

# **PERMESSO DI COSTRUIRE**

## **AMPLIAMENTO DEL COMPARTO AUTODROMO DI MODENA**

**LOCALITA' MARZAGLIA – COMUNE DI MODENA**

Provvedimento Autorizzatorio Unico (PAUR) e Valutazione di Impatto Ambientale (VIA), L.R. n. 4/2018, D.Lgs. 152/06  
Progetto di modifica e ampliamento del comparto "Autodromo di Modena", in località Marzaglia, Comune di Modena (MO)



**COMPARTO: AUTODROMO DI MODENA**

**PROPONENTE: AERAUTODROMO MODENA SPA**

**GRUPPO DI PROGETTAZIONE:**

- ARCHILINEA Srl
- BLUEWORKS – Ing. Yos Zorzi
- GEOGROUP Srl
- PRAXIS AMBIENTE Srl
- STUDIO TECNICO CAPELLARI
- STIEM – Ing. Paolo Scuderi e Ing. Luca Buzzoni
- ATEAM PROGETTI
- STUDIO GECO
- STUDIO TECNICO TADDIA
- Dott. Agr. Giovanni Mondani

## **STR – R03 - RELAZIONE DI CALCOLO SCALE IN ACCIAIO E COLLEGAMENTI – U.S. ALI ESTERNE**

# **P.d.C.4**

**REALIZZAZIONE DI TRIBUNA E VISITOR CENTER E REALIZZAZIONE DI POSTI AUTO  
PDC 4 - VIA**



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# Indice degli Elaborati

<b>1. RELAZIONE DI CALCOLO SCALA IN ACCIAIO DOPPIA RAMPA.....</b>	<b>5</b>
<i>Descrizione generale dell'opera</i> .....	5
<i>Quadro normativo di riferimento adottato</i> .....	5
<i>Azioni di progetto sulla costruzione</i> .....	5
<i>Modello numerico</i> .....	6
Informazioni sul codice di calcolo.....	6
<i>Modellazione delle azioni</i> .....	7
<i>Combinazioni e/o percorsi di carico</i> .....	7
<i>Verifiche agli stati limite ultimi</i> .....	7
<i>Verifiche agli stati limite di esercizio</i> .....	7
<b>RELAZIONE SUI MATERIALI</b> .....	7
NORMATIVA DI RIFERIMENTO .....	8
CARATTERISTICHE MATERIALI UTILIZZATI .....	12
<i>LEGENDA TABELLA DATI MATERIALI</i> .....	12
MODELLAZIONE DELLE SEZIONI .....	17
<i>LEGENDA TABELLA DATI SEZIONI</i> .....	17
MODELLAZIONE STRUTTURA: NODI.....	19
<i>LEGENDA TABELLA DATI NODI</i> .....	19
TABELLA DATI NODI.....	19
MODELLAZIONE STRUTTURA: ELEMENTI TRAVE.....	21
TABELLA DATI TRAVI .....	21
MODELLAZIONE STRUTTURA: ELEMENTI SHELL.....	24
<i>LEGENDA TABELLA DATI SHELL</i> .....	24
MODELLAZIONE DELLA STRUTTURA: ELEMENTI SOLAIO-PANNELLO.....	27
<i>LEGENDA TABELLA DATI SOLAI-PANNELLI</i> .....	27
MODELLAZIONE DELLE AZIONI.....	30
<i>LEGENDA TABELLA DATI AZIONI</i> .....	30
SCHEMATIZZAZIONE DEI CASI DI CARICO .....	32
<i>LEGENDA TABELLA CASI DI CARICO</i> .....	32
DEFINIZIONE DELLE COMBINAZIONI .....	41
<i>LEGENDA TABELLA COMBINAZIONI DI CARICO</i> .....	41
AZIONE SISMICA.....	49
<i>VALUTAZIONE DELL' AZIONE SISMICA</i> .....	49
Parametri della struttura .....	49
RISULTATI ANALISI SISMICHE .....	56
<i>LEGENDA TABELLA ANALISI SISMICHE</i> .....	56
RISULTATI OPERE DI FONDAZIONE.....	85
<i>LEGENDA RISULTATI OPERE DI FONDAZIONE</i> .....	85
RISULTATI ELEMENTI TIPO TRAVE .....	93
<i>LEGENDA RISULTATI ELEMENTI TIPO TRAVE</i> .....	93
VERIFICHE PER ELEMENTI IN ACCIAIO .....	136
<i>LEGENDA TABELLA VERIFICHE PER ELEMENTI IN ACCIAIO</i> .....	136
STATI LIMITE D' ESERCIZIO ACCIAIO .....	138
<i>LEGENDA TABELLA STATI LIMITE D' ESERCIZIO ACCIAIO</i> .....	138
VERIFICHE ELEMENTI PARETE E/O GUSCIO IN C.A. ....	141
<i>LEGENDA TABELLA VERIFICHE ELEMENTI PARETE E GUSCIO IN C.A.</i> .....	141
<i>PROGETTAZIONE DELLE FONDAZIONI</i> .....	144
STATI LIMITE D' ESERCIZIO .....	149
<i>LEGENDA TABELLA STATI LIMITE D' ESERCIZIO</i> .....	149
<b>2. RELAZIONE DI CALCOLO COLLEGAMENTI SCALA DOPPIA RAMPA.....</b>	<b>151</b>
<b>3. RELAZIONE DI CALCOLO SCALA RAMPA SEMPLICE .....</b>	<b>173</b>

<b>Descrizione generale dell'opera</b> .....	173
<b>Quadro normativo di riferimento adottato</b> .....	173
<b>Azioni di progetto sulla costruzione</b> .....	173
<b>Modello numerico</b> .....	174
Informazioni sul codice di calcolo .....	174
<b>Modellazione delle azioni</b> .....	175
<b>Combinazioni e/o percorsi di carico</b> .....	175
<b>Verifiche agli stati limite ultimi</b> .....	175
<b>Verifiche agli stati limite di esercizio</b> .....	175
<b>RELAZIONE SUI MATERIALI</b> .....	175
NORMATIVA DI RIFERIMENTO .....	176
CARATTERISTICHE MATERIALI UTILIZZATI .....	179
<b>LEGENDA TABELLA DATI MATERIALI</b> .....	179
MODELLAZIONE DELLE SEZIONI .....	184
<b>LEGENDA TABELLA DATI SEZIONI</b> .....	184
MODELLAZIONE STRUTTURA: NODI .....	186
<b>LEGENDA TABELLA DATI NODI</b> .....	186
TABELLA DATI NODI .....	186
MODELLAZIONE STRUTTURA: ELEMENTI TRAVE .....	187
<b>TABELLA DATI TRAVI</b> .....	187
MODELLAZIONE STRUTTURA: ELEMENTI SHELL .....	190
<b>LEGENDA TABELLA DATI SHELL</b> .....	190
MODELLAZIONE DELLA STRUTTURA: ELEMENTI SOLAIO-PANNELLO .....	192
<b>LEGENDA TABELLA DATI SOLAI-PANNELLI</b> .....	192
MODELLAZIONE DELLE AZIONI .....	195
<b>LEGENDA TABELLA DATI AZIONI</b> .....	195
SCHEMATIZZAZIONE DEI CASI DI CARICO .....	197
<b>LEGENDA TABELLA CASI DI CARICO</b> .....	197
DEFINIZIONE DELLE COMBINAZIONI .....	206
<b>LEGENDA TABELLA COMBINAZIONI DI CARICO</b> .....	206
AZIONE SISMICA .....	214
<b>VALUTAZIONE DELL' AZIONE SISMICA</b> .....	214
Parametri della struttura .....	214
RISULTATI ANALISI SISMICHE .....	221
<b>LEGENDA TABELLA ANALISI SISMICHE</b> .....	221
RISULTATI NODALI .....	243
<b>LEGENDA RISULTATI NODALI</b> .....	243
RISULTATI OPERE DI FONDAZIONE .....	247
<b>LEGENDA RISULTATI OPERE DI FONDAZIONE</b> .....	247
RISULTATI ELEMENTI TIPO TRAVE .....	249
<b>LEGENDA RISULTATI ELEMENTI TIPO TRAVE</b> .....	249
VERIFICHE PER ELEMENTI IN ACCIAIO .....	281
<b>LEGENDA TABELLA VERIFICHE PER ELEMENTI IN ACCIAIO</b> .....	281
STATI LIMITE D' ESERCIZIO ACCIAIO .....	284
<b>LEGENDA TABELLA STATI LIMITE D' ESERCIZIO ACCIAIO</b> .....	284
VERIFICHE ELEMENTI PARETE E/O GUSCIO IN C.A. ....	287
<b>LEGENDA TABELLA VERIFICHE ELEMENTI PARETE E GUSCIO IN C.A.</b> .....	287
<b>PROGETTAZIONE DELLE FONDAZIONI</b> .....	290
STATI LIMITE D' ESERCIZIO .....	293
<b>LEGENDA TABELLA STATI LIMITE D' ESERCIZIO</b> .....	293



# 1. RELAZIONE DI CALCOLO SCALA IN ACCIAIO DOPPIA RAMPA

## Descrizione generale dell'opera

Descrizione generale dell'opera	
Ubicazione	Comune di MODENA (MO) (Regione EMILIA-ROMAGNA)
	Località MODENA (MO)
	Longitudine 10.925, Latitudine 44.647

Parametri della struttura			
Classe d'uso	Vita Vn [anni]	Coeff. Uso	Periodo Vr [anni]
III	50.0	1.5	75.0

Fattore di struttura/comportamento
<b>q = 1.5</b>

## Quadro normativo di riferimento adottato

Le norme ed i documenti assunti quale riferimento per la progettazione strutturale vengono indicati di seguito. Nel capitolo "normativa di riferimento" è comunque presente l'elenco completo delle normative disponibili.

Progetto-verifica degli elementi	
Progetto cemento armato	D.M. 17-01-2018
Progetto acciaio	D.M. 17-01-2018
Progetto legno	D.M. 17-01-2018
Progetto muratura	D.M. 17-01-2018
Azione sismica	
Norma applicata per l'azione sismica	D.M. 17-01-2018

## Azioni di progetto sulla costruzione

Nei capitoli "modellazione delle azioni" e "schematizzazione dei casi di carico" sono indicate le azioni sulla costruzioni.

Nel prosieguo si indicano tipo di analisi strutturale condotta (statico,dinamico, lineare o non lineare) e il metodo adottato per la risoluzione del problema strutturale nonché le metodologie seguite per la verifica o per il progetto-verifica delle sezioni. Si riportano le combinazioni di carico adottate e, nel caso di calcoli non lineari, i percorsi di carico seguiti; le configurazioni studiate per la struttura in esame *sono risultate effettivamente esaustive per la progettazione-verifica*.

La verifica della sicurezza degli elementi strutturali avviene con i metodi della scienza delle costruzioni. L'analisi strutturale è condotta con il metodo degli spostamenti per la valutazione dello stato tensodeformativo indotto da carichi statici. L'analisi strutturale è condotta con il metodo dell'analisi modale e dello spettro di risposta in termini di accelerazione per la valutazione dello stato tensodeformativo indotto da carichi dinamici (tra cui quelli di tipo sismico).

L'analisi strutturale viene effettuata con il metodo degli elementi finiti. Il metodo sopraindicato si basa sulla schematizzazione della struttura in elementi connessi solo in corrispondenza di un numero prefissato di punti denominati nodi. I nodi sono definiti dalle tre coordinate cartesiane in un sistema di riferimento globale. Le incognite del problema (nell'ambito del metodo degli spostamenti) sono le componenti di spostamento dei nodi riferite al sistema di riferimento globale (traslazioni secondo X, Y, Z, rotazioni attorno X, Y, Z). La soluzione del problema si ottiene con un sistema di equazioni algebriche lineari i cui termini noti sono costituiti dai carichi agenti sulla struttura opportunamente concentrati ai nodi:

$$\mathbf{K} \cdot \mathbf{u} = \mathbf{F} \text{ dove}$$

$\mathbf{K}$  = matrice di rigidezza  
 $\mathbf{u}$  = vettore spostamenti nodali  
 $\mathbf{F}$  = vettore forze nodali

Dagli spostamenti ottenuti con la risoluzione del sistema vengono quindi dedotte le sollecitazioni e/o le tensioni di ogni elemento, riferite generalmente ad una terna locale all'elemento stesso.

Il sistema di riferimento utilizzato è costituito da una terna cartesiana destrorsa XYZ. Si assume l'asse Z verticale ed orientato verso l'alto. Gli elementi utilizzati per la modellazione dello schema statico della struttura sono i seguenti:

Elemento tipo <b>TRUSS</b>	(biella-D2)
Elemento tipo <b>BEAM</b>	(trave-D2)
Elemento tipo <b>MEMBRANE</b>	(membrana-D3)
Elemento tipo <b>PLATE</b>	(piastra-guscio-D3)
Elemento tipo <b>BOUNDARY</b>	(molla)

Elemento tipo <b>STIFFNESS</b>	(matrice di rigidezza)
Elemento tipo <b>BRICK</b>	(elemento solido)
Elemento tipo <b>SOLAIO</b>	(macro elemento composto da più membrane)

## Modello numerico

In questa parte viene descritto il modello numerico utilizzato (o i modelli numerici utilizzati) per l'analisi della struttura. La presentazione delle informazioni deve essere, coerentemente con le prescrizioni del paragrafo 10.2 e relativi sottoparagrafi delle NTC-18, tale da garantirne la leggibilità, la corretta interpretazione e la riproducibilità

Tipo di analisi strutturale	
Carichi verticali	SI
Sismica statica lineare	NO
Sismica dinamica lineare	SI
Sismica statica non lineare (prop. masse)	NO
Sismica statica non lineare (prop. modo)	NO
Sismica statica non lineare (triangolare)	NO
Non linearità geometriche (fattore P delta)	NO

Di seguito si indicano l'origine e le caratteristiche dei codici di calcolo utilizzati riportando titolo, produttore e distributore, versione, estremi della licenza d'uso:

Informazioni sul codice di calcolo	
Titolo:	PRO_SAP PROfessional Structural Analysis Program
Versione:	PROFESSIONAL (build 2020-12-191)
Produttore-Distributore:	2S.I. Software e Servizi per l'Ingegneria s.r.l., Ferrara
Codice Licenza:	Licenza dsi4792

Un attento esame preliminare della documentazione a corredo del software **ha consentito di valutarne l'affidabilità e soprattutto l'idoneità al caso specifico**. La documentazione, fornita dal produttore e distributore del software, contiene una esauriente descrizione delle basi teoriche e degli algoritmi impiegati, l'individuazione dei campi d'impiego, nonché casi prova interamente risolti e commentati, corredati dei file di input necessari a riprodurre l'elaborazione:

Affidabilità dei codici utilizzati
2S.I. ha verificato l'affidabilità e la robustezza del codice di calcolo attraverso un numero significativo di casi prova in cui i risultati dell'analisi numerica sono stati confrontati con soluzioni teoriche. E' possibile reperire la documentazione contenente alcuni dei più significativi casi trattati al seguente link: <a href="https://www.2si.it/it/prodotti/affidabilita/">https://www.2si.it/it/prodotti/affidabilita/</a>

Modellazione della geometria e proprietà meccaniche:	
nodi	118
elementi D2 (per aste, travi, pilastri...)	42
elementi D3 (per pareti, platee, gusci...)	63
elementi solaio	6
elementi solidi	0
Dimensione del modello strutturale [cm]:	
X min =	-38.20
Xmax =	388.80
Ymin =	-143.68
Ymax =	671.69
Zmin =	0.00
Zmax =	555.00
Strutture verticali:	
Elementi di tipo asta	NO
Pilastr	SI

Pareti	NO
Setti (a comportamento membranale)	NO
<b>Strutture non verticali:</b>	
Elementi di tipo asta	NO
Travi	SI
Gusci	NO
Membrane	NO
<b>Orizzontamenti:</b>	
Solai con la proprietà piano rigido	NO
Solai senza la proprietà piano rigido	SI
<b>Tipo di vincoli:</b>	
Nodi vincolati rigidamente	SI
Nodi vincolati elasticamente	NO
Nodi con isolatori sismici	NO
Fondazioni puntuali (plinti/plinti su palo)	NO
Fondazioni di tipo trave	NO
Fondazioni di tipo platea	SI
Fondazioni con elementi solidi	NO

## Modellazione delle azioni

Si veda il capitolo “**Schematizzazione dei casi di carico**” per le informazioni necessarie alla comprensione ed alla ricostruzione delle azioni applicate al modello numerico, coerentemente con quanto indicato nella parte “2.6. Azioni di progetto sulla costruzione”.

## Combinazioni e/o percorsi di carico

Si veda il capitolo “**Definizione delle combinazioni**” in cui sono indicate le combinazioni di carico adottate e, nel caso di calcoli non lineari, i percorsi di carico seguiti.

<b>Combinazioni dei casi di carico</b>	
APPROCCIO PROGETTUALE	Approccio 2
Tensioni ammissibili	NO
SLU	SI
SLV (SLU con sisma)	SI
SLC	NO
SLD	SI
SLO	SI
SLU GEO A2 (per approccio 1)	NO
SLU EQU	NO
Combinazione caratteristica (rara)	SI
Combinazione frequente	SI
Combinazione quasi permanente (SLE)	SI
SLA (accidentale quale incendio)	NO

## Verifiche agli stati limite ultimi

Nel capitolo relativo alla progettazione degli elementi strutturali agli SLU vengono indicate, con riferimento alla normativa adottata, le modalità ed i criteri seguiti per valutare la sicurezza della struttura nei confronti delle possibili situazioni di crisi ed i risultati delle valutazioni svolte. In via generale, oltre alle verifiche di resistenza e di spostamento, devono essere prese in considerazione verifiche nei confronti dei fenomeni di instabilità, locale e globale, di fatica, di duttilità, di degrado.

## Verifiche agli stati limite di esercizio

Nel capitolo relativo alla progettazione degli elementi strutturali agli SLE vengono indicate, con riferimento alla normativa adottata, le modalità seguite per valutare l'affidabilità della struttura nei confronti delle possibili situazioni di perdita di funzionalità (per eccessive deformazioni, fessurazioni, vibrazioni, etc.) ed i risultati delle valutazioni svolte.

## RELAZIONE SUI MATERIALI

Il capitolo Materiali riporta informazioni esaustive relative all'elenco dei materiali impiegati e loro modalità di posa in opera e ai valori di calcolo.

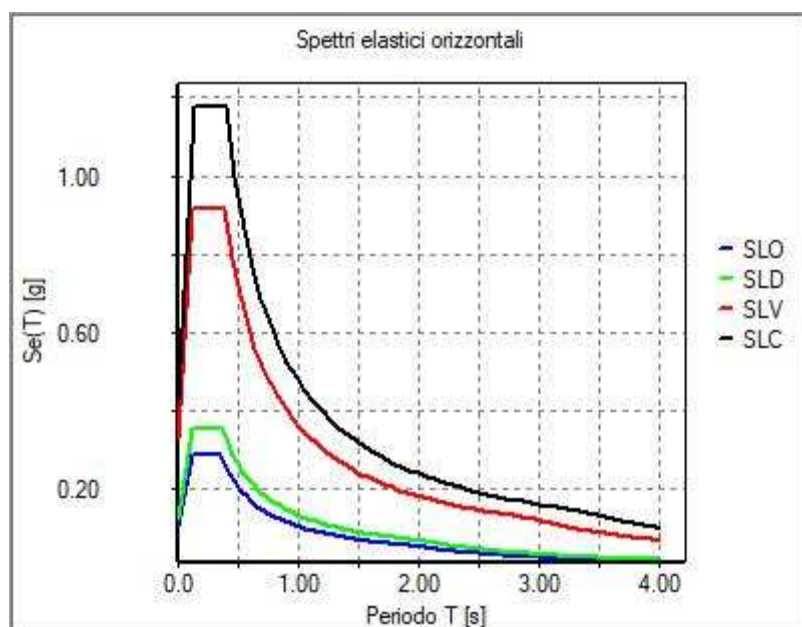
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# NORMATIVA DI RIFERIMENTO

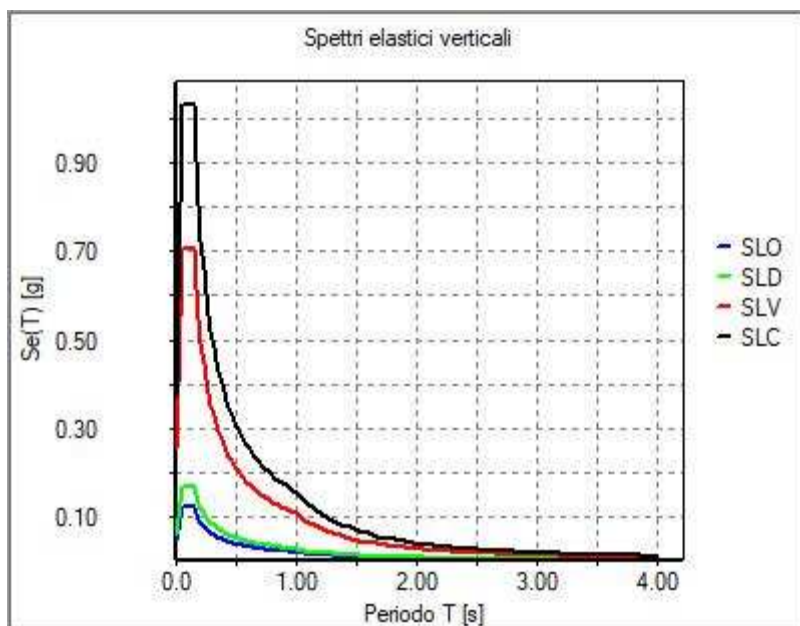
1. D.Min. Infrastrutture Min. Interni e Prot. Civile 17 Gennaio 2018 e allegate "Norme tecniche per le costruzioni".
2. Circolare 21/01/19, n. 7 C.S.LL.PP. "Istruzioni per l'applicazione dell'aggiornamento delle Norme Tecniche delle Costruzioni di cui al decreto ministeriale 17 gennaio 2018"
3. D.Min. Infrastrutture e trasporti 14 Settembre 2005 e allegate "Norme tecniche per le costruzioni".
4. D.M. LL.PP. 9 Gennaio 1996 "Norme tecniche per il calcolo, l'esecuzione ed il collaudo delle strutture in cemento armato, normale e precompresso e per le strutture metalliche".
5. D.M. LL.PP. 16 Gennaio 1996 "Norme tecniche relative ai <<Criteri generali per la verifica di sicurezza delle costruzioni e dei carichi e sovraccarichi>>".
6. D.M. LL.PP. 16 Gennaio 1996 "Norme tecniche per le costruzioni in zone sismiche".
7. Circolare 4/07/96, n.156AA.GG./STC. istruzioni per l'applicazione delle "Norme tecniche relative ai <<Criteri generali per la verifica di sicurezza delle costruzioni e dei carichi e sovraccarichi>>" di cui al D.M. 16/01/96.
8. Circolare 10/04/97, n.65AA.GG. istruzioni per l'applicazione delle "Norme tecniche per le costruzioni in zone sismiche" di cui al D.M. 16/01/96.
9. D.M. LL.PP. 20 Novembre 1987 "Norme tecniche per la progettazione, esecuzione e collaudo degli edifici in muratura e per il loro consolidamento".
10. Circolare 4 Gennaio 1989 n. 30787 "Istruzioni in merito alle norme tecniche per la progettazione, esecuzione e collaudo degli edifici in muratura e per il loro consolidamento".
11. D.M. LL.PP. 11 Marzo 1988 "Norme tecniche riguardanti le indagini sui terreni e sulle rocce, la stabilità dei pendii naturali e delle scarpate, i criteri generali e le prescrizioni per la progettazione, l'esecuzione e il collaudo delle opere di sostegno delle terre e delle opere di fondazione".
12. D.M. LL.PP. 3 Dicembre 1987 "Norme tecniche per la progettazione, esecuzione e collaudo delle costruzioni prefabbricate".
13. UNI 9502 - Procedimento analitico per valutare la resistenza al fuoco degli elementi costruttivi di conglomerato cementizio armato, normale e precompresso - edizione maggio 2001
14. Ordinanza del Presidente del Consiglio dei Ministri n. 3274 del 20 marzo 2003 "Primi elementi in materia di criteri generali per la classificazione sismica del territorio nazionale e di normative tecniche per le costruzioni in zona sismica" e successive modificazioni e integrazioni.
15. UNI EN 1990:2006 13/04/2006 Eurocodice 0 - Criteri generali di progettazione strutturale.
16. UNI EN 1991-1-1:2004 01/08/2004 Eurocodice 1 - Azioni sulle strutture - Parte 1-1: Azioni in generale - Pesi per unità di volume, pesi propri e sovraccarichi per gli edifici.
17. UNI EN 1991-2:2005 01/03/2005 Eurocodice 1 - Azioni sulle strutture - Parte 2: Carichi da traffico sui ponti.
18. UNI EN 1991-1-3:2004 01/10/2004 Eurocodice 1 - Azioni sulle strutture - Parte 1-3: Azioni in generale - Carichi da neve.
19. UNI EN 1991-1-4:2005 01/07/2005 Eurocodice 1 - Azioni sulle strutture - Parte 1-4: Azioni in generale - Azioni del vento.
20. UNI EN 1991-1-5:2004 01/10/2004 Eurocodice 1 - Azioni sulle strutture - Parte 1-5: Azioni in generale - Azioni termiche.
21. UNI EN 1992-1-1:2005 24/11/2005 Eurocodice 2 - Progettazione delle strutture di calcestruzzo - Parte 1-1: Regole generali e regole per gli edifici.
22. UNI EN 1992-1-2:2005 01/04/2005 Eurocodice 2 - Progettazione delle strutture di calcestruzzo - Parte 1-2: Regole generali - Progettazione strutturale contro l'incendio.
23. UNI EN 1993-1-1:2005 01/08/2005 Eurocodice 3 - Progettazione delle strutture di acciaio - Parte 1-1: Regole generali e regole per gli edifici.
24. UNI EN 1993-1-8:2005 01/08/2005 Eurocodice 3 - Progettazione delle strutture di acciaio - Parte 1-8: Progettazione dei collegamenti.
25. UNI EN 1994-1-1:2005 01/03/2005 Eurocodice 4 - Progettazione delle strutture composte acciaio-calcestruzzo - Parte 1-1: Regole generali e regole per gli edifici.
26. UNI EN 1994-2:2006 12/01/2006 Eurocodice 4 - Progettazione delle strutture composte acciaio-calcestruzzo - Parte 2: Regole generali e regole per i ponti.
27. UNI EN 1995-1-1:2005 01/02/2005 Eurocodice 5 - Progettazione delle strutture di legno - Parte 1-1: Regole generali - Regole comuni e regole per gli edifici.
28. UNI EN 1995-2:2005 01/01/2005 Eurocodice 5 - Progettazione delle strutture di legno - Parte 2: Ponti.

29. UNI EN 1996-1-1:2006 26/01/2006 Eurocodice 6 - Progettazione delle strutture di muratura - Parte 1-1: Regole generali per strutture di muratura armata e non armata.
30. UNI EN 1996-3:2006 09/03/2006 Eurocodice 6 - Progettazione delle strutture di muratura - Parte 3: Metodi di calcolo semplificato per strutture di muratura non armata.
31. UNI EN 1997-1:2005 01/02/2005 Eurocodice 7 - Progettazione geotecnica - Parte 1: Regole generali.
32. UNI EN 1998-1:2005 01/03/2005 Eurocodice 8 - Progettazione delle strutture per la resistenza sismica - Parte 1: Regole generali, azioni sismiche e regole per gli edifici.
33. UNI EN 1998-3:2005 01/08/2005 Eurocodice 8 - Progettazione delle strutture per la resistenza sismica - Parte 3: Valutazione e adeguamento degli edifici.
34. UNI EN 1998-5:2005 01/01/2005 Eurocodice 8 - Progettazione delle strutture per la resistenza sismica - Parte 5: Fondazioni, strutture di contenimento ed aspetti geotecnici.

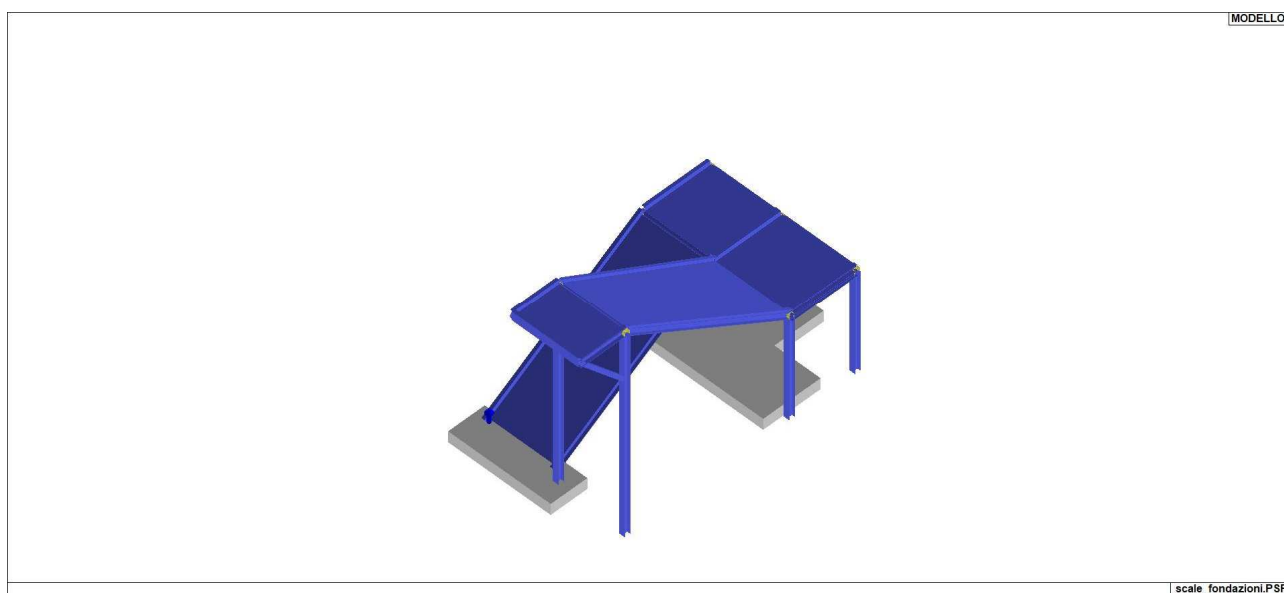
**NOTA il capitolo "normativa di riferimento": riporta l'elenco delle normative implementate nel software. Le norme utilizzate per la struttura oggetto della presente relazione sono indicate nel precedente capitolo "RELAZIONE DI CALCOLO STRUTTURALE" "ANALISI E VERIFICHE SVOLTE CON L'AUSILIO DI CODICI DI CALCOLO".** Laddove nei capitoli successivi vengano richiamate norme antecedenti al DM 17.01.18 è dovuto a progettazione simulata di edificio esistente.



01\_INT\_SPETTRI\_ELASTICI\_O

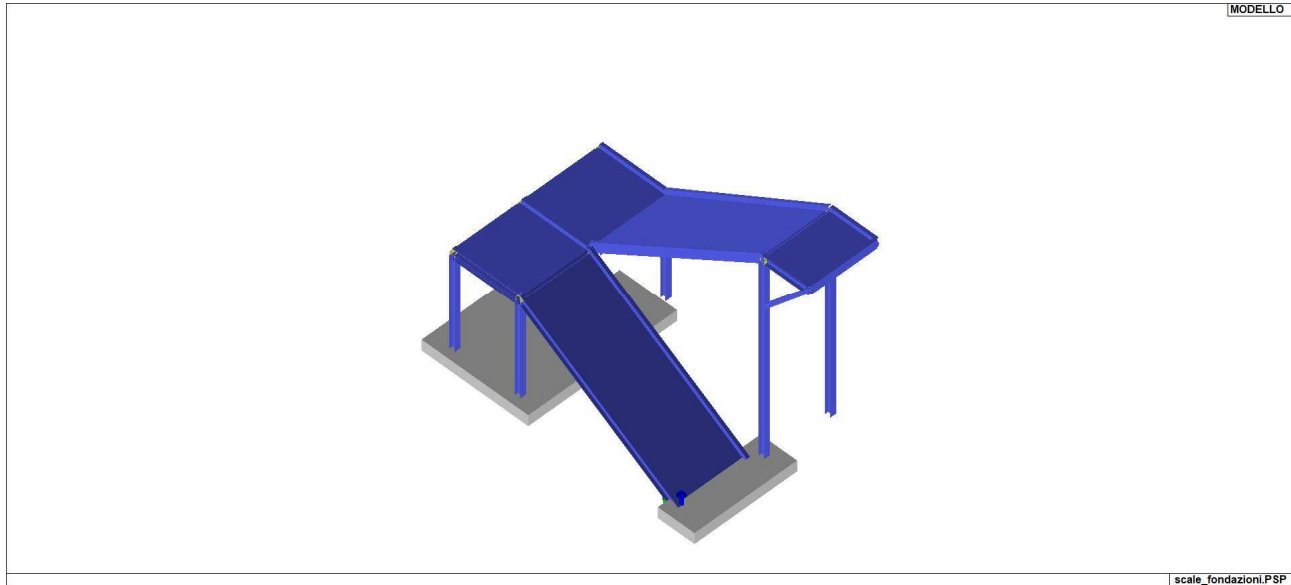


01\_INT\_SPETTRI\_ELASTICI\_V

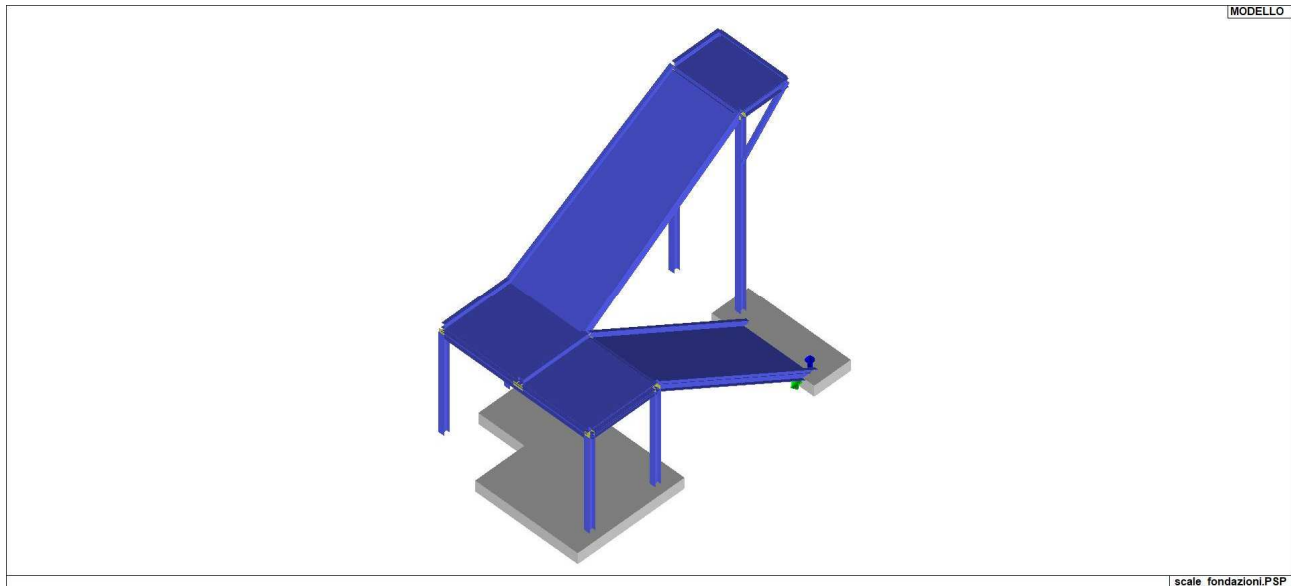


01\_INT\_VISTA\_SOLIDA\_001

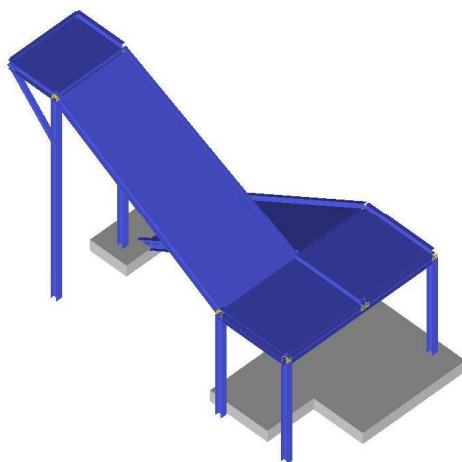




01\_INT\_VISTA\_SOLIDA\_002



01\_INT\_VISTA\_SOLIDA\_003



01\_INT\_VISTA\_SOLIDA\_004

## CARATTERISTICHE MATERIALI UTILIZZATI

### LEGENDA TABELLA DATI MATERIALI

Il programma consente l'uso di materiali diversi. Sono previsti i seguenti tipi di materiale:

1	materiale tipo cemento armato
2	materiale tipo acciaio
3	materiale tipo muratura
4	materiale tipo legno
5	materiale tipo generico

I materiali utilizzati nella modellazione sono individuati da una sigla identificativa ed un codice numerico (gli elementi strutturali richiamano quest'ultimo nella propria descrizione). Per ogni materiale vengono riportati in tabella i seguenti dati:

Young	modulo di elasticità normale E
Poisson	coefficiente di contrazione trasversale $\nu$
G	modulo di elasticità tangenziale
Gamma	peso specifico
Alfa	coefficiente di dilatazione termica
Fattore di confidenza FC m	Fattore di confidenza specifico per materiale; (è riportato solo se diverso da quello globale della struttura)
Fattore di confidenza FC a	Fattore di confidenza specifico per l'armatura (è riportato solo se diverso da quello globale della struttura)
Elasto-plastico	Materiale elastico perfettamente plastico per aste non lineari
Massima compressione	Massima tensione di compressione per aste non lineari
Massima trazione	Massima tensione di trazione per aste non lineari
Fattore attrito	Coefficiente di attrito per aste non lineari
Rapporto HRDb	Rapporto di hardening a flessione
Rapporto HRDv	Rapporto di hardening a taglio

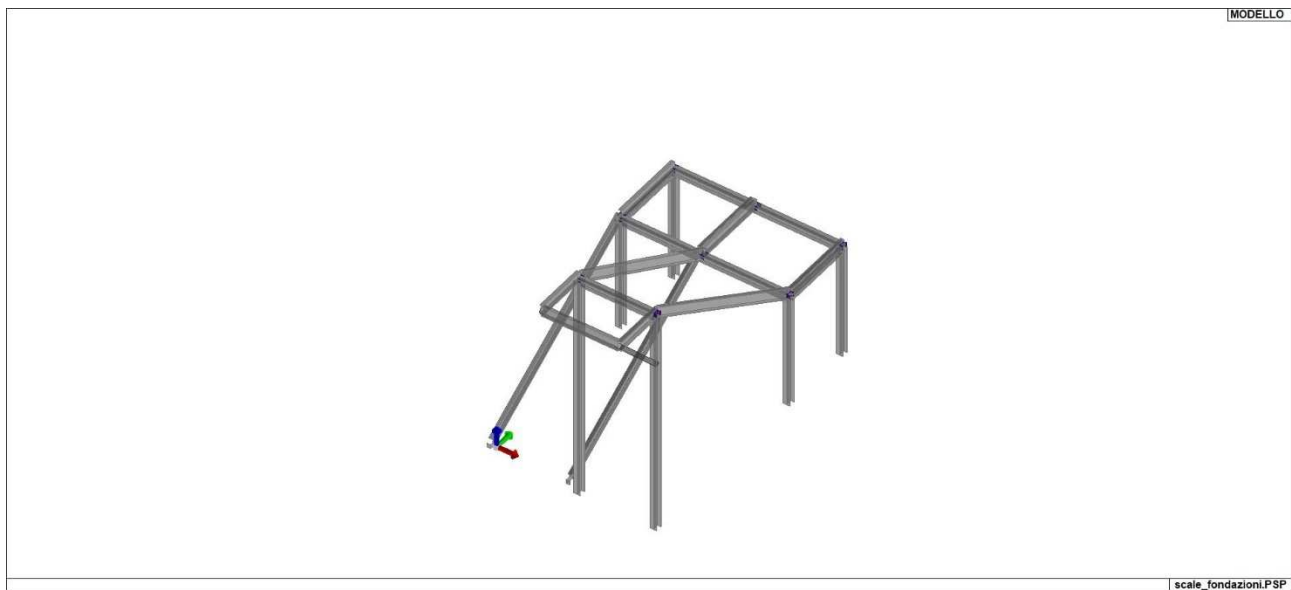
I dati soprariportati vengono utilizzati per la modellazione dello schema statico e per la determinazione dei carichi inerziali e termici. In relazione al tipo di materiale vengono riportati inoltre:

1	c.a.	Resistenza Rc Resistenza fctm Coefficiente ksb	resistenza a compressione cubica resistenza media a trazione semplice Coefficiente di riduzione della resistenza a compressione da utilizzare nello stress block
2	acciaio	Tensione ft Tensione fy Resistenza fd Resistenza fd (>40) Tensione ammissibile Tensione ammissibile(>40)	Valore della tensione di rottura Valore della tensione di snervamento Resistenza di calcolo per SL CNR-UNI 10011 Resistenza di calcolo per SL CNR-UNI 10011 per spessori > 40mm Tensione ammissibile CNR-UNI 10011 Tensione ammissibile CNR-UNI 10011 per spessori > 40mm

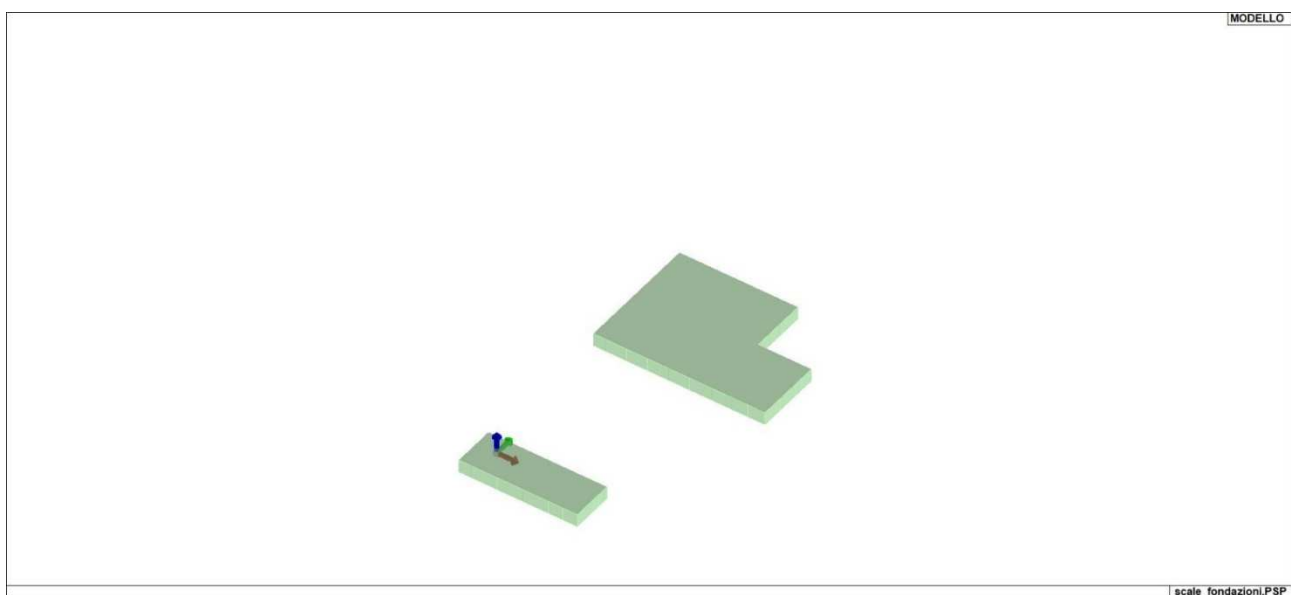
Nel tabulato si riportano sia i valori caratteristici che medi utilizzando gli uni e/o gli altri in relazione alle richieste di normativa ed alla tipologia di verifica. (Cap.7 NTC18 per materiali nuovi, Cap.8 NTC18 e relativa circolare 21/01/2019 per materiali esistenti, Linee Guida Reluis per incamiciatura CAM, CNR-DT 200 per interventi con FRP)

Vengono inoltre riportate le tabelle contenenti il riassunto delle informazioni assegnate nei criteri di progetto in uso.

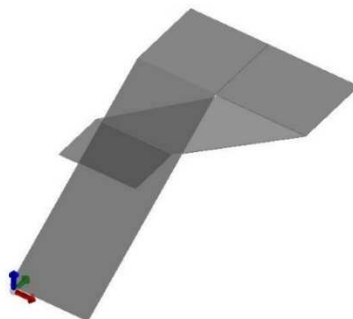
Id	Tipo / Note	V. caratt.	V. medio	Young	Poisson	G	Gamma	Alfa	Altri
		daN/cm2	daN/cm2	daN/cm2		daN/cm2	daN/cm3		
4	Calcestruzzo Classe C30/37			3.302e+05	0.20	1.376e+05	2.50e-03	1.00e-05	
	Resistenza Rc	370.0							
	Resistenza fctm		29.4						
	Rapporto Rfessurata								1.00
	Coefficiente ksb								0.85
	Rapporto HRDb								1.00e-05
	Rapporto HRDv								1.00e-05
11	Acciaio Fe360 - S235-acciaio Fe360-S235			2.100e+06	0.30	8.077e+05	7.85e-03	1.20e-05	
	Tensione ft	3600.0							
	Resistenza fd	2350.0							
	Resistenza fd (>40)	2100.0							
	Tensione ammissibile	1600.0							
	Tensione ammissibile (>40)	1400.0							
	Rapporto HRDb								1.00e-05
	Rapporto HRDv								1.00e-05
12	Acciaio Fe430 - S275-acciaio Fe430-S275			2.100e+06	0.30	8.077e+05	7.85e-03	1.20e-05	
	Tensione ft	4300.0							
	Resistenza fd	2750.0							
	Resistenza fd (>40)	2500.0							
	Tensione ammissibile	1900.0							
	Tensione ammissibile (>40)	1700.0							
	Rapporto HRDb								1.00e-05
	Rapporto HRDv								1.00e-05
157	Materiale inf. rigido no peso E = 1.000e+09			1.000e+09	0.0	5.000e+08	0.0	1.20e-05	
	Rapporto HRDb								1.00e-05
	Rapporto HRDv								1.00e-05



11\_MOD\_MATERIALI\_D2



11\_MOD\_MATERIALI\_D3



## 11\_MOD\_MATERIALI\_SOLAI

Pilastri acc.	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
<b>Lunghezze libere</b>						
Metodo di calcolo 2-2	Assegnato	Assegnato				
2-2 Beta assegnato	1.00	2.00				
2-2 Beta * L assegnato [ cm ]	0.0	0.0				
Metodo di calcolo 3-3	Assegnato	Assegnato				
3-3 Beta assegnato	1.00	2.00				
3-3 Beta * L assegnato [ cm ]	0.0	0.0				
1-1 Beta assegnato	1.00	1.00				
1-1 Beta * L assegnato [ cm ]	0.0	0.0				
<b>Generalità</b>						
Coefficiente gamma M0	1.05	1.05				
Coefficiente gamma M1	1.05	1.05				
Coefficiente gamma M2	1.25	1.25				
Effetti del 2 ordine	SI	SI				
Momenti equivalenti	SI	SI				
Usa condizioni I e II	SI	SI				

Travi acc.	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
<b>Lunghezze libere</b>						
3-3 Beta * L automatico	NO	SI				
3-3 Beta assegnato	1.00	1.00				
3-3 Beta assegnato [ cm ]	0.0	0.0				
2-2 Beta * L automatico	NO	SI				
2-2 Beta assegnato	1.00	1.00				
2-2 Beta * L assegnato [ cm ]	0.0	0.0				
1-1 Beta * L automatico	NO	SI				
1-1 Beta assegnato	1.00	1.00				
1-1 Beta * L assegnato [ cm ]	0.0	0.0				
<b>Generalità</b>						
Coefficiente gamma M0	1.05	1.05				
Coefficiente gamma M1	1.05	1.05				
Coefficiente gamma M2	1.25	1.25				
Luce di taglio per GR [ cm ]	1.00	1.00				
Usa condizioni I e II	SI	SI				
Momenti equivalenti	SI	SI				

Gusci c.a.	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
<b>Armatura</b>						
Inclinazione Ax [ gradi ]	0.0	0.0				
Angolo Ax-Ay [ gradi ]	90.00	90.00				
Minima tesa	0.31	0.0				
Massima tesa	0.78	0.78				

<b>Gusci c.a.</b>	<b>1/7/..</b>	<b>2/8/..</b>	<b>3/9/..</b>	<b>4/10/..</b>	<b>5/11/..</b>	<b>6/12/..</b>
Maglia unica centrale	NO	NO				
Copriferro [ cm ]	2.00	4.00				
<b>Maglia x</b>						
diametro	10	12				
passo	20	20				
diametro aggiuntivi	12	12				
<b>Maglia y</b>						
diametro	10	12				
passo	20	20				
diametro aggiuntivi	12	12				
<b>Stati limite ultimi</b>						
Tensione fy [daN/cm2 ]	4500.00	4500.00				
Tipo acciaio	tipo C	tipo C				
Coefficiente gamma s	1.15	1.15				
Coefficiente gamma c	1.50	1.50				
Verifiche con N costante	SI	SI				
Applica SLU da DIN	NO	NO				
<b>Tensioni ammissibili</b>						
Tensione amm. cls [daN/cm2 ]	97.50	97.50				
Tensione amm. acciaio [daN/cm2 ]	2600.00	2600.00				
Rapporto omogeneizzazione N	15.00	15.00				
Massimo rapporto area compressa/tesa	1.00	1.00				
<b>Resistenza al fuoco</b>						
3- intradosso	NO	NO				
3+ estradosso	NO	NO				
Tempo di esposizione R	15	15				

<b>Solai e pannelli</b>	<b>1/7/..</b>	<b>2/8/..</b>	<b>3/9/..</b>	<b>4/10/..</b>	<b>5/11/..</b>	<b>6/12/..</b>
<b>Generalità</b>						
Usa tensioni ammissibili	NO	NO				
Af inf: da traliccio	SI	SI				
Consenti armatura a taglio	NO	NO				
Incrementa armatura longitudinale per taglio	SI	SI				
Af inf: da $q \cdot L \cdot L /$	20.00	20.00				
Incremento fascia piena [ cm ]	5.00	5.00				
<b>Armatura</b>						
Minima tesa	0.15	0.15				
Massima tesa	3.00	3.00				
Minima compressa	0.0	0.0				
Af/h [ cm ]	7.000e-02	7.000e-02				
<b>Stati limite ultimi</b>						
Tensione fy [daN/cm2 ]	4500.00	4500.00				
Tipo acciaio	tipo C	tipo C				
Coefficiente gamma s	1.15	1.15				
Coefficiente gamma c	1.50	1.50				
Fattore di ridistribuzione	0.0	0.0				
<b>Tensioni ammissibili</b>						
Tensione amm. cls [daN/cm2 ]	85.00	85.00				
Tensione amm. acciaio [daN/cm2 ]	2600.00	2600.00				
Rapporto omogeneizzazione N	15.00	15.00				
Massimo rapporto area compressa/tesa	1.00	1.00				
<b>Verifica freccia</b>						
Infinita	250.00	250.00				
Istantanea	500.00	500.00				
Fattore viscosità	3.00	3.00				
Usa J non fessurato	NO	NO				
<b>Elementi non strutturali</b>						
Tamponatura antiespulsione	NO	NO				
Tamponatura con armatura	NO	NO				
Fattore di struttura/comportamento	2.00	2.00				
Coefficiente gamma m	0.0	0.0				
Periodo Ta	0.0	0.0				
Altezza pannello	0.0	0.0				



# MODELLAZIONE DELLE SEZIONI

## LEGENDA TABELLA DATI SEZIONI

Il programma consente l'uso di sezioni diverse. Sono previsti i seguenti tipi di sezione:

1. sezione di tipo generico
2. profilati semplici
3. profilati accoppiati e speciali

Le sezioni utilizzate nella modellazione sono individuate da una sigla identificativa ed un codice numerico (gli elementi strutturali richiamano quest'ultimo nella propria descrizione). Per ogni sezione vengono riportati in tabella i seguenti dati:

<b>Area</b>	area della sezione
<b>A V2</b>	area della sezione/fattore di taglio (per il taglio in direzione 2)
<b>A V3</b>	area della sezione/fattore di taglio (per il taglio in direzione 3)
<b>Jt</b>	fattore torsionale di rigidezza
<b>J2-2</b>	momento d'inerzia della sezione riferito all'asse 2
<b>J3-3</b>	momento d'inerzia della sezione riferito all'asse 3
<b>W2-2</b>	modulo di resistenza della sezione riferito all'asse 2
<b>W3-3</b>	modulo di resistenza della sezione riferito all'asse 3
<b>Wp2-2</b>	modulo di resistenza plastico della sezione riferito all'asse 2
<b>Wp3-3</b>	modulo di resistenza plastico della sezione riferito all'asse 3

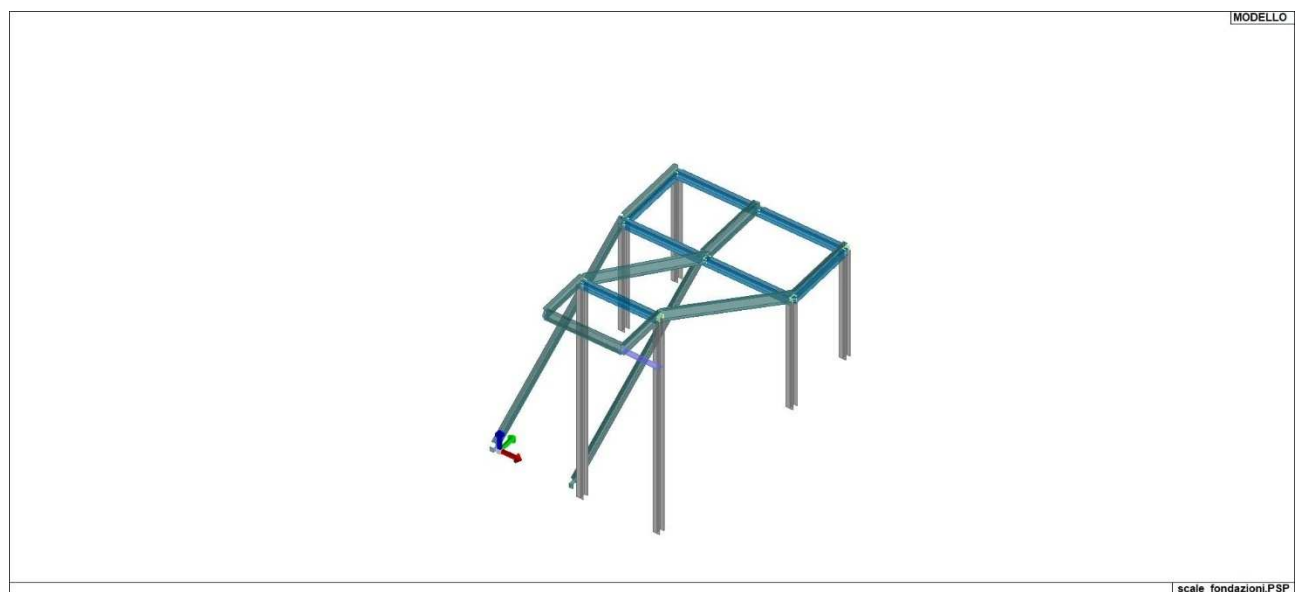
I dati sopra riportati vengono utilizzati per la determinazione dei carichi inerziali e per la definizione delle rigidezze degli elementi strutturali; qualora il valore di Area V2 (e/o Area V3) sia nullo la deformabilità per taglio V2 (e/o V3) è trascurata. La valutazione delle caratteristiche inerziali delle sezioni è condotta nel riferimento 2-3 dell'elemento.

rettangolare	a T	a T rovescia	a T di colmo	a L	a L specchiata
a L specchiata rovescia	a L rovescia	a L di colmo	a doppio T	a quattro specchiata	a quattro
a U	a C	a croce	circolare	rettangolare cava	circolare cava

Per quanto concerne i profilati semplici ed accoppiati l'asse 2 del riferimento coincide con l'asse x riportato nei più diffusi profilati.

Per quanto concerne le sezioni di tipo generico (tipo 1.):  
i valori dimensionali con prefisso B sono riferiti all'asse 2  
i valori dimensionali con prefisso H sono riferiti all'asse 3

Id	Tipo	Area	A V2	A V3	Jt	J 2-2	J 3-3	W 2-2	W 3-3	Wp 2-2	Wp 3-3
		cm2	cm2	cm2	cm4	cm4	cm4	cm3	cm3	cm3	cm3
1	HEA 160	38.80	0.0	0.0	12.20	616.00	1673.00	76.90	220.10	117.60	245.10
2	HEA 160	38.80	0.0	0.0	12.20	616.00	1673.00	76.90	220.10	117.60	245.10
3	UNP 240	42.30	0.0	0.0	19.70	247.00	3599.00	39.50	300.00	75.70	358.00
4	HEA 140	31.40	0.0	0.0	8.10	389.00	1033.00	55.60	155.40	84.80	173.50
6	T.QU 100x3	11.64	0.0	0.0	273.80	182.70	182.70	36.54	36.54	42.35	42.35



13\_MOD\_SEZIONI

scale\_fondazioni.PSP

# MODELLAZIONE STRUTTURA: NODI

## LEGENDA TABELLA DATI NODI

Il programma utilizza per la modellazione nodi strutturali.

Ogni nodo è individuato dalle coordinate cartesiane nel sistema di riferimento globale (X Y Z).

Ad ogni nodo è eventualmente associato un codice di vincolamento rigido, un codice di fondazione speciale, ed un set di sei molle (tre per le traslazioni, tre per le rotazioni). Le tabelle sottoriportate riflettono le succitate possibilità. In particolare per ogni nodo viene indicato in tabella:

<b>Nodo</b>	numero del nodo.
<b>X</b>	valore della coordinata X
<b>Y</b>	valore della coordinata Y
<b>Z</b>	valore della coordinata Z

Per i nodi ai quali sia associato un codice di vincolamento rigido, un codice di fondazione speciale o un set di molle viene indicato in tabella:

<b>Nodo</b>	numero del nodo.
<b>X</b>	valore della coordinata X
<b>Y</b>	valore della coordinata Y
<b>Z</b>	valore della coordinata Z
<b>Note</b>	eventuale codice di vincolo (es. v=110010 sei valori relativi ai sei gradi di libertà previsti per il nodo TxTyTzRxRyRz, il valore 1 indica che lo spostamento o rotazione relativo è impedito, il valore 0 indica che lo spostamento o rotazione relativo è libero).
<b>Note</b>	(FS = 1, 2,...) eventuale codice del tipo di fondazione speciale (1, 2,... fanno riferimento alle tipologie: plinto, palo, plinto su pali,...) che è collegato al nodo. (ISO = "id SIGLA") indice e sigla identificativa dell' eventuale isolatore sismico assegnato al nodo
<b>Rig. TX</b>	valore della rigidezza dei vincoli elastici eventualmente applicati al nodo, nello specifico TX (idem per TY, TZ, RX, RY, RZ).

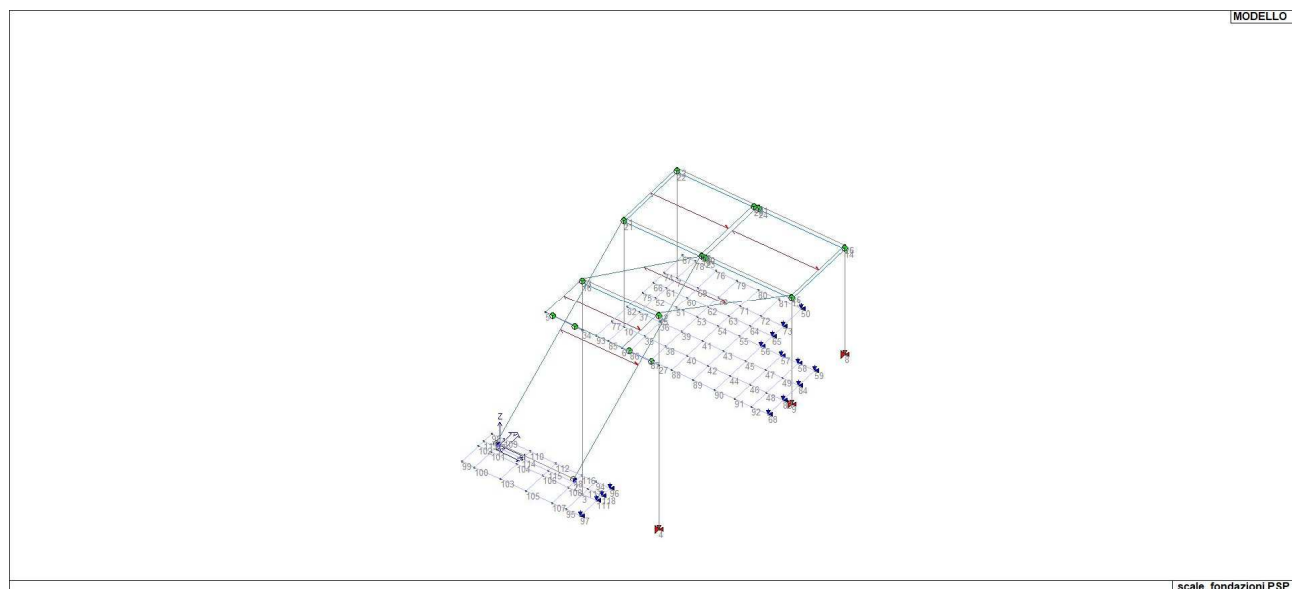
Per strutture sismicamente isolate viene inoltre inserita la tabella delle caratteristiche per gli isolatori utilizzati; le caratteristiche sono indicate in conformità al cap. 7.10 del D.M. 17/01/18

## TABELLA DATI NODI

Nodo	X	Y	Z	Nodo	X	Y	Z	Nodo	X	Y	Z
	cm	cm	cm		cm	cm	cm		cm	cm	cm
1	-8.8	0.0	0.0	2	175.0	0.0	0.0	3	207.8	-18.7	0.0
5	207.8	-143.7	555.0	6	388.8	-143.7	555.0	7	-8.8	610.1	0.0
10	-8.8	431.3	0.0	11	-8.8	431.3	282.5	12	-8.8	610.1	282.5
13	388.8	431.3	272.5	14	388.8	610.1	272.5	15	388.8	-18.7	545.0
16	207.8	-18.7	545.0	17	-8.8	0.0	10.0	18	175.0	0.0	10.0
19	175.0	431.3	272.5	20	175.0	610.1	272.5	21	-8.8	431.3	272.5
22	-8.8	610.1	272.5	23	185.0	431.3	272.5	24	185.0	610.1	272.5
25	388.8	431.3	282.5	26	388.8	610.1	282.5	27	388.8	-18.7	420.0
28	175.0	431.3	282.5	29	175.0	610.1	282.5	30	185.0	431.3	282.5
31	185.0	610.1	282.5	32	388.8	-18.7	555.0	33	207.8	-18.7	555.0
34	207.8	-18.7	420.0	35	40.9	431.3	0.0	36	40.9	484.3	0.0
37	-8.8	484.3	0.0	38	90.6	431.3	0.0	39	90.6	484.3	0.0
40	140.3	431.3	0.0	41	140.3	484.3	0.0	42	190.0	431.3	0.0
43	190.0	484.3	0.0	44	242.1	431.3	0.0	45	242.1	484.3	0.0
46	289.4	431.3	0.0	47	289.4	484.3	0.0	48	328.7	431.3	0.0
49	328.7	484.3	0.0	51	40.9	537.2	0.0	52	-8.8	537.2	0.0
53	90.6	537.2	0.0	54	140.3	537.2	0.0	55	190.0	537.2	0.0
60	40.9	573.7	0.0	61	-8.8	573.7	0.0	62	90.6	573.7	0.0
63	140.3	573.7	0.0	64	190.0	573.7	0.0	66	-38.0	573.7	0.0
67	-38.0	671.7	0.0	69	40.9	610.1	0.0	70	90.6	610.1	0.0

Nodo	X	Y	Z	Nodo	X	Y	Z	Nodo	X	Y	Z
71	140.3	610.1	0.0	72	190.0	610.1	0.0	74	-38.0	610.1	0.0
75	-38.0	537.2	0.0	76	40.9	671.7	0.0	77	-38.0	431.3	0.0
78	-8.8	671.7	0.0	79	90.6	671.7	0.0	80	140.3	671.7	0.0
81	190.0	671.7	0.0	82	-38.0	484.3	0.0	85	-8.8	380.4	0.0
86	40.9	380.4	0.0	87	90.6	380.4	0.0	88	140.3	380.4	0.0
89	190.0	380.4	0.0	90	242.1	380.4	0.0	91	289.4	380.4	0.0
92	328.7	380.4	0.0	93	-38.0	380.4	0.0	94	207.8	26.3	0.0
95	207.8	-73.7	0.0	98	-38.2	26.3	0.0	99	-38.2	-73.7	0.0
100	-8.8	-73.7	0.0	101	-8.8	-18.7	0.0	102	-38.2	-18.7	0.0
103	52.5	-73.7	0.0	104	52.5	-18.7	0.0	105	113.7	-73.7	0.0
106	113.7	-18.7	0.0	107	175.0	-73.7	0.0	108	175.0	-18.7	0.0
109	-8.8	26.3	0.0	110	52.5	26.3	0.0	112	113.7	26.3	0.0
113	-38.2	-3.33e-04	0.0	114	52.5	-3.33e-04	0.0	115	113.7	-3.33e-04	0.0
116	175.0	26.3	0.0	117	207.8	-3.33e-04	0.0				

Nodo	X	Y	Z	Note	Rig. TX	Rig. TY	Rig. TZ	Rig. RX	Rig. RY	Rig. RZ
	cm	cm	cm		daN/cm	daN/cm	daN/cm	daN cm/rad	daN cm/rad	daN cm/rad
4	388.8	-18.7	0.0	v=111111						
8	388.8	610.1	0.0	v=111111						
9	388.8	431.3	0.0	v=111111						
50	242.1	671.7	0.0	v=110000			100.0			
56	242.1	537.2	0.0	v=110000			100.0			
57	289.4	537.2	0.0	v=110000			100.0			
58	328.7	537.2	0.0	v=110000			100.0			
59	368.1	537.2	0.0	v=110000			100.0			
65	242.1	573.7	0.0	v=110000			100.0			
68	368.1	380.4	0.0	v=110000			100.0			
73	242.1	610.1	0.0	v=110000			100.0			
83	368.1	431.3	0.0	v=110000			100.0			
84	368.1	484.3	0.0	v=110000			100.0			
96	241.8	26.3	0.0	v=110000			100.0			
97	241.8	-73.7	0.0	v=110000			100.0			
111	241.8	-18.7	0.0	v=110000			100.0			
118	241.8	-3.33e-04	0.0	v=110000			100.0			



14\_MOD\_NUMERAZIONE\_NODI

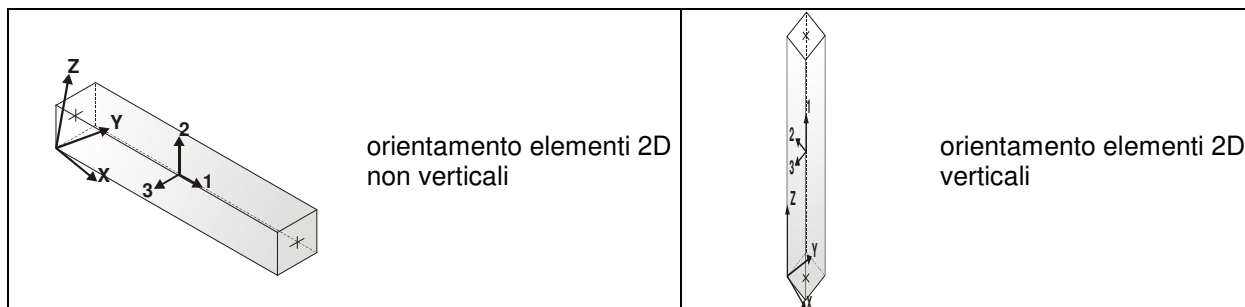
# MODELLAZIONE STRUTTURA: ELEMENTI TRAVE

## TABELLA DATI TRAVI

Il programma utilizza per la modellazione elementi a due nodi denominati in generale travi.

Ogni elemento trave è individuato dal nodo iniziale e dal nodo finale.

Ogni elemento è caratterizzato da un insieme di proprietà riportate in tabella che ne completano la modellazione.

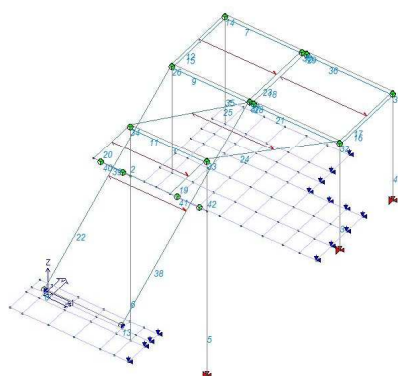


In particolare per ogni elemento viene indicato in tabella:

<b>Elem.</b>	numero dell'elemento
<b>Note</b>	codice di comportamento: trave, trave di fondazione, pilastro, asta, asta tesa, asta compressa,
<b>Nodo I (J)</b>	numero del nodo iniziale (finale)
<b>Mat.</b>	codice del materiale assegnato all'elemento
<b>Sez.</b>	codice della sezione assegnata all'elemento
<b>Rotaz.</b>	valore della rotazione dell'elemento, attorno al proprio asse, nel caso in cui l'orientamento di default non sia adottabile; l'orientamento di default prevede per gli elementi non verticali l'asse 2 contenuto nel piano verticale e l'asse 3 orizzontale, per gli elementi verticali l'asse 2 diretto secondo X negativo e l'asse 3 diretto secondo Y negativo
<b>Svincolo I (J)</b>	codici di svincolo per le azioni interne; i primi sei codici si riferiscono al nodo iniziale, i restanti sei al nodo finale (il valore 1 indica che la relativa azione interna non è attiva)
<b>Wink V</b>	costante di sottofondo (coefficiente di Winkler) per la modellazione della trave su suolo elastico
<b>Wink O</b>	costante di sottofondo (coefficiente di Winkler) per la modellazione del suolo elastico orizzontale

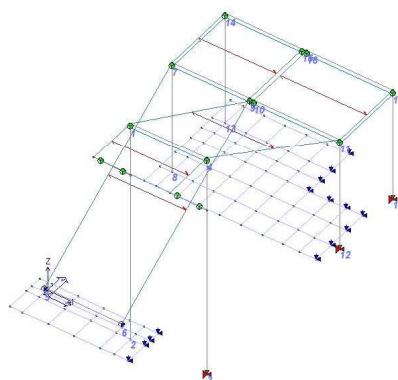
Elem.	Note	Nodo I	Nodo J	Mat.	Sez.	Crit.	Rotaz.	Svincolo I	Svincolo J	Wink V	Wink O
							gradi			daN/cm3	daN/cm3
1	Pilas.	10	21	12	1	1	90.00				
2	Pilas.	34	16	12	1	1	90.00				
3	Pilas.	9	13	12	1	1	90.00				
4	Pilas.	8	14	12	1	1	90.00				
5	Pilas.	4	27	12	1	1	90.00				
6	Pilas.	3	34	12	1	1	90.00				
7	Trave	22	20	12	2	1					
8	Pilas.	1	17	12	3	1	-90.00		010000		
9	Trave	21	19	12	2	1					
10	Trave	20	24	12	2	1					
11	Trave	16	15	12	2	1					
12	Trave	11	12	12	3	1	180.00				
13	Pilas.	2	18	12	3	1	90.00		010000		
14	Pilas.	22	12	157	4	1	90.00	000011			
15	Trave	21	22	12	2	1					
16	Trave	13	14	12	2	1					
17	Trave	25	26	12	3	1					
18	Trave	30	31	12	3	1	180.00				
19	Trave	6	32	12	3	1					
20	Trave	5	33	12	3	1	180.00				
21	Trave	23	13	12	2	1					
22	Trave	17	11	12	3	1	180.00				
23	Trave	28	29	12	3	1					
24	Trave	32	25	12	3	1					
25	Trave	30	33	12	3	1	180.00				
26	Pilas.	21	11	157	4	1	90.00	000011			
27	Pilas.	19	28	157	4	1	90.00	000011			
28	Pilas.	23	30	157	4	1	90.00	000011			
29	Pilas.	24	31	157	4	1	90.00	000011			
30	Pilas.	20	29	157	4	1	90.00	000011			
31	Pilas.	14	26	157	4	1	90.00	000011			
32	Pilas.	13	25	157	4	1	90.00	000011			
33	Pilas.	15	32	157	4	1	90.00	000011			
34	Pilas.	16	33	157	4	1	90.00	000011			
35	Pilas.	7	22	12	1	1	90.00				
36	Trave	24	14	12	2	1					
37	Trave	19	23	12	2	1					
38	Trave	18	28	12	3	1					
39	Trave	5	6	12	3	1	180.00				
40	Trave	5	34	11	6	1		000011	000011		
41	Trave	6	27	11	6	1		000011	000011		
42	Pilas.	27	15	12	1	1	90.00				





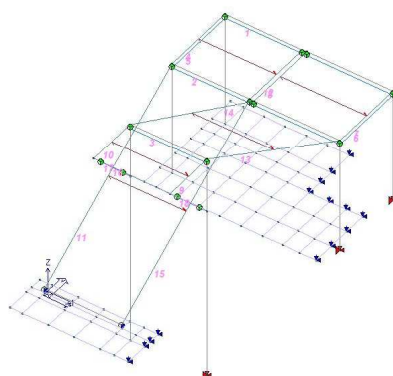
scale\_fondazioni.PSP

15\_MOD\_NUMERAZIONE\_D2



scale\_fondazioni.PSP

15\_MOD\_NUMERAZIONE\_D2\_PILASTRATE



15\_MOD\_NUMERAZIONE\_D2\_TRAVATE

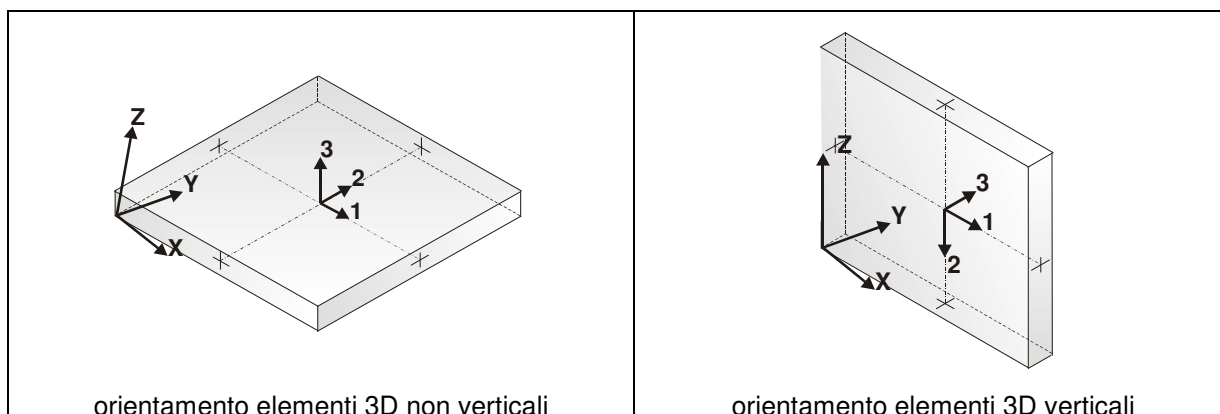
## MODELLAZIONE STRUTTURA: ELEMENTI SHELL

### LEGENDA TABELLA DATI SHELL

Il programma utilizza per la modellazione elementi a tre o quattro nodi denominati in generale shell.

Ogni elemento shell è individuato dai nodi I, J, K, L (L=I per gli elementi a tre nodi).

Ogni elemento è caratterizzato da un insieme di proprietà riportate in tabella che ne completano la modellazione.

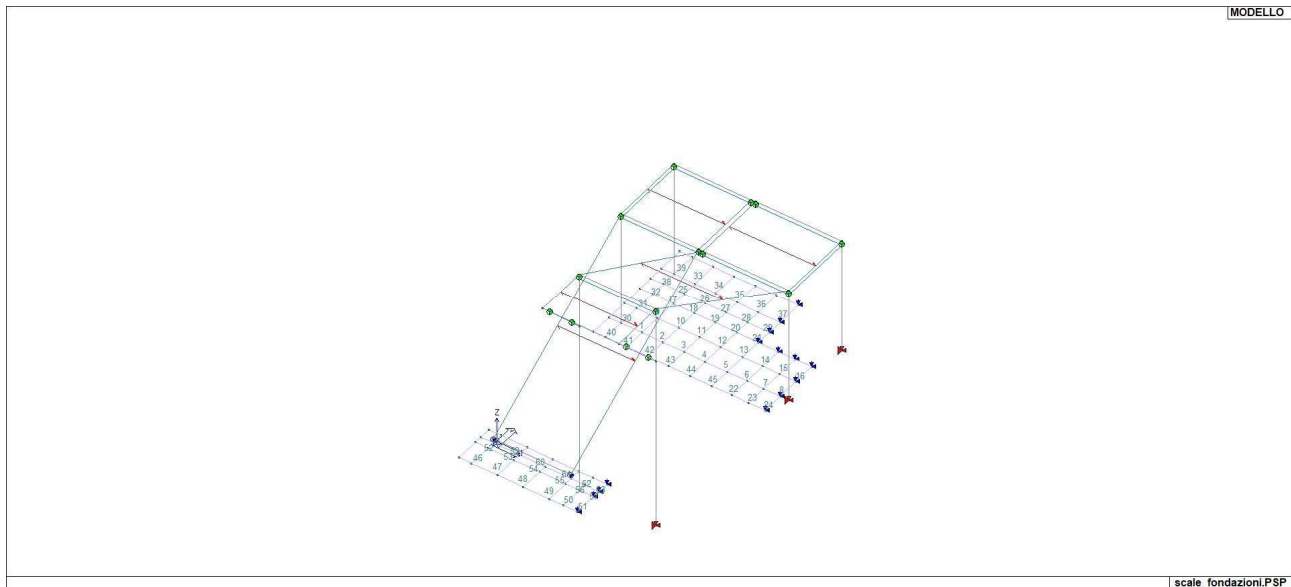


In particolare per ogni elemento viene indicato in tabella:

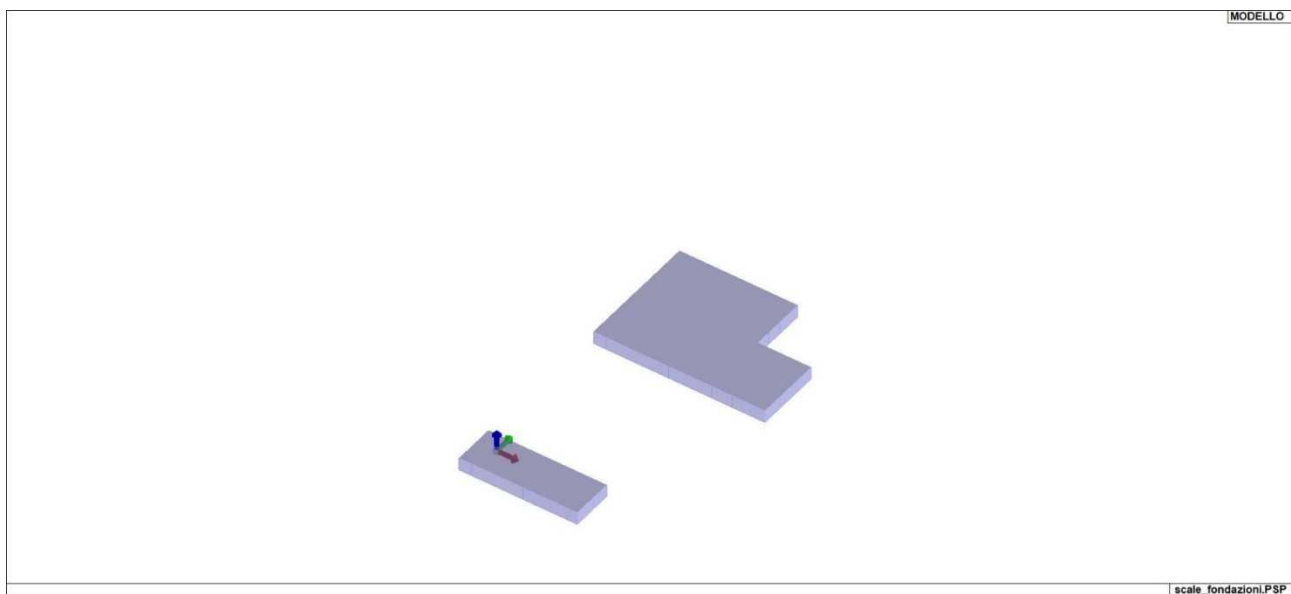
<b>Elem.</b>	numero dell'elemento
<b>Note</b>	codice di comportamento: <i>Guscio</i> (elemento guscio in elevazione non verticale) <i>Guscio fond.</i> (elemento guscio su suolo elastico) <i>Setto</i> (elemento guscio in elevazione verticale) <i>Membrana</i> (elemento guscio con comportamento membranale)
<b>Nodo I (J, K, L)</b>	numero del nodo I (J, K, L)
<b>Mat.</b>	codice del materiale assegnato all'elemento
<b>Spessore</b>	spessore dell'elemento (costante)
<b>Wink V</b>	costante di sottofondo (coefficiente di Winkler) per la modellazione del

	suolo elastico verticale
<b>Wink O</b>	costante di sottofondo (coefficiente di Winkler) per la modellazione del suolo elastico orizzontale

Elem.	Note	Nodo I	Nodo J	Nodo K	Nodo L	Mat.	Crit.	Spessore	Svincolo	Wink V	Wink O
								cm		daN/cm3	daN/cm3
1	Guscio fond.	10	35	36	37	4	2	30.0		1.00	1.00
2	Guscio fond.	35	38	39	36	4	2	30.0		1.00	1.00
3	Guscio fond.	38	40	41	39	4	2	30.0		1.00	1.00
4	Guscio fond.	40	42	43	41	4	2	30.0		1.00	1.00
5	Guscio fond.	42	44	45	43	4	2	30.0		1.00	1.00
6	Guscio fond.	44	46	47	45	4	2	30.0		1.00	1.00
7	Guscio fond.	46	48	49	47	4	2	30.0		1.00	1.00
8	Guscio fond.	48	83	84	49	4	2	30.0		1.00	1.00
9	Guscio fond.	37	36	51	52	4	2	30.0		1.00	1.00
10	Guscio fond.	36	39	53	51	4	2	30.0		1.00	1.00
11	Guscio fond.	39	41	54	53	4	2	30.0		1.00	1.00
12	Guscio fond.	41	43	55	54	4	2	30.0		1.00	1.00
13	Guscio fond.	43	45	56	55	4	2	30.0		1.00	1.00
14	Guscio fond.	45	47	57	56	4	2	30.0		1.00	1.00
15	Guscio fond.	47	49	58	57	4	2	30.0		1.00	1.00
16	Guscio fond.	49	84	59	58	4	2	30.0		1.00	1.00
17	Guscio fond.	52	51	60	61	4	2	30.0		1.00	1.00
18	Guscio fond.	51	53	62	60	4	2	30.0		1.00	1.00
19	Guscio fond.	53	54	63	62	4	2	30.0		1.00	1.00
20	Guscio fond.	54	55	64	63	4	2	30.0		1.00	1.00
21	Guscio fond.	55	56	65	64	4	2	30.0		1.00	1.00
22	Guscio fond.	90	91	46	44	4	2	30.0		1.00	1.00
23	Guscio fond.	91	92	48	46	4	2	30.0		1.00	1.00
24	Guscio fond.	92	68	83	48	4	2	30.0		1.00	1.00
25	Guscio fond.	61	60	69	7	4	2	30.0		1.00	1.00
26	Guscio fond.	60	62	70	69	4	2	30.0		1.00	1.00
27	Guscio fond.	62	63	71	70	4	2	30.0		1.00	1.00
28	Guscio fond.	63	64	72	71	4	2	30.0		1.00	1.00
29	Guscio fond.	64	65	73	72	4	2	30.0		1.00	1.00
30	Guscio fond.	77	10	37	82	4	2	30.0		1.00	1.00
31	Guscio fond.	82	37	52	75	4	2	30.0		1.00	1.00
32	Guscio fond.	75	52	61	66	4	2	30.0		1.00	1.00
33	Guscio fond.	7	69	76	78	4	2	30.0		1.00	1.00
34	Guscio fond.	69	70	79	76	4	2	30.0		1.00	1.00
35	Guscio fond.	70	71	80	79	4	2	30.0		1.00	1.00
36	Guscio fond.	71	72	81	80	4	2	30.0		1.00	1.00
37	Guscio fond.	72	73	50	81	4	2	30.0		1.00	1.00
38	Guscio fond.	66	61	7	74	4	2	30.0		1.00	1.00
39	Guscio fond.	74	7	78	67	4	2	30.0		1.00	1.00
40	Guscio fond.	93	85	10	77	4	2	30.0		1.00	1.00
41	Guscio fond.	85	86	35	10	4	2	30.0		1.00	1.00
42	Guscio fond.	86	87	38	35	4	2	30.0		1.00	1.00
43	Guscio fond.	87	88	40	38	4	2	30.0		1.00	1.00
44	Guscio fond.	88	89	42	40	4	2	30.0		1.00	1.00
45	Guscio fond.	89	90	44	42	4	2	30.0		1.00	1.00
46	Guscio fond.	99	100	101	102	4	2	30.0		1.00	1.00
47	Guscio fond.	100	103	104	101	4	2	30.0		1.00	1.00
48	Guscio fond.	103	105	106	104	4	2	30.0		1.00	1.00
49	Guscio fond.	105	107	108	106	4	2	30.0		1.00	1.00
50	Guscio fond.	107	95	3	108	4	2	30.0		1.00	1.00
51	Guscio fond.	95	97	111	3	4	2	30.0		1.00	1.00
52	Guscio fond.	102	101	1	113	4	2	30.0		1.00	1.00
53	Guscio fond.	101	104	114	1	4	2	30.0		1.00	1.00
54	Guscio fond.	104	106	115	114	4	2	30.0		1.00	1.00
55	Guscio fond.	106	108	2	115	4	2	30.0		1.00	1.00
56	Guscio fond.	108	3	117	2	4	2	30.0		1.00	1.00
57	Guscio fond.	3	111	118	117	4	2	30.0		1.00	1.00
58	Guscio fond.	113	1	109	98	4	2	30.0		1.00	1.00
59	Guscio fond.	1	114	110	109	4	2	30.0		1.00	1.00
60	Guscio fond.	114	115	112	110	4	2	30.0		1.00	1.00
61	Guscio fond.	115	2	116	112	4	2	30.0		1.00	1.00
62	Guscio fond.	2	117	94	116	4	2	30.0		1.00	1.00
63	Guscio fond.	117	118	96	94	4	2	30.0		1.00	1.00



16\_MOD\_NUMERAZIONE\_D3



16\_MOD\_SPESSORI\_D3

# MODELLAZIONE DELLA STRUTTURA: ELEMENTI SOLAIO-PANNELLO

## LEGENDA TABELLA DATI SOLAI-PANNELLI

Il programma utilizza per la modellazione elementi a tre o più nodi denominati in generale solaio o pannello. Ogni elemento solaio-pannello è individuato da una poligonale di nodi 1,2, ..., N.

L'elemento solaio è utilizzato in primo luogo per la modellazione dei carichi agenti sugli elementi strutturali. In secondo luogo può essere utilizzato per la corretta ripartizione delle forze orizzontali agenti nel proprio piano. L'elemento balcone è derivato dall'elemento solaio.

I carichi agenti sugli elementi solaio, raccolti in un archivio, sono direttamente assegnati agli elementi utilizzando le informazioni raccolte nell' archivio (es. i coefficienti combinatori). La tabella seguente riporta i dati utilizzati per la definizione dei carichi e delle masse.

L'elemento pannello è utilizzato solo per l'applicazione dei carichi, quali pesi delle tamponature o spinte dovute al vento o terre. In questo caso i carichi sono applicati in analogia agli altri elementi strutturali (si veda il cap. SCHEMATIZZAZIONE DEI CASI DI CARICO).

<b>Id.Arch.</b>	Identificativo dell' archivio
<b>Tipo</b>	Tipo di carico <b>Variab.</b> Carico variabile generico <b>Var. rid.</b> Carico variabile generico con riduzione in funzione dell' area (c.5.5. ...) <b>Neve</b> Carico di neve
<b>G1k</b>	carico permanente (comprensivo del peso proprio)
<b>G2k</b>	carico permanente non strutturale e non compiutamente definito
<b>Qk</b>	carico variabile
<b>Fatt. A</b>	fattore di riduzione del carico variabile (0.5 o 0.75) per tipo "Var.rid."
<b>S sis.</b>	fattore di riduzione del carico variabile per la definizione delle masse sismiche per D.M. 96 (vedi NOTA sul capitolo "normativa di riferimento")
<b>Psi 0</b>	Coefficiente combinatorio dei valori caratteristici delle azioni variabili: <b>per valore raro</b>
<b>Psi 1</b>	Coefficiente combinatorio dei valori caratteristici delle azioni variabili: <b>per valore frequente</b>
<b>Psi 2</b>	Coefficiente combinatorio dei valori caratteristici delle azioni variabili: <b>per valore quasi permanente</b>
<b>Psi S 2</b>	Coefficiente di combinazione che fornisce il valore quasi-permanente dell'azione variabile: <b>per la definizione delle masse sismiche</b>
<b>Fatt. Fi</b>	Coefficiente di correlazione dei carichi per edifici

Ogni elemento è caratterizzato da un insieme di proprietà riportate in tabella che ne completano la modellazione. In particolare per ogni elemento viene indicato in tabella:

<b>Elem</b>	numero dell'elemento
<b>Tipo</b>	codice di comportamento <div> <div><b>S</b></div> <div>elemento utilizzato solo per scarico</div> </div> <div> <div><b>C</b></div> <div>elemento utilizzato per scarico e per modellazione piano rigido</div> </div> <div> <div><b>P</b></div> <div>elemento utilizzato come pannello</div> </div> <div> <div><b>M</b></div> <div>scarico monodirezionale</div> </div> <div> <div><b>B</b></div> <div>scarico bidirezionale</div> </div>
<b>Id.Arch.</b>	Identificativo dell' archivio
<b>Mat</b>	codice del materiale assegnato all'elemento
<b>Spessore</b>	spessore dell'elemento (costante)
<b>Orditura</b>	angolo (rispetto all'asse X) della direzione dei travetti principali
<b>Gk</b>	carico permanente solaio (comprensivo del peso proprio)
<b>Qk</b>	carico variabile solaio
<b>Nodi</b>	numero dei nodi che definiscono l'elemento (5 per riga)

Nel caso in cui si sia proceduto alla progettazione dei solai con le tensioni ammissibili vengono riportate le massime tensioni nell'elemento (massima compressione nel calcestruzzo, massima tensione nell'acciaio, massima tensione tangenziale); nel caso in cui si sia proceduto alla progettazione con il metodo degli stati limite vengono riportati il rapporto  $x/d$  e le verifiche per sollecitazioni proporzionali nonché le verifiche in esercizio.

In particolare i simboli utilizzati in tabella assumono il seguente significato:

<b>Elem.</b>	numero identificativo dell'elemento
<b>Stato</b>	Codici di verifica relativi alle tensioni normali e alle tensioni tangenziali
<b>Note</b>	Viene riportato il codice relativo alla sezione(s) e relativo al materiale(m);
<b>Pos.</b>	Ascissa del punto di verifica
<b>F ist, F infi</b>	Frecce istantanee e a tempo infinito
<b>Momento</b>	Momento flettente
<b>Taglio</b>	Sollecitazione di taglio
<b>Af inf.</b>	Area di armatura longitudinale posta all'intradosso della trave
<b>Af sup.</b>	Area di armatura longitudinale posta all'estradosso della trave
<b>AfV</b>	Area dell'armatura atta ad assorbire le azioni di taglio
<b>Beff</b>	Base della sezione di cls per l'assorbimento del taglio
<b>simboli utilizzati con il metodo delle tensioni ammissibili:</b>	
<b>sc max</b>	Massima tensione di compressione del calcestruzzo
<b>sf max</b>	Massima tensione nell'acciaio
<b>tau max</b>	Massima tensione tangenziale nel cls
<b>simboli utilizzati con il metodo degli stati limite:</b>	
<b>x/d</b>	rapporto tra posizione dell'asse neutro e altezza utile alla rottura della sezione (per sola flessione)
<b>verif.</b>	rapporto $S_d/S_u$ con sollecitazioni ultime proporzionali: valore minore o uguale a 1 per verifica positiva
<b>Verif.V</b>	rapporto $S_d/S_u$ con sollecitazioni taglianti proporzionali: valore minore o uguale a 1 per verifica positiva
<b>rRfck</b>	rapporto tra la massima compressione nel calcestruzzo e la tensione $f_{ck}$ in combinazioni rare [normalizzato a 1]
<b>rFfck</b>	rapporto tra la massima compressione nel calcestruzzo e la tensione $f_{ck}$ in combinazioni frequenti [normalizzato a 1]
<b>rPfck</b>	rapporto tra la massima compressione nel calcestruzzo e la tensione $f_{ck}$ in combinazioni quasi permanenti [normalizzato a 1]
<b>rRfyk</b>	rapporto tra la massima tensione nell'acciaio e la tensione $f_{yk}$ in combinazioni frequenti [normalizzato a 1]
<b>rFyk</b>	rapporto tra la massima tensione nell'acciaio e la tensione $f_{yk}$ in combinazioni rare [normalizzato a 1]
<b>rPfyk</b>	rapporto tra la massima tensione nell'acciaio e la tensione $f_{yk}$ in combinazioni quasi permanenti [normalizzato a 1]
<b>wR</b>	apertura caratteristica delle fessure in combinazioni rare [mm]
<b>wF</b>	apertura caratteristica delle fessure in combinazioni frequenti [mm]
<b>wP</b>	apertura caratteristica delle fessure in combinazioni quasi permanenti [mm]

Nel caso in cui si sia proceduto alla verifica delle tamponature secondo il D.M. 17.01.2018 - §7.2.3 viene riportata una tabella riassuntiva delle verifiche degli elementi pannello. La verifica confronta i momenti sollecitanti indotti dal sisma con i momenti resistenti, secondo tre ipotesi, due basate sulla resistenza a pressoflessione della tamponatura ed una basata sul cinematismo a seguito della formazione di tre cerniere plastiche sulla tamponatura (rif. Ufficio di Vigilanza sulle Costruzioni, Provincia di Terni).

Qualora la tamponatura sia di tipo antiespulsione (nelle due possibili varianti ordinaria o armata) viene condotta una verifica con meccanismo ad arco con degrado di resistenza. La verifica confronta le pressioni sollecitanti indotte dal sisma con le pressioni resistenti che la tamponatura sviluppa attraverso il meccanismo ad arco. La verifica considera anche il degrado di resistenza dovuto al danneggiamento nel piano della tamponatura.

Per quest'ultima tamponatura sono disponibili, in funzione del materiale impiegato (materiale [52] o materiale [53]):

- **Tamponatura Antiespulsione ordinaria Poroton® Cis Edil** sp.30 cm; con metodo di verifica per meccanismo ad arco con degrado di resistenza, sviluppato attraverso i risultati di un progetto di ricerca



sperimentale condotto dall'Università degli Studi di Padova.

Utilizzabile per il materiale [52].

- **Tamponatura Antiespulsione armata Poroton® Cis Edil** sp.30 cm; con metodo di verifica per meccanismo ad arco con degrado di resistenza, sviluppato attraverso i risultati di un progetto di ricerca sperimentale condotto dall'Università degli Studi di Padova.  
Utilizzabile per il materiale [53].

La verifica è stata calibrata sulla base di prove sperimentali sul sistema di Tamponatura Antiespulsione anche in presenza di aperture.

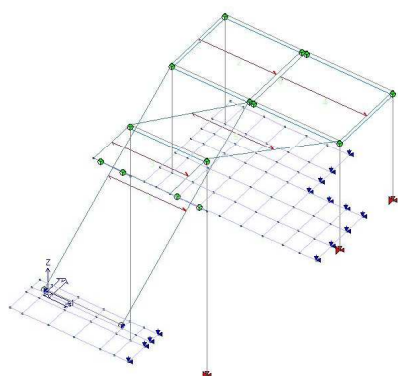
(rif. Rapporti di Prova redatti dal Dipartimento ICEA - Università degli Studi di Padova di test sperimentali condotti sul sistema Tamponatura Antiespulsione di Cis Edil)

In particolare i simboli utilizzati in tabella assumono il seguente significato:

<b>Elem.</b>	Numero identificativo dell'elemento
<b>Stato</b>	Codice di verifica
<b>Ver. c.c.</b>	Verifica nell'ipotesi di trave appoggiata con carico concentrato in mezzzeria
<b>Ver. c.d.</b>	Verifica nell'ipotesi di trave appoggiata con carico distribuito
<b>Ver. c.cin.</b>	Verifica nell'ipotesi di cinematismo con formazione di cerniere plastiche in appoggio e mezzzeria
<b>Ver. CIS</b>	Rapporto $p_a/p_r$ (valore minore o uguale a 1 per verifica positiva)
<b>Z</b>	Quota del baricentro dell'elemento
<b>T1</b>	Periodo proprio dell'edificio nella direzione di interesse (ortogonale al pannello)
<b>Ta</b>	Periodo proprio della parete
<b>Sa</b>	Accelerazione massima, adimensionalizzata allo SLV
<b><math>p_a</math></b>	Pressione sulla parete causata dall'azione sismica
<b><math>p_r</math></b>	Pressione resistente del meccanismo ad arco
<b>Drift</b>	Spostamento relativo interpiano allo SLV valutato secondo il D.M. 14.01.2018 - § 7.3.3.3
<b>Beta a</b>	Coef. riduttivo per tener conto del danneggiamento del piano dipendente dallo spostamento, ottenuto sperimentalmente

ID Arch.	Tipo	G1k	G2k	Qk	Fatt. A	s sis.	Psi 0	Psi 1	Psi 2	Psi S 2	Fatt. Fi
		daN/ m2	daN/ m2	daN/ m2							
1	Variab.	60.00		500.00		1.00	0.70	0.70	0.60	0.60	1.00

Elem.	Tipo	ID Arch.	Mat.	Spessore	Orditura	G1k	G2k	Qk	Nodo 1/6..	Nodo 2/7..	Nodo 3/8..	Nodo..	Nodo..
						daN/ m2	daN/ m2	daN/ m2					
1	SM	1	m=12	1.0	0.0	60.00		500.00	18	28	11	17	
2	SM	1	m=12	1.0	0.0	60.00		500.00	28	29	12	11	
3	SM	1	m=12	1.0	0.0	60.00		500.00	6	32	33	5	
4	SM	1	m=12	1.0	0.0	60.00		500.00	30	25	26	31	
5	SM	1	m=12	1.0	0.0	60.00		500.00	30	33	32	25	
6	SM	1	m=12	1.0	0.0	60.00		500.00	28	30	31	29	



17\_MOD\_NUMERAZIONE\_SOLAI

## MODELLAZIONE DELLE AZIONI

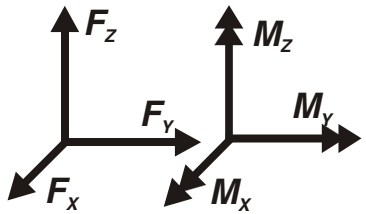
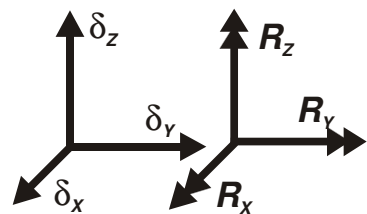
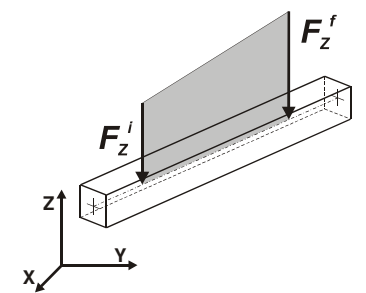
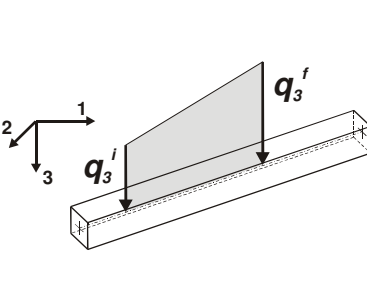
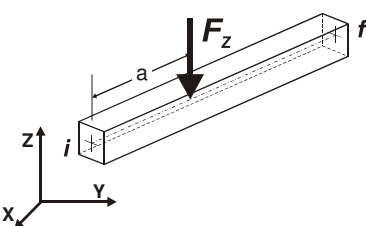
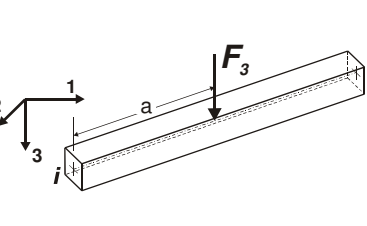
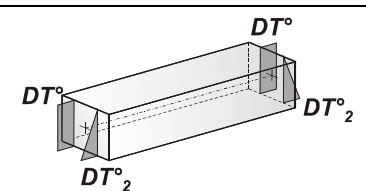
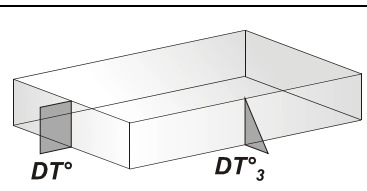
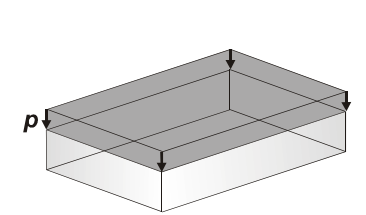
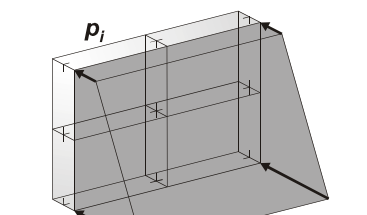
### LEGENDA TABELLA DATI AZIONI

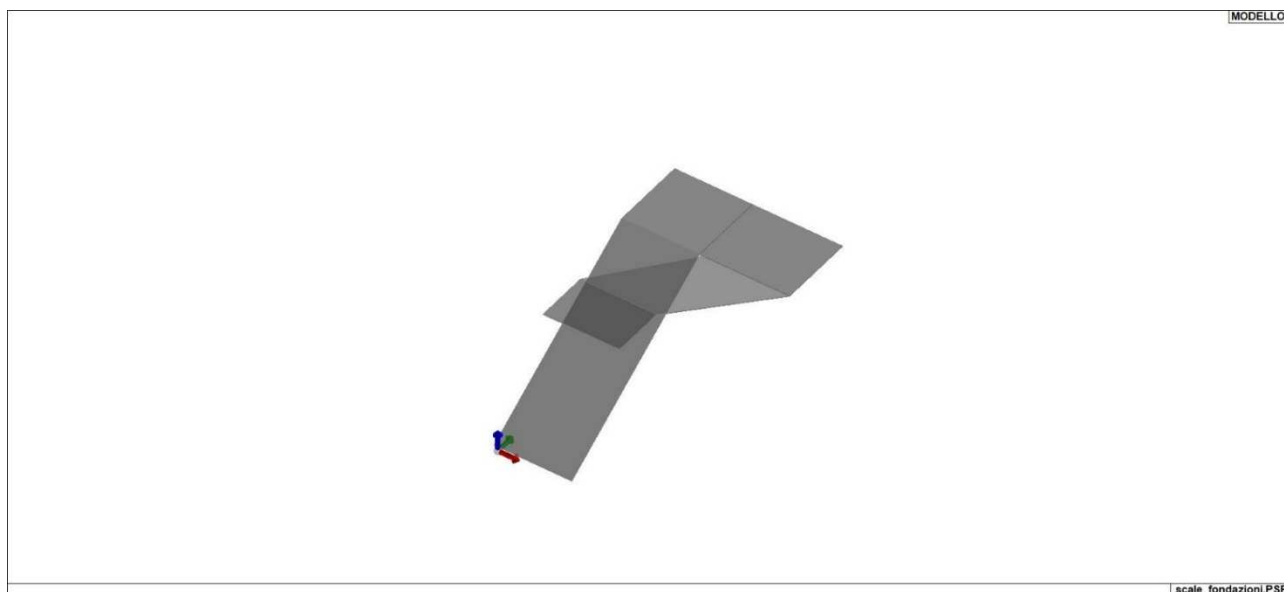
Il programma consente l'uso di diverse tipologie di carico (azioni). Le azioni utilizzate nella modellazione sono individuate da una sigla identificativa ed un codice numerico (gli elementi strutturali richiamano quest'ultimo nella propria descrizione). Per ogni azione applicata alla struttura viene di riportato il codice, il tipo e la sigla identificativa. Le tabelle successive dettagliano i valori caratteristici di ogni azione in relazione al tipo. Le tabelle riportano infatti i seguenti dati in relazione al tipo:

<b>1</b>	<b>carico concentrato nodale</b> 6 dati (forza $F_x$ , $F_y$ , $F_z$ , momento $M_x$ , $M_y$ , $M_z$ )
<b>2</b>	<b>spostamento nodale impresso</b> 6 dati (spostamento $T_x$ , $T_y$ , $T_z$ , rotazione $R_x$ , $R_y$ , $R_z$ )
<b>3</b>	<b>carico distribuito globale su elemento tipo trave</b> 7 dati ( $f_x$ , $f_y$ , $f_z$ , $m_x$ , $m_y$ , $m_z$ , ascissa di inizio carico) 7 dati ( $f_x$ , $f_y$ , $f_z$ , $m_x$ , $m_y$ , $m_z$ , ascissa di fine carico)
<b>4</b>	<b>carico distribuito locale su elemento tipo trave</b> 7 dati ( $f_1$ , $f_2$ , $f_3$ , $m_1$ , $m_2$ , $m_3$ , ascissa di inizio carico) 7 dati ( $f_1$ , $f_2$ , $f_3$ , $m_1$ , $m_2$ , $m_3$ , ascissa di fine carico)
<b>5</b>	<b>carico concentrato globale su elemento tipo trave</b> 7 dati ( $F_x$ , $F_y$ , $F_z$ , $M_x$ , $M_y$ , $M_z$ , ascissa di carico)
<b>6</b>	<b>carico concentrato locale su elemento tipo trave</b> 7 dati ( $F_1$ , $F_2$ , $F_3$ , $M_1$ , $M_2$ , $M_3$ , ascissa di carico)
<b>7</b>	<b>variazione termica applicata ad elemento tipo trave</b> 7 dati (variazioni termiche: uniforme, media e differenza in altezza e larghezza al nodo iniziale e finale)
<b>8</b>	<b>carico di pressione uniforme su elemento tipo piastra</b> 1 dato (pressione)
<b>9</b>	<b>carico di pressione variabile su elemento tipo piastra</b> 4 dati (pressione, quota, pressione, quota)
<b>10</b>	<b>variazione termica applicata ad elemento tipo piastra</b> 2 dati (variazioni termiche: media e differenza nello spessore)
<b>11</b>	<b>carico variabile generale su elementi tipo trave e piastra</b> 1 dato descrizione della tipologia

4 dati per segmento (posizione, valore, posizione, valore)  
la tipologia precisa l'ascissa di definizione, la direzione del carico, la modalità di carico  
e la larghezza d'influenza per gli elementi tipo trave

**12 gruppo di carichi con impronta su piastra**  
9 dati (numero di ripetizioni in direzione X e Y, valore di ciascun carico, posizione  
centrale del primo, dimensioni dell'impronta, interasse tra i carichi

 <p>Carico concentrato nodale</p>	 <p>Spostamento impresso</p>
 <p>Carico distribuito globale</p>	 <p>Carico distribuito locale</p>
 <p>Carico concentrato globale</p>	 <p>Carico concentrato locale</p>
 <p>Carico termico 2D</p>	 <p>Carico termico 3D</p>
 <p>Carico pressione uniforme</p>	 <p>Carico pressione variabile</p>



21\_CAR\_CARICHI\_SOLAI

## SCHEMATIZZAZIONE DEI CASI DI CARICO

### LEGENDA TABELLA CASI DI CARICO

Il programma consente l'applicazione di diverse tipologie di casi di carico.

Sono previsti i seguenti 11 tipi di casi di carico:

	<b>Sigla</b>	<b>Tipo</b>	<b>Descrizione</b>
<b>1</b>	<b>Ggk</b>	A	caso di carico comprensivo del peso proprio struttura
<b>2</b>	<b>Gk</b>	NA	caso di carico con azioni permanenti
<b>3</b>	<b>Qk</b>	NA	caso di carico con azioni variabili
<b>4</b>	<b>Gsk</b>	A	caso di carico comprensivo dei carichi permanenti sui solai e sulle coperture
<b>5</b>	<b>Qsk</b>	A	caso di carico comprensivo dei carichi variabili sui solai
<b>6</b>	<b>Qnk</b>	A	caso di carico comprensivo dei carichi di neve sulle coperture
<b>7</b>	<b>Qtk</b>	SA	caso di carico comprensivo di una variazione termica agente sulla struttura
<b>8</b>	<b>Qvk</b>	NA	caso di carico comprensivo di azioni da vento sulla struttura
<b>9</b>	<b>Esk</b>	SA	caso di carico sismico con analisi statica equivalente
<b>10</b>	<b>Edk</b>	SA	caso di carico sismico con analisi dinamica
<b>11</b>	<b>Etk</b>	NA	caso di carico comprensivo di azioni derivanti dall' incremento di spinta delle terre in condizione sismica
<b>12</b>	<b>Pk</b>	NA	caso di carico comprensivo di azioni derivanti da coazioni, cedimenti e precompressioni

Sono di tipo automatico A (ossia non prevedono introduzione dati da parte dell'utente) i seguenti casi di carico: 1-Ggk; 4-Gsk; 5-Qsk; 6-Qnk.

Sono di tipo semi-automatico SA (ossia prevedono una minima introduzione dati da parte dell'utente) i seguenti casi di carico:

7-Qtk, in quanto richiede solo il valore della variazione termica;

9-Esk e 10-Edk, in quanto richiedono il valore dell'angolo di ingresso del sisma e l'individuazione dei casi di carico partecipanti alla definizione delle masse.

Sono di tipo non automatico NA ossia prevedono la diretta applicazione di carichi generici agli elementi strutturali (si veda il precedente punto Modellazione delle Azioni) i restanti casi di carico.

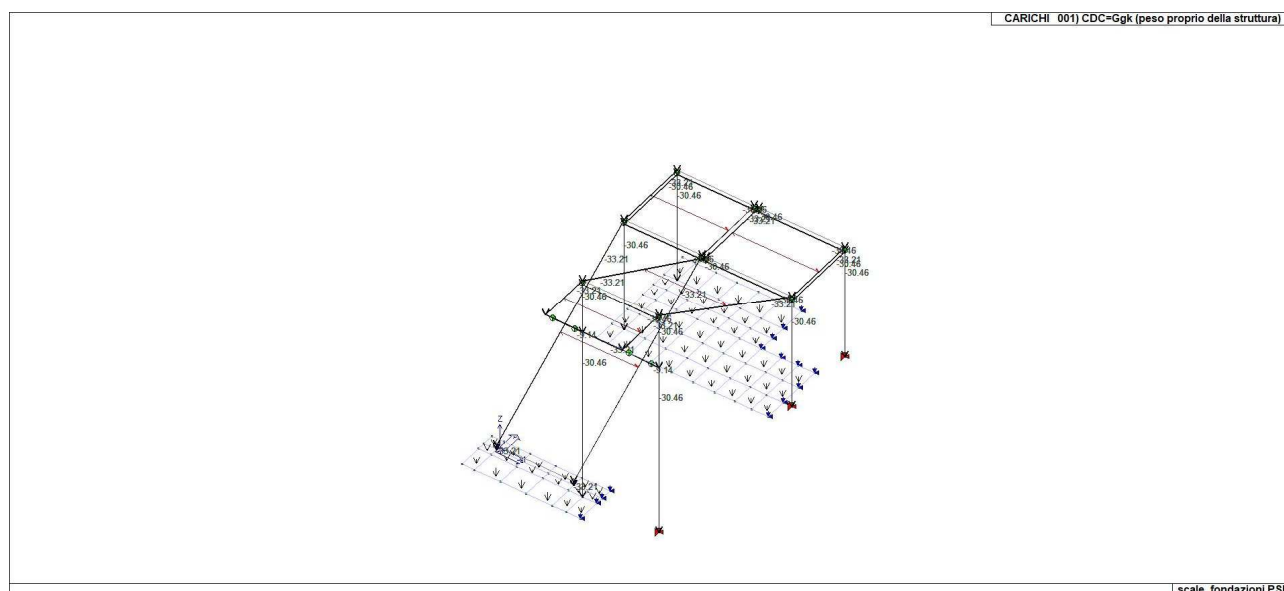
Nella tabella successiva vengono riportati i casi di carico agenti sulla struttura, con l'indicazione dei dati relativi al caso di carico stesso:

*Numero Tipo e Sigla identificativa, Valore di riferimento del caso di carico (se previsto).*

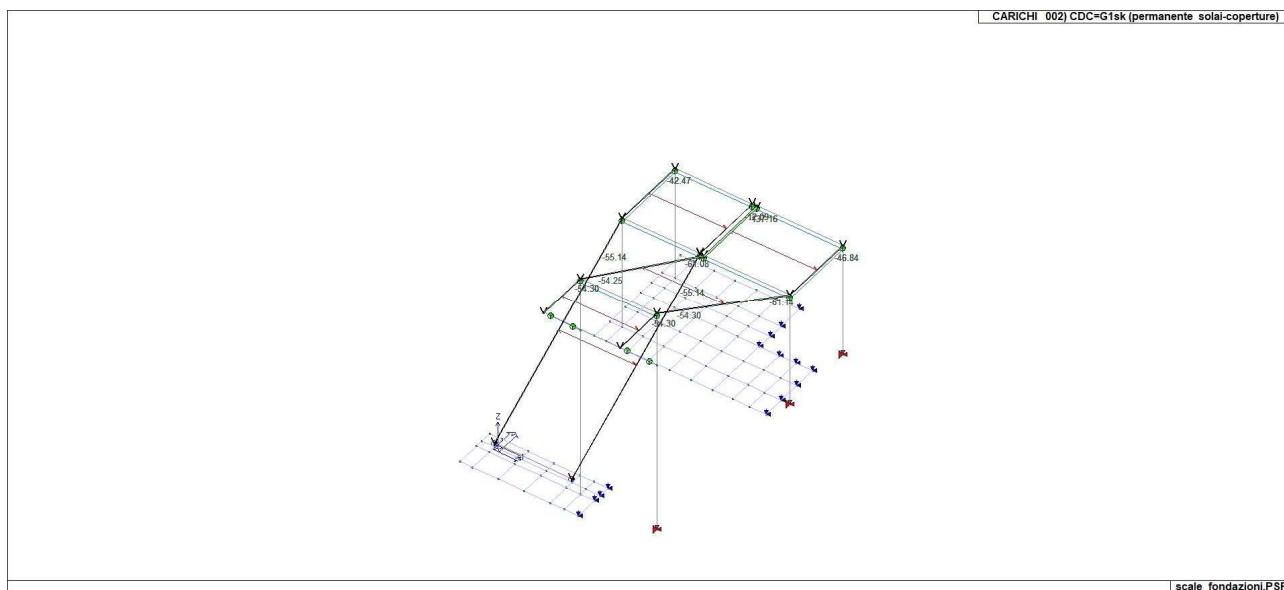
In successione, per i casi di carico non automatici, viene riportato l'elenco di nodi ed elementi direttamente caricati con la sigla identificativa del carico.

Per i casi di carico di tipo sismico (9-Esk e 10-Edk), viene riportata la tabella di definizione delle masse: per ogni caso di carico partecipante alla definizione delle masse viene indicata la relativa aliquota (partecipazione) considerata. Si precisa che per i caso di carico 5-Qsk e 6-Qnk la partecipazione è prevista localmente per ogni elemento solaio o copertura presente nel modello (si confronti il valore Sksol nel capitolo relativo agli elementi solaio) e pertanto la loro partecipazione è di norma pari a uno.

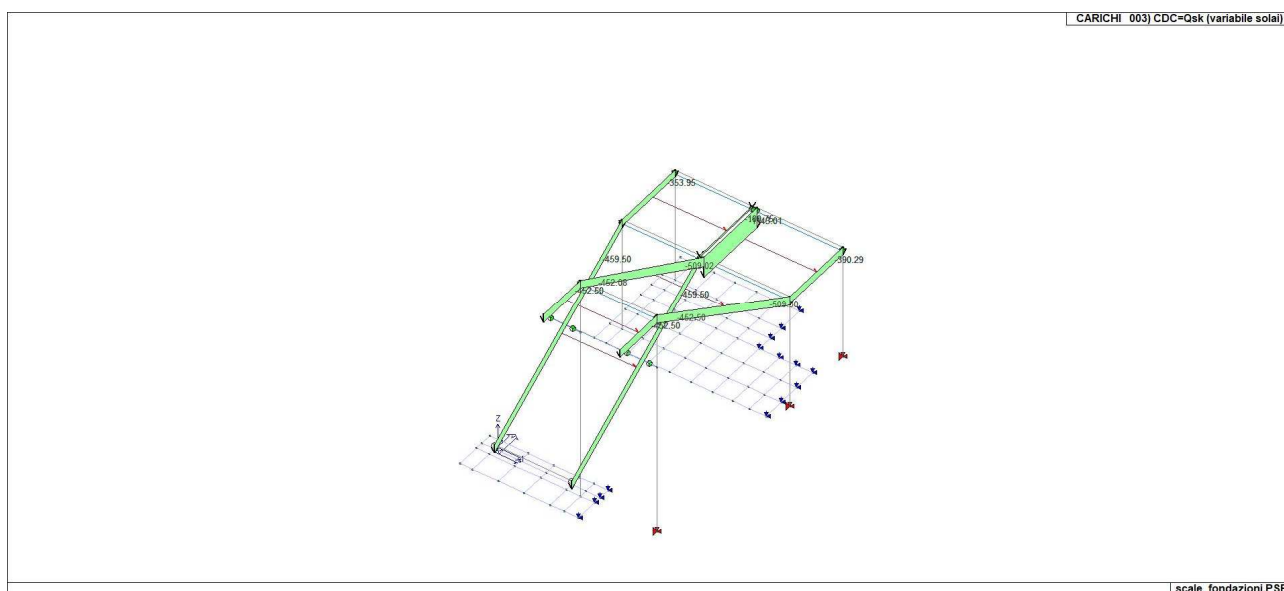
CDC	Tipo	Sigla Id	Note
1	Ggk	CDC=Ggk (peso proprio della struttura)	
2	Gsk	CDC=G1sk (permanente solai-coperture)	
3	Qsk	CDC=Qsk (variabile solai)	
4	Edk	CDC=Ed (dinamico SLU) alfa=0.0 (ecc. +)	partecipazione:1.00 per 1 CDC=Ggk (peso proprio della struttura)
			partecipazione:1.00 per 2 CDC=G1sk (permanente solai-coperture)
			partecipazione:1.00 per 3 CDC=Qsk (variabile solai)
5	Edk	CDC=Ed (dinamico SLU) alfa=0.0 (ecc. -)	come precedente CDC sismico
6	Edk	CDC=Ed (dinamico SLU) alfa=90.00 (ecc. +)	come precedente CDC sismico
7	Edk	CDC=Ed (dinamico SLU) alfa=90.00 (ecc. -)	come precedente CDC sismico
8	Edk	CDC=Ed (dinamico SLD) alfa=0.0 (ecc. +)	come precedente CDC sismico
9	Edk	CDC=Ed (dinamico SLD) alfa=0.0 (ecc. -)	come precedente CDC sismico
10	Edk	CDC=Ed (dinamico SLD) alfa=90.00 (ecc. +)	come precedente CDC sismico
11	Edk	CDC=Ed (dinamico SLD) alfa=90.00 (ecc. -)	come precedente CDC sismico
12	Edk	CDC=Ed (dinamico SLU) verticale	come precedente CDC sismico
13	Edk	CDC=Ed (dinamico SLO) alfa=0.0 (ecc. +)	come precedente CDC sismico
14	Edk	CDC=Ed (dinamico SLO) alfa=0.0 (ecc. -)	come precedente CDC sismico
15	Edk	CDC=Ed (dinamico SLO) alfa=90.00 (ecc. +)	come precedente CDC sismico
16	Edk	CDC=Ed (dinamico SLO) alfa=90.00 (ecc. -)	come precedente CDC sismico



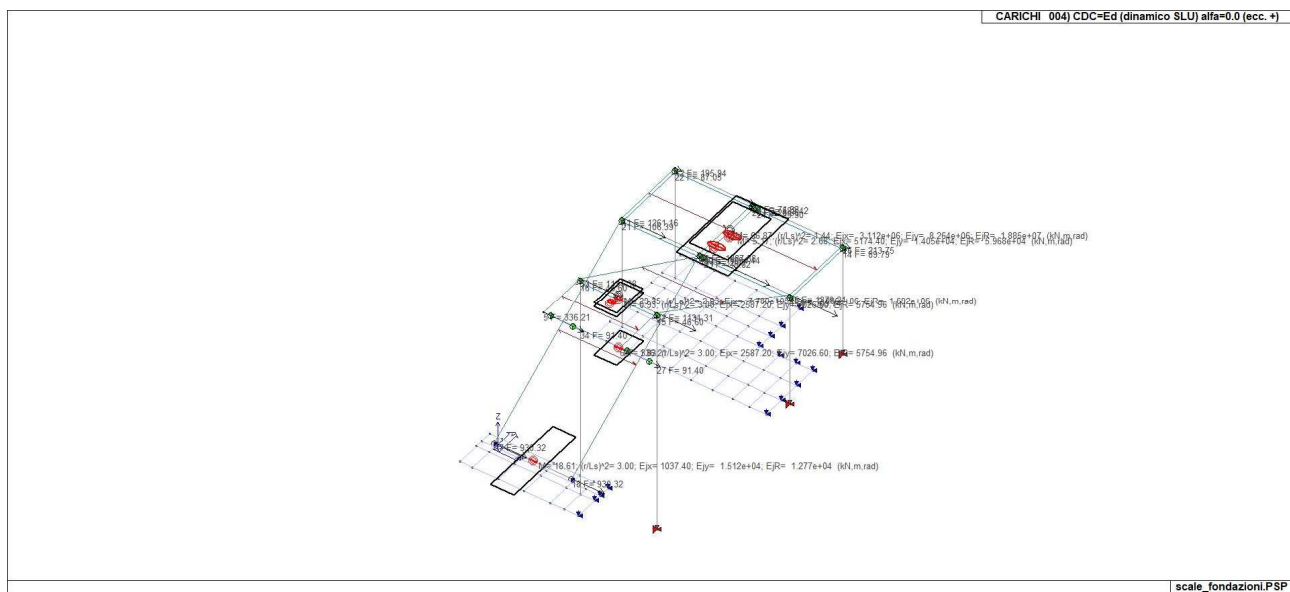
22\_CDC\_001\_CDC=Ggk (peso proprio della struttura)



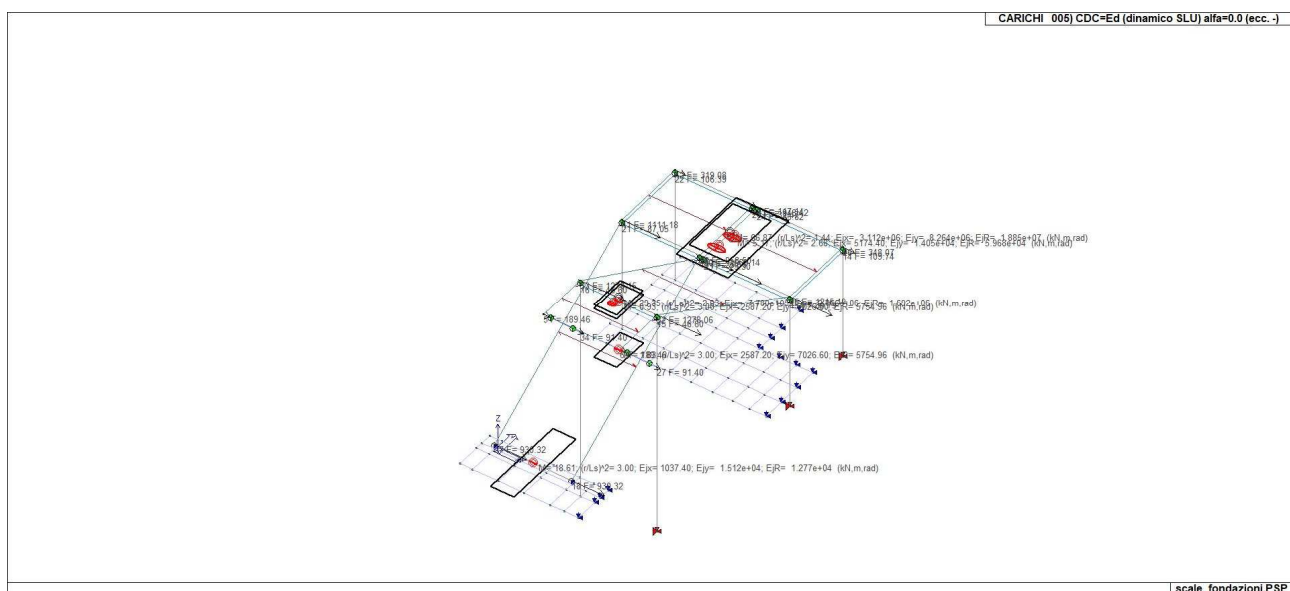
22\_CDC\_002\_CDC=G1sk (permanente solai-coperture)



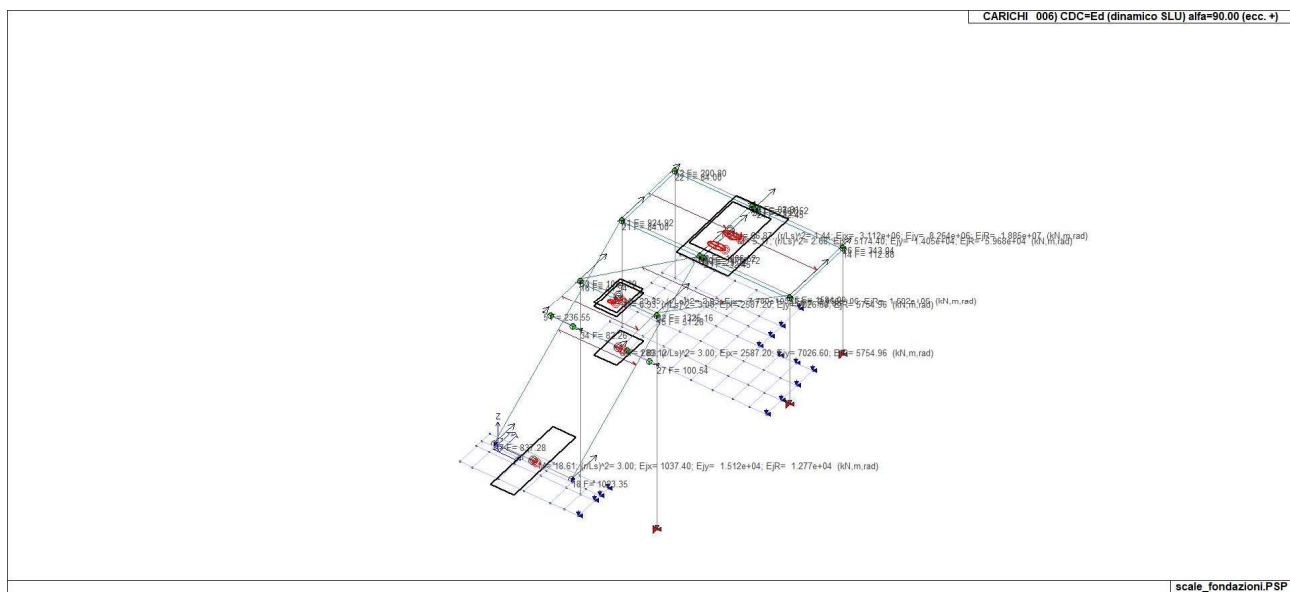
22\_CDC\_003\_CDC=Qsk (variabile solai)



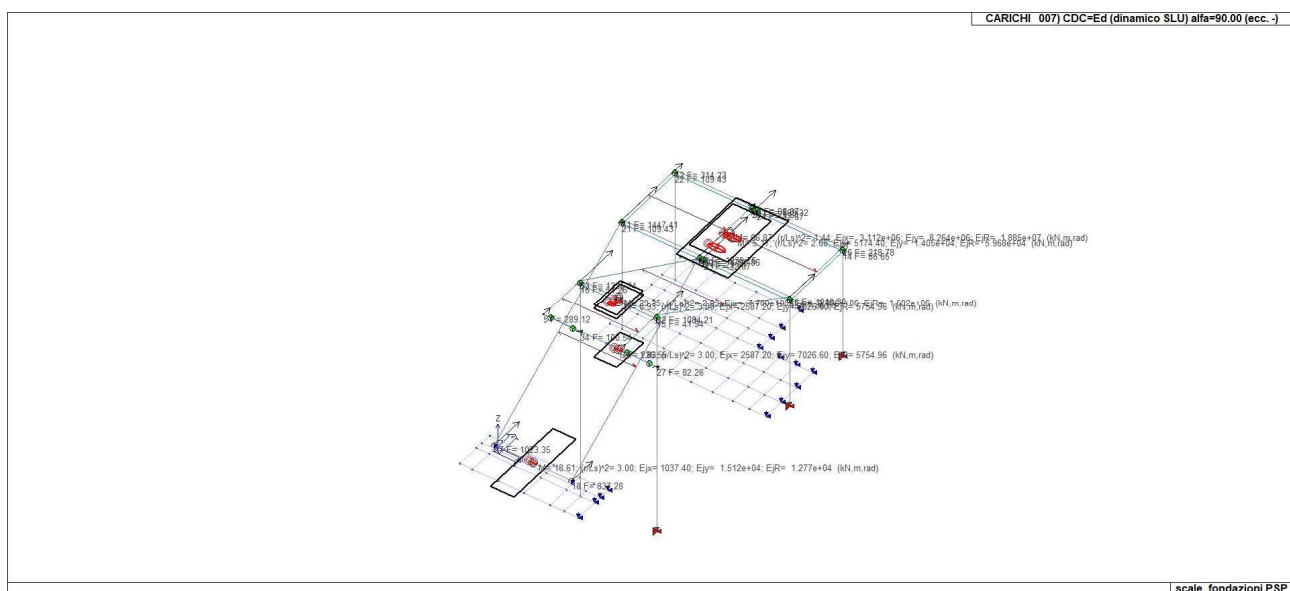
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22\_CDC\_005\_CDC=Ed (dinamico SLU) alfa=0.0 (ecc. -)

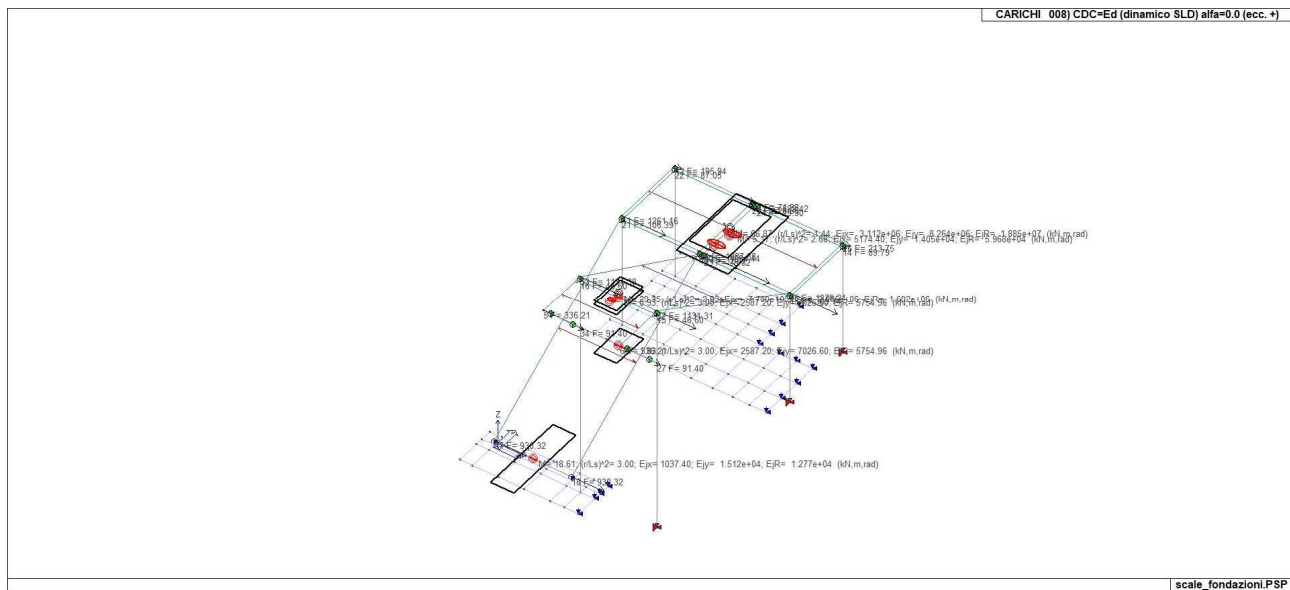


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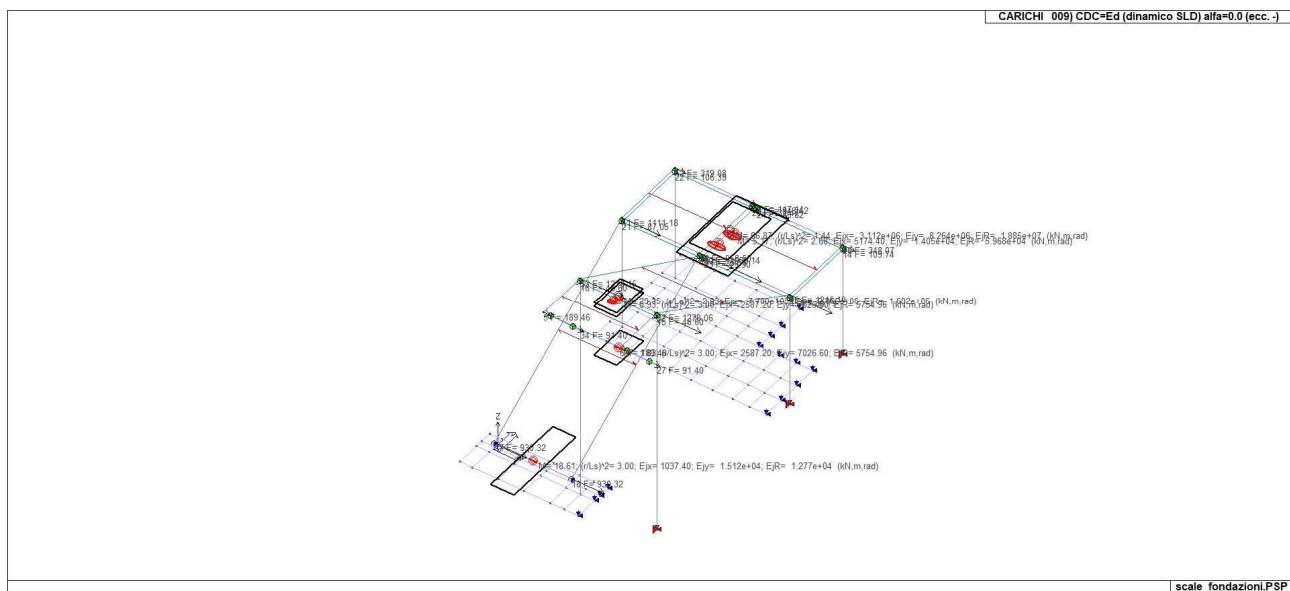


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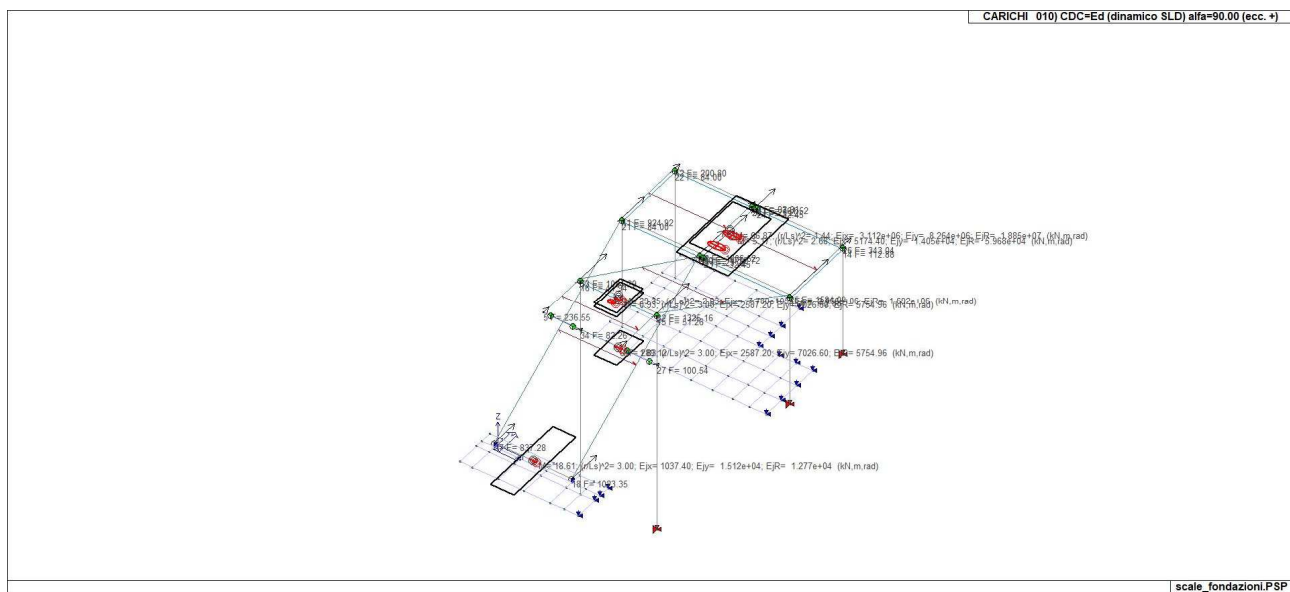




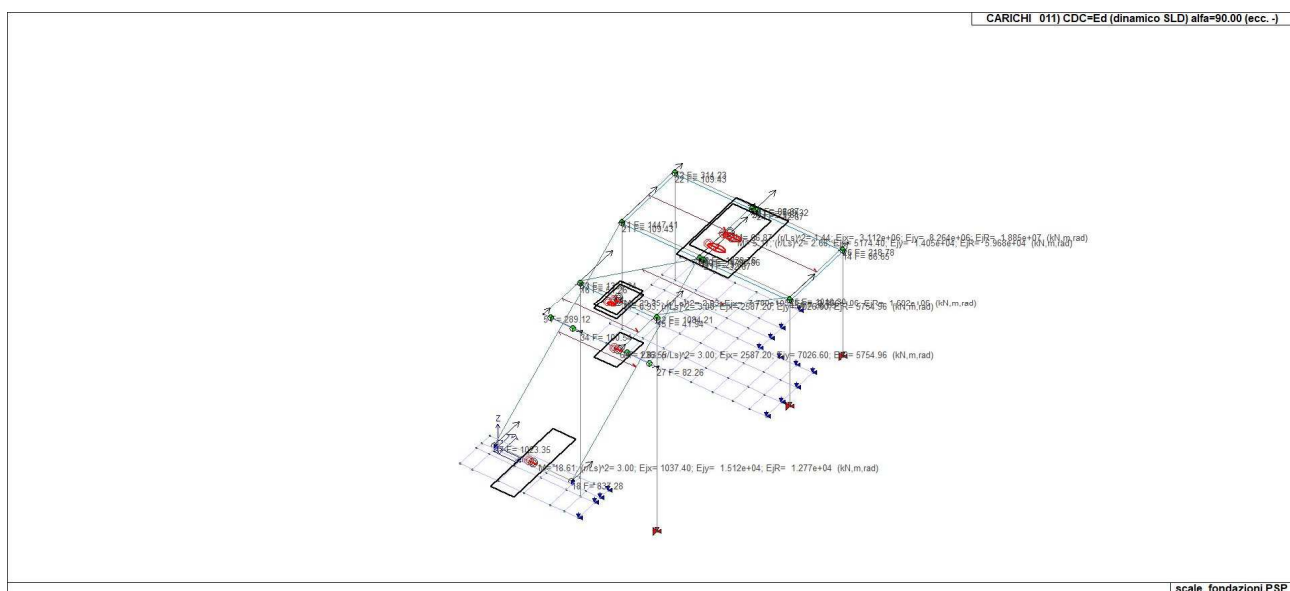
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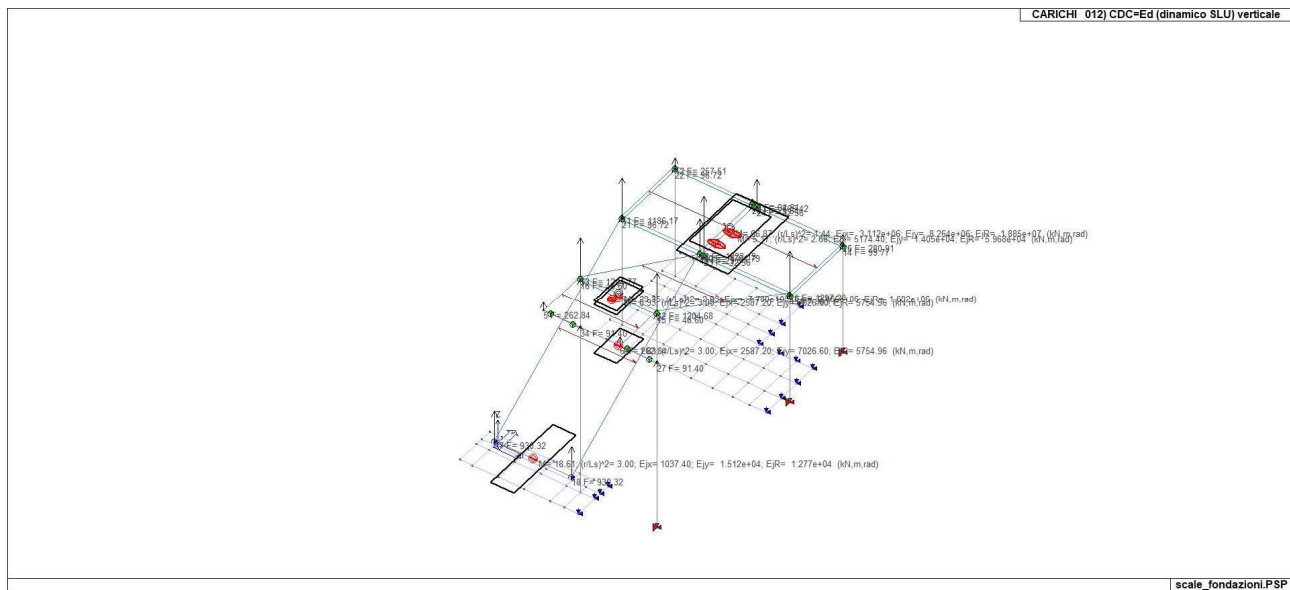
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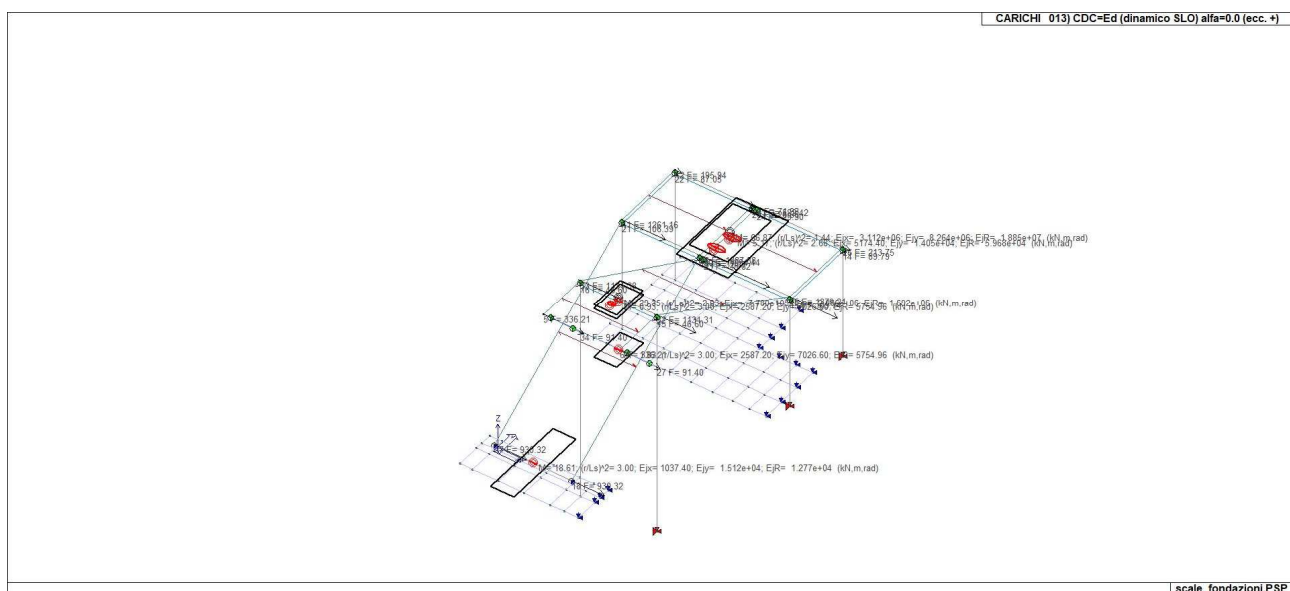
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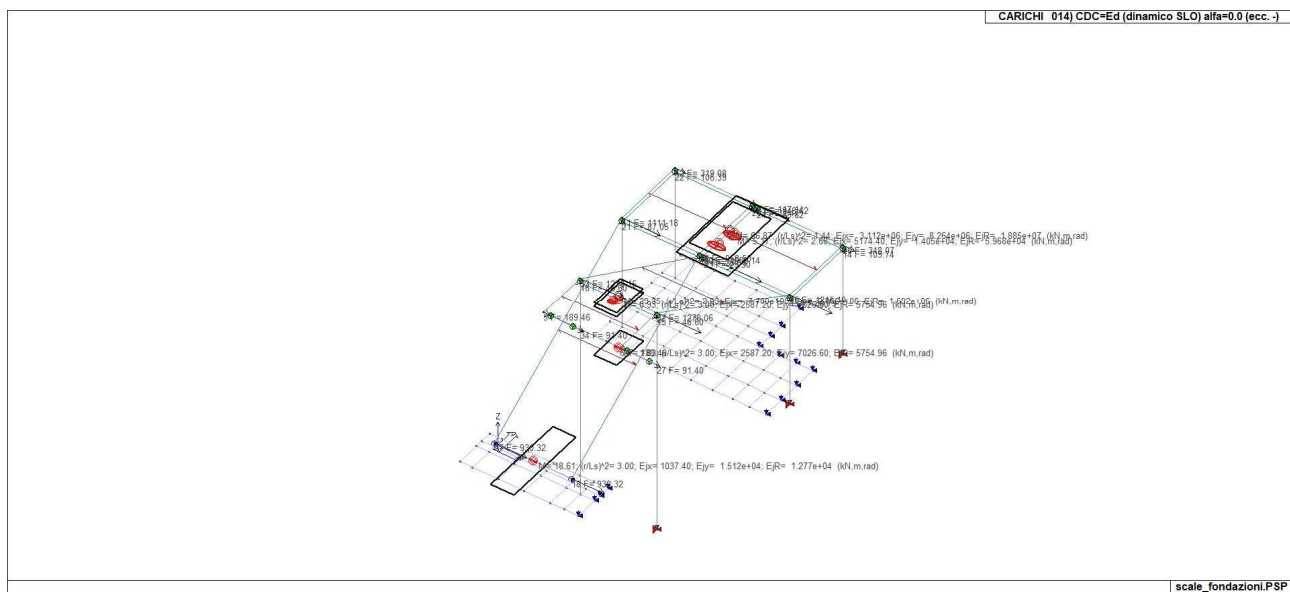
22\_CDC\_011\_CDC=Ed (dinamico SLD) alfa=90.00 (ecc. -)



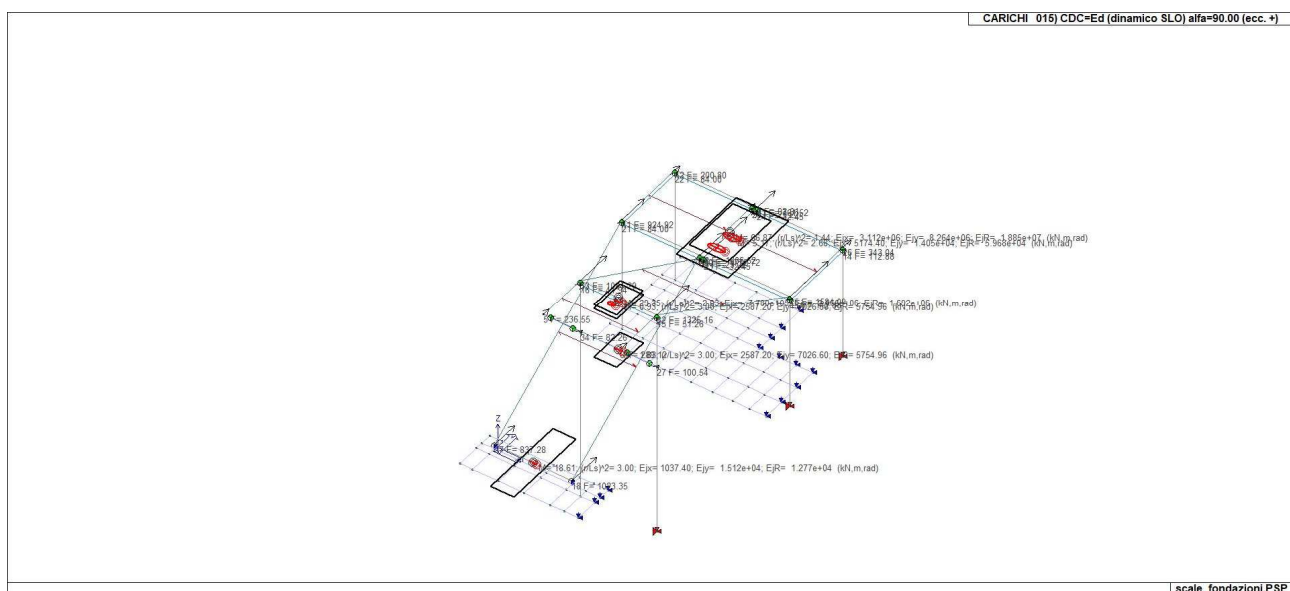
22\_CDC\_012\_CDC=Ed (dinamico SLU) verticale



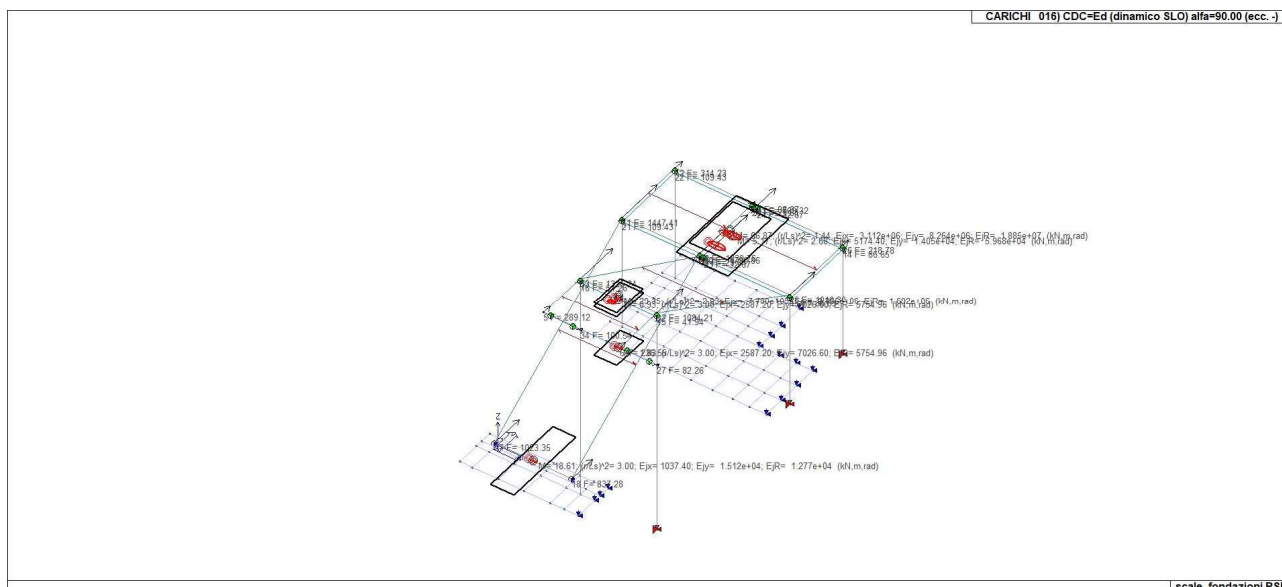
22\_CDC\_013\_CDC=Ed (dinamico SLO) alfa=0.0 (ecc. +)



22\_CDC\_014\_CDC=Ed (dinamico SLO) alfa=0.0 (ecc. -)



22\_CDC\_015\_CDC=Ed (dinamico SLO) alfa=90.00 (ecc. +)



22\_CDC\_016\_CDC=Ed (dinamico SLO) alfa=90.00 (ecc. -)

## DEFINIZIONE DELLE COMBINAZIONI

### LEGENDA TABELLA COMBINAZIONI DI CARICO

Il programma combina i diversi tipi di casi di carico (CDC) secondo le regole previste dalla normativa vigente. Le combinazioni previste sono destinate al controllo di sicurezza della struttura ed alla verifica degli spostamenti e delle sollecitazioni.

La prima tabella delle combinazioni riportata di seguito comprende le seguenti informazioni: Numero, Tipo, Sigla identificativa. Una seconda tabella riporta il peso nella combinazione assunto per ogni caso di carico.

Ai fini delle verifiche degli stati limite si definiscono le seguenti combinazioni delle azioni:

#### **Combinazione fondamentale** SLU

$$\gamma G1 \cdot G1 + \gamma G2 \cdot G2 + \gamma P \cdot P + \gamma Q1 \cdot Qk1 + \gamma Q2 \cdot \psi 02 \cdot Qk2 + \gamma Q3 \cdot \psi 03 \cdot Qk3 + \dots$$

#### **Combinazione caratteristica** (rara) SLE

$$G1 + G2 + P + Qk1 + \psi 02 \cdot Qk2 + \psi 03 \cdot Qk3 + \dots$$

#### **Combinazione frequente** SLE

$$G1 + G2 + P + \psi 11 \cdot Qk1 + \psi 22 \cdot Qk2 + \psi 23 \cdot Qk3 + \dots$$

#### **Combinazione quasi permanente** SLE

$$G1 + G2 + P + \psi 21 \cdot Qk1 + \psi 22 \cdot Qk2 + \psi 23 \cdot Qk3 + \dots$$

#### **Combinazione sismica**, impiegata per gli stati limite ultimi e di esercizio connessi all'azione sismica E

$$E + G1 + G2 + P + \psi 21 \cdot Qk1 + \psi 22 \cdot Qk2 + \dots$$

#### **Combinazione eccezionale**, impiegata per gli stati limite connessi alle azioni eccezionali

$$G1 + G2 + Ad + P + \psi 21 \cdot Qk1 + \psi 22 \cdot Qk2 + \dots$$

Dove:

NTC 2018 Tabella 2.5.1

Destinazione d'uso/azione	$\psi 0$	$\psi 1$	$\psi 2$
Categoria A residenziali	0,70	0,50	0,30
Categoria B uffici	0,70	0,50	0,30
Categoria C ambienti suscettibili di affollamento	0,70	0,70	0,60
Categoria D ambienti ad uso commerciale	0,70	0,70	0,60
Categoria E biblioteche, archivi, magazzini,...	1,00	0,90	0,80
Categoria F Rimesse e parcheggi (autoveicoli <= 30kN)	0,70	0,70	0,60
Categoria G Rimesse e parcheggi (autoveicoli > 30kN)	0,70	0,50	0,30

<i>Categoria H Coperture</i>	<i>0,00</i>	<i>0,00</i>	<i>0,00</i>
<i>Vento</i>	<i>0,60</i>	<i>0,20</i>	<i>0,00</i>
<i>Neve a quota &lt;= 1000 m</i>	<i>0,50</i>	<i>0,20</i>	<i>0,00</i>
<i>Neve a quota &gt; 1000 m</i>	<i>0,70</i>	<i>0,50</i>	<i>0,20</i>
<i>Variazioni Termiche</i>	<i>0,60</i>	<i>0,50</i>	<i>0,00</i>

Nelle verifiche possono essere adottati in alternativa due diversi approcci progettuali:

- per l'approccio 1 si considerano due diverse combinazioni di gruppi di coefficienti di sicurezza parziali per le azioni, per i materiali e per la resistenza globale (combinazione 1 con coefficienti A1 e combinazione 2 con coefficienti A2),
- per l'approccio 2 si definisce un'unica combinazione per le azioni, per la resistenza dei materiali e per la resistenza globale (con coefficienti A1).

NTC 2018 Tabella 2.6.I

		Coefficiente $\gamma_f$	<b>EQU</b>	<b>A1</b>	<b>A2</b>
<i>Carichi permanenti</i>	<i>Favorevoli</i>	$\gamma_{G1}$	0,9	1,0	1,0
	<i>Sfavorevoli</i>		1,1	1,3	1,0
<i>Carichi permanenti non strutturali</i> <i>(Non compiutamente definiti)</i>	<i>Favorevoli</i>	$\gamma_{G2}$	0,8	0,8	0,8
	<i>Sfavorevoli</i>		1,5	1,5	1,3
<i>Carichi variabili</i>	<i>Favorevoli</i>	$\gamma_{Qi}$	0,0	0,0	0,0
	<i>Sfavorevoli</i>		1,5	1,5	1,3

<b>Cmb</b>	<b>Tipo</b>	<b>Sigla Id</b>
1	SLU	Comb. SLU A1 1
2	SLU	Comb. SLU A1 2
3	SLU	Comb. SLU A1 3
4	SLU	Comb. SLU A1 4
5	SLE(r)	Comb. SLE(rara) 5
6	SLE(r)	Comb. SLE(rara) 6
7	SLE(f)	Comb. SLE(freq.) 7
8	SLE(f)	Comb. SLE(freq.) 8
9	SLE(p)	Comb. SLE(perm.) 9
10	SLE(p)	Comb. SLE(perm.) 10
11	SLU	Comb. SLU A1 (SLV sism.) 11
12	SLU	Comb. SLU A1 (SLV sism.) 12
13	SLU	Comb. SLU A1 (SLV sism.) 13
14	SLU	Comb. SLU A1 (SLV sism.) 14
15	SLU	Comb. SLU A1 (SLV sism.) 15
16	SLU	Comb. SLU A1 (SLV sism.) 16
17	SLU	Comb. SLU A1 (SLV sism.) 17
18	SLU	Comb. SLU A1 (SLV sism.) 18
19	SLU	Comb. SLU A1 (SLV sism.) 19
20	SLU	Comb. SLU A1 (SLV sism.) 20
21	SLU	Comb. SLU A1 (SLV sism.) 21
22	SLU	Comb. SLU A1 (SLV sism.) 22
23	SLU	Comb. SLU A1 (SLV sism.) 23
24	SLU	Comb. SLU A1 (SLV sism.) 24
25	SLU	Comb. SLU A1 (SLV sism.) 25
26	SLU	Comb. SLU A1 (SLV sism.) 26
27	SLU	Comb. SLU A1 (SLV sism.) 27
28	SLU	Comb. SLU A1 (SLV sism.) 28
29	SLU	Comb. SLU A1 (SLV sism.) 29
30	SLU	Comb. SLU A1 (SLV sism.) 30
31	SLU	Comb. SLU A1 (SLV sism.) 31
32	SLU	Comb. SLU A1 (SLV sism.) 32
33	SLU	Comb. SLU A1 (SLV sism.) 33
34	SLU	Comb. SLU A1 (SLV sism.) 34
35	SLU	Comb. SLU A1 (SLV sism.) 35
36	SLU	Comb. SLU A1 (SLV sism.) 36
37	SLU	Comb. SLU A1 (SLV sism.) 37
38	SLU	Comb. SLU A1 (SLV sism.) 38
39	SLU	Comb. SLU A1 (SLV sism.) 39

<b>Cmb</b>	<b>Tipo</b>	<b>Sigla Id</b>
40	SLU	Comb. SLU A1 (SLV sism.) 40
41	SLU	Comb. SLU A1 (SLV sism.) 41
42	SLU	Comb. SLU A1 (SLV sism.) 42
43	SLU	Comb. SLU A1 (SLV sism.) 43
44	SLU	Comb. SLU A1 (SLV sism.) 44
45	SLU	Comb. SLU A1 (SLV sism.) 45
46	SLU	Comb. SLU A1 (SLV sism.) 46
47	SLU	Comb. SLU A1 (SLV sism.) 47
48	SLU	Comb. SLU A1 (SLV sism.) 48
49	SLU	Comb. SLU A1 (SLV sism.) 49
50	SLU	Comb. SLU A1 (SLV sism.) 50
51	SLU	Comb. SLU A1 (SLV sism.) 51
52	SLU	Comb. SLU A1 (SLV sism.) 52
53	SLU	Comb. SLU A1 (SLV sism.) 53
54	SLU	Comb. SLU A1 (SLV sism.) 54
55	SLU	Comb. SLU A1 (SLV sism.) 55
56	SLU	Comb. SLU A1 (SLV sism.) 56
57	SLU	Comb. SLU A1 (SLV sism.) 57
58	SLU	Comb. SLU A1 (SLV sism.) 58
59	SLU	Comb. SLU A1 (SLV sism.) 59
60	SLU	Comb. SLU A1 (SLV sism.) 60
61	SLU	Comb. SLU A1 (SLV sism.) 61
62	SLU	Comb. SLU A1 (SLV sism.) 62
63	SLU	Comb. SLU A1 (SLV sism.) 63
64	SLU	Comb. SLU A1 (SLV sism.) 64
65	SLU	Comb. SLU A1 (SLV sism.) 65
66	SLU	Comb. SLU A1 (SLV sism.) 66
67	SLU	Comb. SLU A1 (SLV sism.) 67
68	SLU	Comb. SLU A1 (SLV sism.) 68
69	SLU	Comb. SLU A1 (SLV sism.) 69
70	SLU	Comb. SLU A1 (SLV sism.) 70
71	SLU	Comb. SLU A1 (SLV sism.) 71
72	SLU	Comb. SLU A1 (SLV sism.) 72
73	SLU	Comb. SLU A1 (SLV sism.) 73
74	SLU	Comb. SLU A1 (SLV sism.) 74
75	SLD(sis)	Comb. SLE (SLD Danno sism.) 75
76	SLD(sis)	Comb. SLE (SLD Danno sism.) 76
77	SLD(sis)	Comb. SLE (SLD Danno sism.) 77
78	SLD(sis)	Comb. SLE (SLD Danno sism.) 78

Cmb	Tipo	Sigla Id
79	SLD(sis)	Comb. SLE (SLD Danno sism.) 79
80	SLD(sis)	Comb. SLE (SLD Danno sism.) 80
81	SLD(sis)	Comb. SLE (SLD Danno sism.) 81
82	SLD(sis)	Comb. SLE (SLD Danno sism.) 82
83	SLD(sis)	Comb. SLE (SLD Danno sism.) 83
84	SLD(sis)	Comb. SLE (SLD Danno sism.) 84
85	SLD(sis)	Comb. SLE (SLD Danno sism.) 85
86	SLD(sis)	Comb. SLE (SLD Danno sism.) 86
87	SLD(sis)	Comb. SLE (SLD Danno sism.) 87
88	SLD(sis)	Comb. SLE (SLD Danno sism.) 88
89	SLD(sis)	Comb. SLE (SLD Danno sism.) 89
90	SLD(sis)	Comb. SLE (SLD Danno sism.) 90
91	SLD(sis)	Comb. SLE (SLD Danno sism.) 91
92	SLD(sis)	Comb. SLE (SLD Danno sism.) 92
93	SLD(sis)	Comb. SLE (SLD Danno sism.) 93
94	SLD(sis)	Comb. SLE (SLD Danno sism.) 94
95	SLD(sis)	Comb. SLE (SLD Danno sism.) 95
96	SLD(sis)	Comb. SLE (SLD Danno sism.) 96
97	SLD(sis)	Comb. SLE (SLD Danno sism.) 97
98	SLD(sis)	Comb. SLE (SLD Danno sism.) 98
99	SLD(sis)	Comb. SLE (SLD Danno sism.) 99
100	SLD(sis)	Comb. SLE (SLD Danno sism.) 100
101	SLD(sis)	Comb. SLE (SLD Danno sism.) 101
102	SLD(sis)	Comb. SLE (SLD Danno sism.) 102
103	SLD(sis)	Comb. SLE (SLD Danno sism.) 103
104	SLD(sis)	Comb. SLE (SLD Danno sism.) 104
105	SLD(sis)	Comb. SLE (SLD Danno sism.) 105
106	SLD(sis)	Comb. SLE (SLD Danno sism.) 106
107	SLU	Comb. SLU A1 (SLV sism.) 107
108	SLU	Comb. SLU A1 (SLV sism.) 108
109	SLU	Comb. SLU A1 (SLV sism.) 109
110	SLU	Comb. SLU A1 (SLV sism.) 110
111	SLU	Comb. SLU A1 (SLV sism.) 111
112	SLU	Comb. SLU A1 (SLV sism.) 112
113	SLU	Comb. SLU A1 (SLV sism.) 113
114	SLU	Comb. SLU A1 (SLV sism.) 114
115	SLU	Comb. SLU A1 (SLV sism.) 115
116	SLU	Comb. SLU A1 (SLV sism.) 116
117	SLU	Comb. SLU A1 (SLV sism.) 117
118	SLU	Comb. SLU A1 (SLV sism.) 118
119	SLU	Comb. SLU A1 (SLV sism.) 119
120	SLU	Comb. SLU A1 (SLV sism.) 120
121	SLU	Comb. SLU A1 (SLV sism.) 121
122	SLU	Comb. SLU A1 (SLV sism.) 122
123	SLU	Comb. SLU A1 (SLV sism.) 123
124	SLU	Comb. SLU A1 (SLV sism.) 124
125	SLU	Comb. SLU A1 (SLV sism.) 125

Cmb	Tipo	Sigla Id
126	SLU	Comb. SLU A1 (SLV sism.) 126
127	SLU	Comb. SLU A1 (SLV sism.) 127
128	SLU	Comb. SLU A1 (SLV sism.) 128
129	SLU	Comb. SLU A1 (SLV sism.) 129
130	SLU	Comb. SLU A1 (SLV sism.) 130
131	SLU	Comb. SLU A1 (SLV sism.) 131
132	SLU	Comb. SLU A1 (SLV sism.) 132
133	SLU	Comb. SLU A1 (SLV sism.) 133
134	SLU	Comb. SLU A1 (SLV sism.) 134
135	SLU	Comb. SLU A1 (SLV sism.) 135
136	SLU	Comb. SLU A1 (SLV sism.) 136
137	SLU	Comb. SLU A1 (SLV sism.) 137
138	SLU	Comb. SLU A1 (SLV sism.) 138
139	SLD(sis)	Comb. SLE (SLO Operativo sism.) 139
140	SLD(sis)	Comb. SLE (SLO Operativo sism.) 140
141	SLD(sis)	Comb. SLE (SLO Operativo sism.) 141
142	SLD(sis)	Comb. SLE (SLO Operativo sism.) 142
143	SLD(sis)	Comb. SLE (SLO Operativo sism.) 143
144	SLD(sis)	Comb. SLE (SLO Operativo sism.) 144
145	SLD(sis)	Comb. SLE (SLO Operativo sism.) 145
146	SLD(sis)	Comb. SLE (SLO Operativo sism.) 146
147	SLD(sis)	Comb. SLE (SLO Operativo sism.) 147
148	SLD(sis)	Comb. SLE (SLO Operativo sism.) 148
149	SLD(sis)	Comb. SLE (SLO Operativo sism.) 149
150	SLD(sis)	Comb. SLE (SLO Operativo sism.) 150
151	SLD(sis)	Comb. SLE (SLO Operativo sism.) 151
152	SLD(sis)	Comb. SLE (SLO Operativo sism.) 152
153	SLD(sis)	Comb. SLE (SLO Operativo sism.) 153
154	SLD(sis)	Comb. SLE (SLO Operativo sism.) 154
155	SLD(sis)	Comb. SLE (SLO Operativo sism.) 155
156	SLD(sis)	Comb. SLE (SLO Operativo sism.) 156
157	SLD(sis)	Comb. SLE (SLO Operativo sism.) 157
158	SLD(sis)	Comb. SLE (SLO Operativo sism.) 158
159	SLD(sis)	Comb. SLE (SLO Operativo sism.) 159
160	SLD(sis)	Comb. SLE (SLO Operativo sism.) 160
161	SLD(sis)	Comb. SLE (SLO Operativo sism.) 161
162	SLD(sis)	Comb. SLE (SLO Operativo sism.) 162
163	SLD(sis)	Comb. SLE (SLO Operativo sism.) 163
164	SLD(sis)	Comb. SLE (SLO Operativo sism.) 164
165	SLD(sis)	Comb. SLE (SLO Operativo sism.) 165
166	SLD(sis)	Comb. SLE (SLO Operativo sism.) 166
167	SLD(sis)	Comb. SLE (SLO Operativo sism.) 167
168	SLD(sis)	Comb. SLE (SLO Operativo sism.) 168
169	SLD(sis)	Comb. SLE (SLO Operativo sism.) 169
170	SLD(sis)	Comb. SLE (SLO Operativo sism.) 170

Cmb	CDC 1/15...	CDC 2/16...	CDC 3/17...	CDC 4/18...	CDC 5/19...	CDC 6/20...	CDC 7/21...	CDC 8/22...	CDC 9/23...	CDC 10/24...	CDC 11/25...	CDC 12/26...	CDC 13/27...	CDC 14/28...
1	1.30	1.30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	1.00	1.00	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	1.00	1.00	0.70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cmb	CDC 1/15...	CDC 2/16...	CDC 3/17...	CDC 4/18...	CDC 5/19...	CDC 6/20...	CDC 7/21...	CDC 8/22...	CDC 9/23...	CDC 10/24...	CDC 11/25...	CDC 12/26...	CDC 13/27...	CDC 14/28...
11	1.00 0.0	1.00 0.0	0.60	-1.00	0.0	-0.30	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
12	1.00 0.0	1.00 0.0	0.60	-1.00	0.0	-0.30	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
13	1.00 0.0	1.00 0.0	0.60	-1.00	0.0	0.30	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
14	1.00 0.0	1.00 0.0	0.60	-1.00	0.0	0.30	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
15	1.00 0.0	1.00 0.0	0.60	1.00	0.0	-0.30	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
16	1.00 0.0	1.00 0.0	0.60	1.00	0.0	-0.30	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
17	1.00 0.0	1.00 0.0	0.60	1.00	0.0	0.30	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
18	1.00 0.0	1.00 0.0	0.60	1.00	0.0	0.30	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
19	1.00 0.0	1.00 0.0	0.60	-1.00	0.0	0.0	-0.30	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
20	1.00 0.0	1.00 0.0	0.60	-1.00	0.0	0.0	-0.30	0.0	0.0	0.0	0.0	0.30	0.0	0.0
21	1.00 0.0	1.00 0.0	0.60	-1.00	0.0	0.0	0.30	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
22	1.00 0.0	1.00 0.0	0.60	-1.00	0.0	0.0	0.30	0.0	0.0	0.0	0.0	0.30	0.0	0.0
23	1.00 0.0	1.00 0.0	0.60	1.00	0.0	0.0	-0.30	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
24	1.00 0.0	1.00 0.0	0.60	1.00	0.0	0.0	-0.30	0.0	0.0	0.0	0.0	0.30	0.0	0.0
25	1.00 0.0	1.00 0.0	0.60	1.00	0.0	0.0	0.30	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
26	1.00 0.0	1.00 0.0	0.60	1.00	0.0	0.0	0.30	0.0	0.0	0.0	0.0	0.30	0.0	0.0
27	1.00 0.0	1.00 0.0	0.60	0.0	-1.00	-0.30	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
28	1.00 0.0	1.00 0.0	0.60	0.0	-1.00	-0.30	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
29	1.00 0.0	1.00 0.0	0.60	0.0	-1.00	0.30	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
30	1.00 0.0	1.00 0.0	0.60	0.0	-1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
31	1.00 0.0	1.00 0.0	0.60	0.0	1.00	-0.30	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
32	1.00 0.0	1.00 0.0	0.60	0.0	1.00	-0.30	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
33	1.00 0.0	1.00 0.0	0.60	0.0	1.00	0.30	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
34	1.00 0.0	1.00 0.0	0.60	0.0	1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
35	1.00 0.0	1.00 0.0	0.60	0.0	-1.00	0.0	-0.30	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
36	1.00 0.0	1.00 0.0	0.60	0.0	-1.00	0.0	-0.30	0.0	0.0	0.0	0.0	0.30	0.0	0.0
37	1.00 0.0	1.00 0.0	0.60	0.0	-1.00	0.0	0.30	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
38	1.00 0.0	1.00 0.0	0.60	0.0	-1.00	0.0	0.30	0.0	0.0	0.0	0.0	0.30	0.0	0.0
39	1.00 0.0	1.00 0.0	0.60	0.0	1.00	0.0	-0.30	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
40	1.00 0.0	1.00 0.0	0.60	0.0	1.00	0.0	-0.30	0.0	0.0	0.0	0.0	0.30	0.0	0.0
41	1.00 0.0	1.00 0.0	0.60	0.0	1.00	0.0	0.30	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
42	1.00 0.0	1.00 0.0	0.60	0.0	1.00	0.0	0.30	0.0	0.0	0.0	0.0	0.30	0.0	0.0
43	1.00 0.0	1.00 0.0	0.60	-0.30	0.0	-1.00	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
44	1.00 0.0	1.00 0.0	0.60	-0.30	0.0	-1.00	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
45	1.00 0.0	1.00 0.0	0.60	-0.30	0.0	1.00	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0



Cmb	CDC 1/15...	CDC 2/16...	CDC 3/17...	CDC 4/18...	CDC 5/19...	CDC 6/20...	CDC 7/21...	CDC 8/22...	CDC 9/23...	CDC 10/24...	CDC 11/25...	CDC 12/26...	CDC 13/27...	CDC 14/28...
46	1.00 0.0	1.00 0.0	0.60	-0.30	0.0	1.00	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
47	1.00 0.0	1.00 0.0	0.60	0.30	0.0	-1.00	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
48	1.00 0.0	1.00 0.0	0.60	0.30	0.0	-1.00	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
49	1.00 0.0	1.00 0.0	0.60	0.30	0.0	1.00	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
50	1.00 0.0	1.00 0.0	0.60	0.30	0.0	1.00	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
51	1.00 0.0	1.00 0.0	0.60	0.0	-0.30	-1.00	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
52	1.00 0.0	1.00 0.0	0.60	0.0	-0.30	-1.00	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
53	1.00 0.0	1.00 0.0	0.60	0.0	-0.30	1.00	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
54	1.00 0.0	1.00 0.0	0.60	0.0	-0.30	1.00	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
55	1.00 0.0	1.00 0.0	0.60	0.0	0.30	-1.00	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
56	1.00 0.0	1.00 0.0	0.60	0.0	0.30	-1.00	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
57	1.00 0.0	1.00 0.0	0.60	0.0	0.30	1.00	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
58	1.00 0.0	1.00 0.0	0.60	0.0	0.30	1.00	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
59	1.00 0.0	1.00 0.0	0.60	-0.30	0.0	0.0	-1.00	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
60	1.00 0.0	1.00 0.0	0.60	-0.30	0.0	0.0	-1.00	0.0	0.0	0.0	0.0	0.30	0.0	0.0
61	1.00 0.0	1.00 0.0	0.60	-0.30	0.0	0.0	1.00	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
62	1.00 0.0	1.00 0.0	0.60	-0.30	0.0	0.0	1.00	0.0	0.0	0.0	0.0	0.30	0.0	0.0
63	1.00 0.0	1.00 0.0	0.60	0.30	0.0	0.0	-1.00	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
64	1.00 0.0	1.00 0.0	0.60	0.30	0.0	0.0	-1.00	0.0	0.0	0.0	0.0	0.30	0.0	0.0
65	1.00 0.0	1.00 0.0	0.60	0.30	0.0	0.0	1.00	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
66	1.00 0.0	1.00 0.0	0.60	0.30	0.0	0.0	1.00	0.0	0.0	0.0	0.0	0.30	0.0	0.0
67	1.00 0.0	1.00 0.0	0.60	0.0	-0.30	0.0	-1.00	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
68	1.00 0.0	1.00 0.0	0.60	0.0	-0.30	0.0	-1.00	0.0	0.0	0.0	0.0	0.30	0.0	0.0
69	1.00 0.0	1.00 0.0	0.60	0.0	-0.30	0.0	1.00	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
70	1.00 0.0	1.00 0.0	0.60	0.0	-0.30	0.0	1.00	0.0	0.0	0.0	0.0	0.30	0.0	0.0
71	1.00 0.0	1.00 0.0	0.60	0.0	0.30	0.0	-1.00	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
72	1.00 0.0	1.00 0.0	0.60	0.0	0.30	0.0	-1.00	0.0	0.0	0.0	0.0	0.30	0.0	0.0
73	1.00 0.0	1.00 0.0	0.60	0.0	0.30	0.0	1.00	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
74	1.00 0.0	1.00 0.0	0.60	0.0	0.30	0.0	1.00	0.0	0.0	0.0	0.0	0.30	0.0	0.0
75	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	-1.00	0.0	-0.30	0.0	0.0	0.0	0.0
76	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	-1.00	0.0	0.30	0.0	0.0	0.0	0.0
77	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	1.00	0.0	-0.30	0.0	0.0	0.0	0.0
78	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	1.00	0.0	0.30	0.0	0.0	0.0	0.0
79	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	-1.00	0.0	0.0	-0.30	0.0	0.0	0.0
80	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	-1.00	0.0	0.0	0.30	0.0	0.0	0.0

Cmb	CDC 1/15...	CDC 2/16...	CDC 3/17...	CDC 4/18...	CDC 5/19...	CDC 6/20...	CDC 7/21...	CDC 8/22...	CDC 9/23...	CDC 10/24...	CDC 11/25...	CDC 12/26...	CDC 13/27...	CDC 14/28...
81	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	1.00	0.0	0.0	-0.30	0.0	0.0	0.0
82	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	1.00	0.0	0.0	0.30	0.0	0.0	0.0
83	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	-1.00	-0.30	0.0	0.0	0.0	0.0
84	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	-1.00	0.30	0.0	0.0	0.0	0.0
85	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	1.00	-0.30	0.0	0.0	0.0	0.0
86	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	1.00	0.30	0.0	0.0	0.0	0.0
87	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	-0.30	0.0	0.0	0.0
88	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	0.30	0.0	0.0	0.0
89	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	1.00	0.0	-0.30	0.0	0.0	0.0
90	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.30	0.0	0.0	0.0
91	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	-0.30	0.0	-1.00	0.0	0.0	0.0	0.0
92	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	-0.30	0.0	1.00	0.0	0.0	0.0	0.0
93	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.30	0.0	-1.00	0.0	0.0	0.0	0.0
94	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.30	0.0	1.00	0.0	0.0	0.0	0.0
95	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	-0.30	-1.00	0.0	0.0	0.0	0.0
96	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	-0.30	1.00	0.0	0.0	0.0	0.0
97	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.30	-1.00	0.0	0.0	0.0	0.0
98	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.30	1.00	0.0	0.0	0.0	0.0
99	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	-0.30	0.0	0.0	-1.00	0.0	0.0	0.0
100	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	-0.30	0.0	0.0	1.00	0.0	0.0	0.0
101	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.30	0.0	0.0	-1.00	0.0	0.0	0.0
102	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.30	0.0	0.0	1.00	0.0	0.0	0.0
103	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	-1.00	0.0	0.0	0.0
104	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	1.00	0.0	0.0	0.0
105	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.30	0.0	-1.00	0.0	0.0	0.0
106	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.30	0.0	1.00	0.0	0.0	0.0
107	1.00 0.0	1.00 0.0	0.60	-0.30	0.0	-0.30	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
108	1.00 0.0	1.00 0.0	0.60	-0.30	0.0	-0.30	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.0
109	1.00 0.0	1.00 0.0	0.60	-0.30	0.0	0.30	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
110	1.00 0.0	1.00 0.0	0.60	-0.30	0.0	0.30	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.0
111	1.00 0.0	1.00 0.0	0.60	0.30	0.0	-0.30	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
112	1.00 0.0	1.00 0.0	0.60	0.30	0.0	-0.30	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.0
113	1.00 0.0	1.00 0.0	0.60	0.30	0.0	0.30	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
114	1.00 0.0	1.00 0.0	0.60	0.30	0.0	0.30	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.0
115	1.00 0.0	1.00 0.0	0.60	-0.30	0.0	0.0	-0.30	0.0	0.0	0.0	0.0	-1.00	0.0	0.0

Cmb	CDC 1/15...	CDC 2/16...	CDC 3/17...	CDC 4/18...	CDC 5/19...	CDC 6/20...	CDC 7/21...	CDC 8/22...	CDC 9/23...	CDC 10/24...	CDC 11/25...	CDC 12/26...	CDC 13/27...	CDC 14/28...
116	1.00 0.0	1.00 0.0	0.60	-0.30	0.0	0.0	-0.30	0.0	0.0	0.0	0.0	1.00	0.0	0.0
117	1.00 0.0	1.00 0.0	0.60	-0.30	0.0	0.0	0.30	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
118	1.00 0.0	1.00 0.0	0.60	-0.30	0.0	0.0	0.30	0.0	0.0	0.0	0.0	1.00	0.0	0.0
119	1.00 0.0	1.00 0.0	0.60	0.30	0.0	0.0	-0.30	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
120	1.00 0.0	1.00 0.0	0.60	0.30	0.0	0.0	-0.30	0.0	0.0	0.0	0.0	1.00	0.0	0.0
121	1.00 0.0	1.00 0.0	0.60	0.30	0.0	0.0	0.30	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
122	1.00 0.0	1.00 0.0	0.60	0.30	0.0	0.0	0.30	0.0	0.0	0.0	0.0	1.00	0.0	0.0
123	1.00 0.0	1.00 0.0	0.60	0.0	-0.30	-0.30	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
124	1.00 0.0	1.00 0.0	0.60	0.0	-0.30	-0.30	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.0
125	1.00 0.0	1.00 0.0	0.60	0.0	-0.30	0.30	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
126	1.00 0.0	1.00 0.0	0.60	0.0	-0.30	0.30	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.0
127	1.00 0.0	1.00 0.0	0.60	0.0	0.30	-0.30	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
128	1.00 0.0	1.00 0.0	0.60	0.0	0.30	-0.30	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.0
129	1.00 0.0	1.00 0.0	0.60	0.0	0.30	0.30	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
130	1.00 0.0	1.00 0.0	0.60	0.0	0.30	0.30	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.0
131	1.00 0.0	1.00 0.0	0.60	0.0	-0.30	0.0	-0.30	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
132	1.00 0.0	1.00 0.0	0.60	0.0	-0.30	0.0	-0.30	0.0	0.0	0.0	0.0	1.00	0.0	0.0
133	1.00 0.0	1.00 0.0	0.60	0.0	-0.30	0.0	0.30	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
134	1.00 0.0	1.00 0.0	0.60	0.0	-0.30	0.0	0.30	0.0	0.0	0.0	0.0	1.00	0.0	0.0
135	1.00 0.0	1.00 0.0	0.60	0.0	0.30	0.0	-0.30	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
136	1.00 0.0	1.00 0.0	0.60	0.0	0.30	0.0	-0.30	0.0	0.0	0.0	0.0	1.00	0.0	0.0
137	1.00 0.0	1.00 0.0	0.60	0.0	0.30	0.0	0.30	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
138	1.00 0.0	1.00 0.0	0.60	0.0	0.30	0.0	0.30	0.0	0.0	0.0	0.0	1.00	0.0	0.0
139	1.00 -0.30	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.00	0.0
140	1.00 0.30	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.00	0.0
141	1.00 -0.30	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.0
142	1.00 0.30	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.0
143	1.00 0.0	1.00 -0.30	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.00	0.0
144	1.00 0.0	1.00 0.30	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.00	0.0
145	1.00 0.0	1.00 -0.30	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.0
146	1.00 0.0	1.00 0.30	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.0
147	1.00 -0.30	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.00
148	1.00 0.30	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.00
149	1.00 -0.30	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00
150	1.00 0.30	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00

Cmb	CDC 1/15...	CDC 2/16...	CDC 3/17...	CDC 4/18...	CDC 5/19...	CDC 6/20...	CDC 7/21...	CDC 8/22...	CDC 9/23...	CDC 10/24...	CDC 11/25...	CDC 12/26...	CDC 13/27...	CDC 14/28...
151	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.00
	0.0	-0.30												
152	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.00
	0.0	0.30												
153	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00
	0.0	-0.30												
154	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00
	0.0	0.30												
155	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.30	0.0
	-1.00	0.0												
156	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.30	0.0
	1.00	0.0												
157	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.0
	-1.00	0.0												
158	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.0
	1.00	0.0												
159	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.30
	-1.00	0.0												
160	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.30
	1.00	0.0												
161	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30
	-1.00	0.0												
162	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30
	1.00	0.0												
163	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.30	0.0
	0.0	-1.00												
164	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.30	0.0
	0.0	1.00												
165	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.0
	0.0	-1.00												
166	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.0
	0.0	1.00												
167	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.30
	0.0	-1.00												
168	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.30
	0.0	1.00												
169	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30
	0.0	-1.00												
170	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30
	0.0	1.00												

# AZIONE SISMICA

## VALUTAZIONE DELL' AZIONE SISMICA

L'azione sismica sulle costruzioni è valutata a partire dalla "pericolosità sismica di base", in condizioni ideali di sito di riferimento rigido con superficie topografica orizzontale.

Allo stato attuale, la pericolosità sismica su reticolo di riferimento nell'intervallo di riferimento è fornita dai dati pubblicati sul sito <http://esse1.mi.ingv.it/>. Per punti non coincidenti con il reticolo di riferimento e periodi di ritorno non contemplati direttamente si opera come indicato nell' allegato alle NTC (rispettivamente media pesata e interpolazione).

L' azione sismica viene definita in relazione ad un periodo di riferimento  $V_r$  che si ricava, per ciascun tipo di costruzione, moltiplicandone la vita nominale per il coefficiente d'uso (vedi tabella Parametri della struttura). Fissato il periodo di riferimento  $V_r$  e la probabilità di superamento  $P_{ver}$  associata a ciascuno degli stati limite considerati, si ottiene il periodo di ritorno  $T_r$  e i relativi parametri di pericolosità sismica (vedi tabella successiva):

$a_g$ : accelerazione orizzontale massima del terreno;

$F_o$ : valore massimo del fattore di amplificazione dello spettro in accelerazione orizzontale;

$T^*c$ : periodo di inizio del tratto a velocità costante dello spettro in accelerazione orizzontale;

### Parametri della struttura

Classe d'uso	Vita $V_n$ [anni]	Coeff. Uso	Periodo $V_r$ [anni]	Tipo di suolo	Categoria topografica
III	50.0	1.5	75.0	C	T1

Per la struttura in esame si sono adottati i parametri di pericolosità sismica da analisi di Risposta Sismica locale; si sono adottati i parametri spettrali riportati nelle seguenti tabelle; i parametri consentono la definizione degli spettri elastici come previsto al cap. 3.2 delle norme tecniche:

lo spettro di risposta elastico in accelerazione della componente orizzontale del moto sismico,  $S_e$ , è definito dalle seguenti espressioni:

$$\begin{aligned} 0 \leq T < T_B & \quad S_e(T) = a_g \cdot S \cdot \eta \cdot F_o \cdot \left[ \frac{T}{T_B} + \frac{1}{\eta \cdot F_o} \left( 1 - \frac{T}{T_B} \right) \right] \\ T_B \leq T < T_C & \quad S_e(T) = a_g \cdot S \cdot \eta \cdot F_o \\ T_C \leq T < T_D & \quad S_e(T) = a_g \cdot S \cdot \eta \cdot F_o \cdot \left( \frac{T_C}{T} \right) \\ T_D \leq T & \quad S_e(T) = a_g \cdot S \cdot \eta \cdot F_o \cdot \left( \frac{T_C \cdot T_D}{T^2} \right) \end{aligned}$$

Lo spettro di risposta elastico in accelerazione della componente verticale del moto sismico,  $S_{ve}$ , è definito dalle espressioni:

$$\begin{aligned} 0 \leq T < T_B & \quad S_{ve}(T) = a_g \cdot S \cdot \eta \cdot F_v \cdot \left[ \frac{T}{T_B} + \frac{1}{\eta \cdot F_o} \left( 1 - \frac{T}{T_B} \right) \right] \\ T_B \leq T < T_C & \quad S_{ve}(T) = a_g \cdot S \cdot \eta \cdot F_v \\ T_C \leq T < T_D & \quad S_{ve}(T) = a_g \cdot S \cdot \eta \cdot F_v \cdot \left( \frac{T_C}{T} \right) \\ T_D \leq T & \quad S_{ve}(T) = a_g \cdot S \cdot \eta \cdot F_v \cdot \left( \frac{T_C \cdot T_D}{T^2} \right) \end{aligned}$$

I valori di  $S_s$ ,  $T_B$ ,  $T_C$  e  $T_D$ , sono riportati nella seguente Tabella

Categoria di sottosuolo	$S_s$	$T_B$	$T_C$	$T_D$
A, B, C, D, E	1,0	0,05 s	0,15 s	1,0 s

S è il coefficiente che tiene conto della categoria di sottosuolo e delle condizioni topografiche mediante la relazione seguente  $S = S_s \cdot S_t$  (3.2.3); nel caso di RSL i valori sono unitari

Fo è il fattore che quantifica l'amplificazione spettrale massima, su sito in esame

Fv è il fattore che quantifica l'amplificazione spettrale massima verticale, in termini di accelerazione orizzontale massima del terreno ag su sito in esame

Tb è il periodo corrispondente all'inizio del tratto dello spettro ad accelerazione costante.

Tc è il periodo corrispondente all'inizio del tratto dello spettro a velocità costante.

Td è il periodo corrispondente all'inizio del tratto dello spettro a spostamento costante.

### Simbologia adottata nelle tabelle

Se(t)	Accelerazioni dello spettro di input
Tr	Periodo di ritorno
Tmin	Valore minore tra i tre periodi di vibrazione dell'edificio con massa partecipante più elevata
2Tmax	Valore maggiore tra i tre periodi di vibrazione dell'edificio con massa partecipante più elevata moltiplicato per due
Integrale RSL	Integrale dello spettro di risposta sismica locale valutato nell'intervallo compreso tra Tmin e 2Tmax
Integrale NTC*1.2	Integrale dello spettro da normativa amplificato del 20% valutato nell'intervallo compreso tra Tmin e 2Tmax
Rapporto	Rapporto tra Integrale RSL e Integrale NTC*1.2;
Esito confronto RSL vs NTC	<ul style="list-style-type: none"> <li>- Possibile l'uso dello spettro NTC se Rapporto minore di 1 e <math>RSL &lt; NTC \cdot 1.3</math></li> <li>- Non ammesso l'uso dello spettro NTC se <math>RSL \geq NTC \cdot 1.3</math> e Rapporto maggiore di 1</li> <li>- Non ammesso l'uso dello spettro NTC (30% superato) se <math>RSL \geq NTC \cdot 1.3</math></li> <li>- Non ammesso l'uso dello spettro NTC (rapporto integrali) se Rapporto maggiore di 1</li> </ul>
Se(t) RSL	Accelerazioni dello spettro di risposta sismica locale
Se(t) NTC*1.3	Accelerazioni dello spettro da normativa amplificate del 30%
Confronto ord.55	<p>Confronto tra lo spettro di risposta sismica locale e lo spettro da normativa amplificato del 30% nell'intervallo compreso tra Tmin e 2Tmax secondo l'Ordinanza n. 55 – 24/04/2018:</p> <ul style="list-style-type: none"> <li>- Non richiesto (ad di fuori dell'intervallo compreso tra Tmin e 2Tmax);</li> <li>- <math>RSL \leq NTC \cdot 1.3</math>;</li> <li>- <math>RSL &gt; NTC \cdot 1.3</math></li> </ul>
Esito confronto RSL vs NTC (0.7 A)	<p>Se lo spettro di risposta sismica locale è minore del 70% dello spettro da normativa non è consentito l'uso dello spettro di risposta sismica locale (7.2.6 NTC 2018):</p> <ul style="list-style-type: none"> <li>- Possibile l'uso dello spettro RSL;</li> <li>- Non ammesso l'uso di RSL (0.7 non superato).</li> </ul>
Se(t) NTC*0.7 suolo tipo A	70% delle Accelerazioni dello spettro da normativa valutato per categoria A di sottosuolo
Confronto NTC	<p>Confronto tra lo spettro di risposta sismica locale e il 70% dello spettro da normativa:</p> <ul style="list-style-type: none"> <li>- <math>RSL \geq NTC\_A \cdot 0.7</math>;</li> <li>- <math>RSL &lt; NTC\_A \cdot 0.7</math></li> </ul>

A seguire sono riportati i confronti tra pericolosità sismica RSL e NTC come previsto da Ordinanza n.55 – 24/04/2018 e NTC (7.2.6)

Id nodo	Longitudine	Latitudine	Distanza
			Km
Loc.	10.925	44.647	
16280	10.893	44.607	5.101
16281	10.963	44.608	5.260
16059	10.961	44.658	3.089
16058	10.891	44.656	2.860

SL	Pver	Tr	ag	Fo	T*c
		Anni	g		sec
SLO	81.0	45.0	0.099	2.873	0.360
SLD	63.0	75.0	0.124	2.843	0.374
SLV	10.0	712.0	0.327	2.790	0.396
SLC	5.0	1462.0	0.423	2.780	0.404

SL	ag	S	Fo	Fv	Tb	Tc	Td
	g				sec	sec	sec
SLO	0.099	1.000	2.873	1.222	0.120	0.360	1.997
SLD	0.124	1.000	2.843	1.354	0.125	0.374	2.098
SLV	0.327	1.000	2.790	2.155	0.132	0.396	2.909
SLC	0.423	1.000	2.780	2.442	0.135	0.404	3.293

File spettro in input	Normalizzazione
Z:/LAVORI 2021/ARCHILINEA/2780 - AUTODROMO MODENA/01 - TRIBUNE/SLV tribune.txt	Appendice 1) Ordinanza PCM n. 55 24/04/18

Periodo	Se(t) spettro input
[s]	[g]
0.01	0.319
0.01	0.319
0.01	0.319
0.01	0.320
0.01	0.320
0.02	0.320
0.02	0.321
0.02	0.321
0.02	0.322
0.02	0.322
0.03	0.323
0.03	0.325
0.03	0.328
0.04	0.335
0.04	0.355
0.04	0.366
0.05	0.368
0.05	0.377
0.06	0.390
0.07	0.399
0.07	0.424

Periodo	Se(t) spettro input
0.08	0.461
0.09	0.536
0.10	0.494
0.11	0.490
0.12	0.555
0.13	0.606
0.14	0.659
0.16	0.733
0.17	0.739
0.19	0.729
0.21	0.770
0.23	0.840
0.26	0.855
0.29	0.815
0.32	0.841
0.35	0.790
0.38	0.776
0.42	0.704
0.47	0.650
0.52	0.640
0.57	0.522
0.63	0.463

Periodo	Se(t) spettro input
0.70	0.412
0.77	0.377
0.85	0.328
0.93	0.271
1.03	0.242
1.14	0.193
1.26	0.179
1.39	0.171
1.53	0.158
1.69	0.144
1.86	0.106
2.06	0.092
2.27	0.073
2.51	0.060
2.77	0.048
3.05	0.040
3.37	0.033
3.72	0.026
4.10	0.019
4.53	0.013
5.00	0.009

Periodo di ritorno <Tr>	Accelerazione max <ag>	Amplificazione <Fo>	Inizio v=costante <T*c>
	[g]		[s]
30	0.084	2.842	0.339
50	0.104	2.881	0.366
72	0.122	2.843	0.373
101	0.142	2.846	0.380
140	0.167	2.788	0.380
201	0.199	2.753	0.383
475	0.281	2.790	0.392
975	0.369	2.790	0.399
2475	0.507	2.766	0.410

Confronto spettri RSL vs NTC	
Tmin	0.100
2Tmax	0.700
Integrale RSL	0.405
Integrale NTC*1.2	0.380
Rapporto	1.066
Esito confronto	Non ammesso l'uso dello spettro NTC

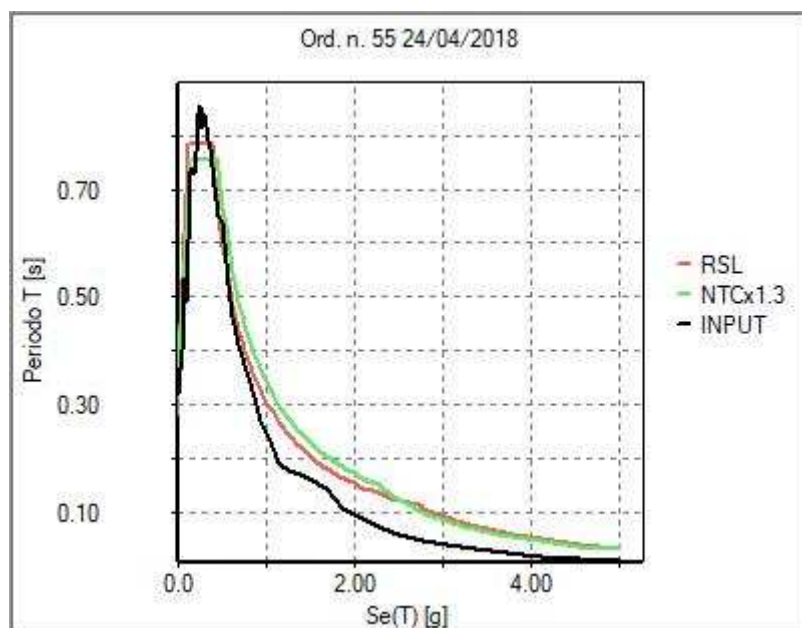


Fig. 1

Periodo [s]	Se(t) RSL [g]	Se(t) NTC*1.3 [g]	Confronto ord.55
0.000	0.281	0.310	Non richiesto
0.010	0.319	0.339	Non richiesto
0.011	0.323	0.342	Non richiesto
0.012	0.328	0.345	Non richiesto
0.013	0.333	0.349	Non richiesto
0.015	0.338	0.353	Non richiesto
0.016	0.344	0.357	Non richiesto
0.018	0.350	0.362	Non richiesto
0.020	0.358	0.368	Non richiesto
0.022	0.365	0.374	Non richiesto
0.024	0.374	0.381	Non richiesto
0.027	0.384	0.388	Non richiesto
0.030	0.395	0.396	Non richiesto
0.033	0.406	0.405	Non richiesto
0.036	0.419	0.415	Non richiesto
0.040	0.434	0.426	Non richiesto
0.044	0.450	0.438	Non richiesto
0.048	0.467	0.451	Non richiesto
0.053	0.487	0.465	Non richiesto
0.059	0.508	0.481	Non richiesto
0.065	0.531	0.499	Non richiesto
0.072	0.557	0.519	Non richiesto
0.079	0.586	0.541	Non richiesto
0.088	0.618	0.564	Non richiesto
0.097	0.653	0.591	Non richiesto
0.100	0.665	0.601	RSL > NTC*1.3
0.107	0.691	0.620	RSL > NTC*1.3
0.118	0.734	0.652	RSL > NTC*1.3
0.130	0.781	0.688	RSL > NTC*1.3
0.131	0.783	0.690	RSL > NTC*1.3
0.143	0.783	0.727	RSL > NTC*1.3
0.152	0.783	0.753	RSL > NTC*1.3

Periodo	Se(t) RSL	Se(t) NTC*1.3	Confronto ord.55
0.158	0.783	0.753	RSL > NTC*1.3
0.175	0.783	0.753	RSL > NTC*1.3
0.193	0.783	0.753	RSL > NTC*1.3
0.213	0.783	0.753	RSL > NTC*1.3
0.234	0.783	0.753	RSL > NTC*1.3
0.235	0.783	0.753	RSL > NTC*1.3
0.259	0.783	0.753	RSL > NTC*1.3
0.286	0.783	0.753	RSL > NTC*1.3
0.316	0.783	0.753	RSL > NTC*1.3
0.338	0.783	0.753	RSL > NTC*1.3
0.349	0.783	0.753	RSL > NTC*1.3
0.385	0.783	0.753	RSL > NTC*1.3
0.392	0.783	0.753	RSL > NTC*1.3
0.425	0.723	0.753	RSL <= NTC*1.3
0.442	0.695	0.753	RSL <= NTC*1.3
0.457	0.672	0.753	RSL <= NTC*1.3
0.469	0.655	0.734	RSL <= NTC*1.3
0.517	0.594	0.665	RSL <= NTC*1.3
0.545	0.563	0.631	RSL <= NTC*1.3
0.571	0.538	0.603	RSL <= NTC*1.3
0.630	0.487	0.546	RSL <= NTC*1.3
0.649	0.473	0.530	RSL <= NTC*1.3
0.695	0.442	0.495	RSL <= NTC*1.3
0.700	0.439	0.492	RSL <= NTC*1.3
0.753	0.408	0.457	Non richiesto
0.767	0.400	0.448	Non richiesto
0.847	0.363	0.406	Non richiesto
0.857	0.359	0.402	Non richiesto
0.935	0.329	0.368	Non richiesto
0.960	0.320	0.358	Non richiesto
1.032	0.298	0.334	Non richiesto
1.064	0.289	0.323	Non richiesto
1.139	0.270	0.302	Non richiesto



Periodo	Se(t) RSL	Se(t) NTC*1.3	Confronto ord.55
1.168	0.263	0.295	Non richiesto
1.257	0.244	0.274	Non richiesto
1.271	0.242	0.271	Non richiesto
1.375	0.223	0.250	Non richiesto
1.387	0.221	0.248	Non richiesto
1.479	0.208	0.233	Non richiesto
1.531	0.201	0.225	Non richiesto
1.582	0.194	0.217	Non richiesto
1.686	0.182	0.204	Non richiesto
1.689	0.182	0.204	Non richiesto
1.790	0.172	0.192	Non richiesto
1.864	0.165	0.185	Non richiesto
1.894	0.162	0.182	Non richiesto
1.997	0.154	0.172	Non richiesto
2.058	0.149	0.167	Non richiesto
2.101	0.146	0.164	Non richiesto
2.205	0.139	0.156	Non richiesto
2.252	0.136	0.153	Non richiesto
2.271	0.135	0.150	Non richiesto
2.308	0.133	0.145	Non richiesto
2.412	0.127	0.133	Non richiesto
2.507	0.123	0.123	Non richiesto
2.516	0.122	0.122	Non richiesto
2.619	0.117	0.113	Non richiesto
2.723	0.113	0.104	Non richiesto
2.766	0.109	0.101	Non richiesto
2.774	0.109	0.101	Non richiesto
2.825	0.105	0.097	Non richiesto
2.876	0.101	0.094	Non richiesto

Periodo	Se(t) RSL	Se(t) NTC*1.3	Confronto ord.55
2.927	0.098	0.090	Non richiesto
2.979	0.094	0.087	Non richiesto
3.030	0.091	0.084	Non richiesto
3.053	0.090	0.083	Non richiesto
3.081	0.088	0.082	Non richiesto
3.132	0.085	0.079	Non richiesto
3.183	0.083	0.076	Non richiesto
3.234	0.080	0.074	Non richiesto
3.285	0.077	0.072	Non richiesto
3.336	0.075	0.070	Non richiesto
3.370	0.074	0.068	Non richiesto
3.387	0.073	0.068	Non richiesto
3.438	0.071	0.066	Non richiesto
3.489	0.069	0.064	Non richiesto
3.540	0.067	0.062	Non richiesto
3.591	0.065	0.060	Non richiesto
3.642	0.063	0.058	Non richiesto
3.694	0.061	0.057	Non richiesto
3.719	0.060	0.056	Non richiesto
3.745	0.060	0.055	Non richiesto
3.796	0.058	0.054	Non richiesto
3.847	0.057	0.052	Non richiesto
3.898	0.055	0.051	Non richiesto
3.949	0.054	0.050	Non richiesto
4.000	0.052	0.048	Non richiesto
4.105	0.050	0.046	Non richiesto
4.530	0.041	0.038	Non richiesto
5.000	0.033	0.031	Non richiesto

Confronto spettro RSL vs NTC (0.7 A)	
Esito confronto	Possibile l'uso dello spettro RSL

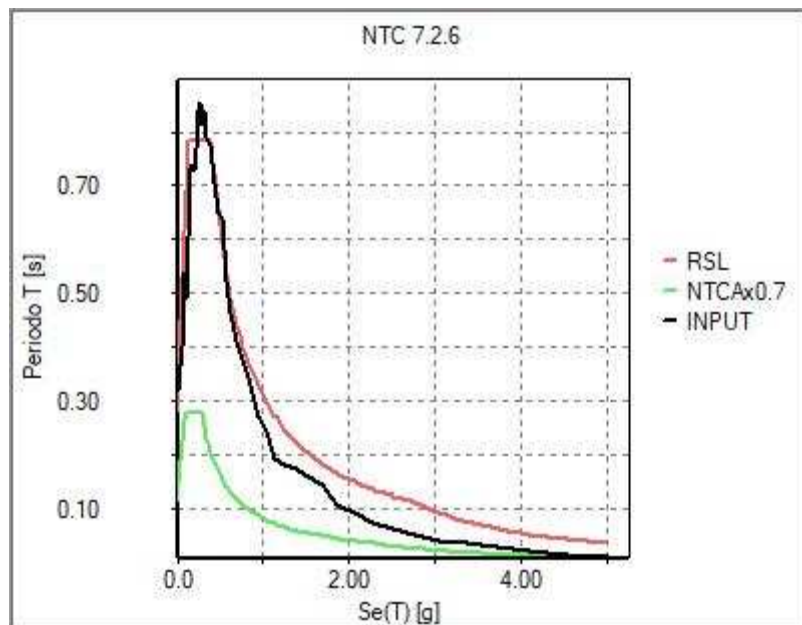


Fig. 2

Periodo	Se(t) RSL	Se(t) NTC*0.7 suolo tipo A	Confronto NTC
[s]	[g]	[g]	
0.000	0.281	0.114	RSL >= NTC A*0.7
0.010	0.319	0.131	RSL >= NTC A*0.7
0.011	0.323	0.133	RSL >= NTC A*0.7
0.012	0.328	0.135	RSL >= NTC A*0.7
0.013	0.333	0.137	RSL >= NTC A*0.7

Periodo	Se(t) RSL	Se(t) NTC*0.7 suolo tipo A	Confronto NTC
0.015	0.338	0.139	RSL >= NTC A*0.7
0.016	0.344	0.142	RSL >= NTC A*0.7
0.018	0.350	0.145	RSL >= NTC A*0.7
0.020	0.358	0.148	RSL >= NTC A*0.7
0.022	0.365	0.151	RSL >= NTC A*0.7
0.024	0.374	0.155	RSL >= NTC A*0.7
0.027	0.384	0.159	RSL >= NTC A*0.7
0.030	0.395	0.164	RSL >= NTC A*0.7
0.033	0.406	0.169	RSL >= NTC A*0.7
0.036	0.419	0.175	RSL >= NTC A*0.7
0.040	0.434	0.181	RSL >= NTC A*0.7
0.044	0.450	0.188	RSL >= NTC A*0.7
0.048	0.467	0.196	RSL >= NTC A*0.7
0.053	0.487	0.205	RSL >= NTC A*0.7
0.059	0.508	0.214	RSL >= NTC A*0.7
0.065	0.531	0.224	RSL >= NTC A*0.7
0.072	0.557	0.236	RSL >= NTC A*0.7
0.079	0.586	0.248	RSL >= NTC A*0.7
0.088	0.618	0.262	RSL >= NTC A*0.7
0.096	0.651	0.277	RSL >= NTC A*0.7
0.097	0.653	0.277	RSL >= NTC A*0.7
0.107	0.691	0.277	RSL >= NTC A*0.7
0.118	0.734	0.277	RSL >= NTC A*0.7
0.130	0.781	0.277	RSL >= NTC A*0.7
0.131	0.783	0.277	RSL >= NTC A*0.7
0.143	0.783	0.277	RSL >= NTC A*0.7
0.158	0.783	0.277	RSL >= NTC A*0.7
0.175	0.783	0.277	RSL >= NTC A*0.7
0.193	0.783	0.277	RSL >= NTC A*0.7
0.201	0.783	0.277	RSL >= NTC A*0.7
0.213	0.783	0.277	RSL >= NTC A*0.7
0.235	0.783	0.277	RSL >= NTC A*0.7
0.259	0.783	0.277	RSL >= NTC A*0.7
0.286	0.783	0.277	RSL >= NTC A*0.7
0.289	0.783	0.277	RSL >= NTC A*0.7
0.306	0.783	0.261	RSL >= NTC A*0.7
0.316	0.783	0.254	RSL >= NTC A*0.7
0.349	0.783	0.230	RSL >= NTC A*0.7
0.385	0.783	0.208	RSL >= NTC A*0.7
0.392	0.783	0.204	RSL >= NTC A*0.7
0.412	0.746	0.195	RSL >= NTC A*0.7
0.425	0.723	0.189	RSL >= NTC A*0.7
0.469	0.655	0.171	RSL >= NTC A*0.7
0.517	0.594	0.155	RSL >= NTC A*0.7
0.517	0.594	0.155	RSL >= NTC A*0.7
0.571	0.538	0.140	RSL >= NTC A*0.7
0.622	0.494	0.129	RSL >= NTC A*0.7
0.630	0.487	0.127	RSL >= NTC A*0.7
0.695	0.442	0.115	RSL >= NTC A*0.7
0.727	0.423	0.110	RSL >= NTC A*0.7
0.767	0.400	0.104	RSL >= NTC A*0.7
0.832	0.369	0.096	RSL >= NTC A*0.7
0.847	0.363	0.095	RSL >= NTC A*0.7
0.935	0.329	0.086	RSL >= NTC A*0.7
0.937	0.328	0.085	RSL >= NTC A*0.7
1.032	0.298	0.078	RSL >= NTC A*0.7
1.042	0.295	0.077	RSL >= NTC A*0.7
1.139	0.270	0.070	RSL >= NTC A*0.7
1.147	0.268	0.070	RSL >= NTC A*0.7
1.252	0.245	0.064	RSL >= NTC A*0.7
1.257	0.244	0.064	RSL >= NTC A*0.7
1.357	0.226	0.059	RSL >= NTC A*0.7
1.387	0.221	0.058	RSL >= NTC A*0.7
1.462	0.210	0.055	RSL >= NTC A*0.7
1.531	0.201	0.052	RSL >= NTC A*0.7
1.567	0.196	0.051	RSL >= NTC A*0.7
1.672	0.184	0.048	RSL >= NTC A*0.7
1.689	0.182	0.047	RSL >= NTC A*0.7
1.778	0.173	0.045	RSL >= NTC A*0.7
1.864	0.165	0.043	RSL >= NTC A*0.7
1.883	0.163	0.043	RSL >= NTC A*0.7

Periodo	Se(t) RSL	Se(t) NTC*0.7 suolo tipo A	Confronto NTC
1.988	0.155	0.040	RSL >= NTC A*0.7
2.058	0.149	0.039	RSL >= NTC A*0.7
2.093	0.147	0.038	RSL >= NTC A*0.7
2.198	0.140	0.036	RSL >= NTC A*0.7
2.252	0.136	0.036	RSL >= NTC A*0.7
2.271	0.135	0.035	RSL >= NTC A*0.7
2.303	0.133	0.034	RSL >= NTC A*0.7
2.408	0.128	0.031	RSL >= NTC A*0.7
2.507	0.123	0.029	RSL >= NTC A*0.7
2.513	0.122	0.029	RSL >= NTC A*0.7
2.618	0.117	0.026	RSL >= NTC A*0.7
2.723	0.113	0.024	RSL >= NTC A*0.7
2.766	0.109	0.024	RSL >= NTC A*0.7
2.774	0.109	0.023	RSL >= NTC A*0.7
2.825	0.105	0.023	RSL >= NTC A*0.7
2.876	0.101	0.022	RSL >= NTC A*0.7
2.927	0.098	0.021	RSL >= NTC A*0.7
2.979	0.094	0.020	RSL >= NTC A*0.7
3.030	0.091	0.020	RSL >= NTC A*0.7
3.053	0.090	0.019	RSL >= NTC A*0.7
3.081	0.088	0.019	RSL >= NTC A*0.7
3.132	0.085	0.018	RSL >= NTC A*0.7
3.183	0.083	0.018	RSL >= NTC A*0.7
3.234	0.080	0.017	RSL >= NTC A*0.7
3.285	0.077	0.017	RSL >= NTC A*0.7
3.336	0.075	0.016	RSL >= NTC A*0.7
3.370	0.074	0.016	RSL >= NTC A*0.7
3.387	0.073	0.016	RSL >= NTC A*0.7
3.438	0.071	0.015	RSL >= NTC A*0.7
3.489	0.069	0.015	RSL >= NTC A*0.7
3.540	0.067	0.014	RSL >= NTC A*0.7
3.591	0.065	0.014	RSL >= NTC A*0.7
3.642	0.063	0.014	RSL >= NTC A*0.7
3.694	0.061	0.013	RSL >= NTC A*0.7
3.719	0.060	0.013	RSL >= NTC A*0.7
3.745	0.060	0.013	RSL >= NTC A*0.7
3.796	0.058	0.013	RSL >= NTC A*0.7
3.847	0.057	0.012	RSL >= NTC A*0.7
3.898	0.055	0.012	RSL >= NTC A*0.7
3.949	0.054	0.012	RSL >= NTC A*0.7
4.000	0.052	0.011	RSL >= NTC A*0.7
4.105	0.050	0.011	RSL >= NTC A*0.7
4.530	0.041	0.009	RSL >= NTC A*0.7
5.000	0.033	0.007	RSL >= NTC A*0.7

Periodo di ritorno <Tr>	Esito confronto
30	Possibile l'uso dello spettro RSL
50	Possibile l'uso dello spettro RSL
72	Possibile l'uso dello spettro RSL
101	Possibile l'uso dello spettro RSL
140	Possibile l'uso dello spettro RSL
201	Possibile l'uso dello spettro RSL
475	Possibile l'uso dello spettro RSL
975	Possibile l'uso dello spettro RSL
2475	Possibile l'uso dello spettro RSL

# RISULTATI ANALISI SISMICHE

## LEGENDA TABELLA ANALISI SISMICHE

Il programma consente l'analisi di diverse configurazioni sismiche.

Sono previsti, infatti, i seguenti casi di carico:

- 9. Esk** caso di carico sismico con analisi statica equivalente
- 10. Edk** caso di carico sismico con analisi dinamica

Ciascun caso di carico è caratterizzato da un angolo di ingresso e da una configurazione di masse determinante la forza sismica complessiva (si rimanda al capitolo relativo ai casi di carico per chiarimenti inerenti questo aspetto).

Nella colonna Note, in funzione della norma in uso sono riportati i parametri fondamentali che caratterizzano l'azione sismica: in particolare possono essere presenti i seguenti valori:

<b>Angolo di ingresso</b>	Angolo di ingresso dell'azione sismica orizzontale
<b>Fattore di importanza</b>	Fattore di importanza dell'edificio, in base alla categoria di appartenenza
<b>Zona sismica</b>	Zona sismica
<b>Accelerazione ag</b>	Accelerazione orizzontale massima sul suolo
<b>Categoria suolo</b>	Categoria di profilo stratigrafico del suolo di fondazione
<b>Fattore q</b>	Fattore di struttura/di comportamento. Dipendente dalla tipologia strutturale
<b>Fattore di sito S</b>	Fattore dipendente dalla stratigrafia e dal profilo topografico
<b>Classe di duttilità CD</b>	Classe di duttilità della struttura – "A" duttilità alta, "B" duttilità bassa
<b>Fattore riduz. SLD</b>	Fattore di riduzione dello spettro elastico per lo stato limite di danno
<b>Periodo proprio T1</b>	Periodo proprio di vibrazione della struttura
<b>Coefficiente Lambda</b>	Coefficiente dipendente dal periodo proprio T1 e dal numero di piani della struttura
<b>Ordinata spettro Sd(T1)</b>	Valore delle ordinate dello spettro di progetto per lo stato limite ultimo, componente orizzontale (verticale Svd)
<b>Ordinata spettro Se(T1)</b>	Valore delle ordinate dello spettro elastico ridotta del fattore SLD per lo stato limite di danno, componente orizzontale (verticale Sve)
<b>Ordinata spettro S (Tb-Tc)</b>	Valore dell' ordinata dello spettro in uso nel tratto costante
<b>numero di modi considerati</b>	Numero di modi di vibrare della struttura considerati nell'analisi dinamica

Per ciascun caso di carico sismico viene riportato l'insieme di dati sotto riportati (le masse sono espresse in unità di forza):

- a) **analisi sismica statica equivalente:**
  - quota, posizione del centro di applicazione e azione orizzontale risultante, posizione del baricentro delle rigidezze, rapporto  $r/L_s$  (per strutture a nucleo), indici di regolarità e/r secondo EC8 4.2.3.2
  - azione sismica complessiva
- b) **analisi sismica dinamica con spettro di risposta:**
  - quota, posizione del centro di massa e massa risultante, posizione del baricentro delle rigidezze, rapporto  $r/L_s$  (per strutture a nucleo) , indici di regolarità e/r secondo EC8 4.2.3.2
  - frequenza, periodo, accelerazione spettrale, massa eccitata nelle tre direzioni globali per tutti i modi

- massa complessiva ed aliquota di massa complessiva eccitata.

Per ciascuna combinazione sismica definita SLD o SLO viene riportato il livello di deformazione  $\epsilon_T$  (dr) degli elementi strutturali verticali. Per semplicità di consultazione il livello è espresso anche in unità  $1000 \cdot \epsilon_T/h$  da confrontare direttamente con i valori forniti nella norma (es. 5 per edifici con tamponamenti collegati rigidamente alla struttura, 10.0 per edifici con tamponamenti collegati elasticamente, 3 per edifici in muratura ordinaria, 4 per edifici in muratura armata).

Qualora si applichi il D.M. 96 (vedi NOTA sul capitolo "normativa di riferimento") l'analisi sismica dinamica può essere comprensiva di sollecitazione verticale contemporanea a quella orizzontale, nel qual caso è effettuata una sovrapposizione degli effetti in ragione della radice dei quadrati degli effetti stessi. Per ciascuna combinazione sismica - analisi effettuate con il D.M. 96 (vedi NOTA sul capitolo "normativa di riferimento") - viene riportato il livello di deformazione  $\epsilon_T$ ,  $\epsilon_P$  e  $\epsilon_D$  degli elementi strutturali verticali. Per semplicità di consultazione il livello è espresso in unità  $1000 \cdot \epsilon_T/h$  da confrontare direttamente con il valore 2 o 4 per la verifica.

Per gli edifici sismicamente isolati si riportano di seguito le verifiche condotte sui dispositivi di isolamento. Le verifiche sono effettuate secondo la circolare n.7/2019 del C.S.LL.PP nelle combinazioni in SLC come previsto dal DM 17-01-2018. Per ogni combinazione è riportato il codice di verifica ed i valori utilizzati per la verifica: spostamento  $dE$ , area ridotta e dimensione  $A_2$ , azione verticale, deformazioni di taglio dell'elastomero e tensioni nell'acciaio.

Qualora si applichi l'Ordinanza 3274 e s.m.i. le verifiche sono eseguite in accordo con l'allegato 10.A. In particolare la tabella, per ogni combinazione di calcolo, riporta:

<b>Nodo</b>	Nodo di appoggio dell' isolatore
<b>Cmb</b>	Combinazione oggetto della verifica
<b>Verif.</b>	Codice di verifica ok – verifica positiva , NV – verifica negativa, ND – verifica non completata
<b>dE</b>	Spostamento relativo tra le due facce (amplificato del 20% per Ordinanza 3274 e smi) combinato con la regola del 30%
<b>Ang fi</b>	Angolo utilizzato per il calcolo dell' area ridotta $A_r$ (per dispositivi circolari)
<b>V</b>	Azione verticale agente
<b>Ar</b>	Area ridotta efficace
<b>Dim A2</b>	Dimensione utile per il calcolo della deformazione per rotazione
<b>Sig s</b>	Tensione nell' inserto in acciaio
<b>Gam c(a,s,t)</b>	Deformazioni di taglio dell' elastomero
<b>Vcr</b>	Carico critico per instabilità

Affinché la verifica sia positiva deve essere:

- 1)  $V > 0$
- 2)  $\text{Sig } s < f_{yk}$
- 3)  $\text{Gam } t < 5$
- 4)  $\text{Gam } s < \text{Gam } * \text{ (caratteristica dell' elastomero)}$
- 5)  $\text{Gam } s < 2$
- 6)  $V < 0.5 V_{cr}$

**Calcolo dei fattori di comportamento secondo il D.M. 17/01/2018**

La costruzione, nuova, è caratterizzata da non regolarità sia in pianta sia in altezza ed è progettata considerando un comportamento non dissipativo (ND).

**Parametri fattore in direzione x e y**

Sistema costruttivo: acciaio o composto acciaio-calcestruzzo  
 Tipologia strutturale: strutture intelaiate o strutture con controventi eccentrici  
 Valore base fattore  $q_0 = 4.000$   
 Fattore di regolarità  $K_R = 0.8$   
 Fattore dissipativo  $q_D = q_0 \cdot K_R = 3.200$   
 Fattore non dissipativo  $q_{ND} = 2/3 \cdot q_D = 1.500$  ( $\leq 1.5$ )

**Fattori di comportamento utilizzati**

	Dissipativi	Non dissipativi
q SLU x	3.200	1.500
q SLU y	3.200	1.500
q SLU z	1.500	1.500

CDC	Tipo	Sigla Id	Note
4	Edk	CDC=Ed (dinamico SLU) alfa=0.0 (ecc. +)	
			categoria suolo: C
			fattore di sito S = 1.000
			ordinata spettro (tratto Tb-Tc) = 0.609 g
			angolo di ingresso: 0.0
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.379 sec.
			fattore q: 1.500
			fattore per spost. $\mu_d$ : 1.522
			classe di duttilità CD: ND
			numero di modi considerati: 60
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	daN	m	m	m	m	m	m			
5.55	2935.12	2.98	-0.41	0.0	-0.06	2.98	-0.19	2.031	2.7935e-05	0.152
5.45	93.20	2.98	-0.19	0.0	0.0	2.98	-0.19	3.000	0.0	0.0
4.20	182.81	2.98	-0.19	0.0	0.0	2.98	-0.19	3.000	0.0	0.0
2.83	6686.73	1.90	4.69	0.0	-0.09	1.85	5.21	1.440	0.030	0.211
2.73	517.12	1.90	5.21	0.0	-0.09	1.90	5.21	2.681	0.0	0.0
0.10	1860.63	0.83	0.0	0.0	0.0	0.83	0.0	3.000	0.0	0.0
Risulta	1.228e+04									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X	%	M efficace Y	%	M efficace Z	%	Energia	Energia x v
	Hz	sec	g	x g		x g		x g			
				daN		daN		daN			
1	1.160	0.862	0.280	3549.57	28.9	2.41	1.96e-02	0.99	8.10e-03	0.0	0.0
2	2.635	0.379	0.609	6721.75	54.8	43.66	0.4	2.01	1.63e-02	0.0	0.0
3	2.995	0.334	0.609	34.16	0.3	1.108e+04	90.2	1.89	1.54e-02	0.0	0.0
4	4.629	0.216	0.609	68.05	0.6	459.83	3.7	16.22	0.1	0.0	0.0
5	6.347	0.158	0.609	3.47	2.83e-02	195.43	1.6	1959.22	16.0	0.0	0.0
6	7.511	0.133	0.609	0.60	4.86e-03	409.37	3.3	756.13	6.2	0.0	0.0
7	7.986	0.125	0.594	3.38	2.75e-02	31.14	0.3	0.57	4.64e-03	0.0	0.0
8	9.653	0.104	0.548	11.53	9.39e-02	0.34	2.76e-03	3160.14	25.7	0.0	0.0
9	10.101	0.099	0.538	7.56	6.16e-02	0.46	3.78e-03	117.48	1.0	0.0	0.0
10	11.462	0.087	0.513	0.23	1.87e-03	0.23	1.84e-03	3.17	2.58e-02	0.0	0.0
11	12.673	0.079	0.496	2.42	1.97e-02	0.40	3.22e-03	0.37	3.02e-03	0.0	0.0
12	13.179	0.076	0.489	0.23	1.86e-03	8.77	7.14e-02	8.91	7.26e-02	0.0	0.0
13	13.267	0.075	0.488	1.80	1.47e-02	0.60	4.85e-03	43.98	0.4	0.0	0.0
14	13.942	0.072	0.480	0.62	5.09e-03	2.08	1.70e-02	58.95	0.5	0.0	0.0
15	15.560	0.064	0.464	6.37	5.19e-02	0.77	6.28e-03	1085.38	8.8	0.0	0.0
16	16.145	0.062	0.459	0.05	4.31e-04	2.48	2.02e-02	281.28	2.3	0.0	0.0
17	17.597	0.057	0.448	1.47e-03	1.20e-05	0.78	6.33e-03	0.59	4.78e-03	0.0	0.0
18	20.140	0.050	0.433	1.92e-03	1.57e-05	13.15	0.1	261.49	2.1	0.0	0.0
19	21.075	0.047	0.428	0.79	6.40e-03	15.55	0.1	1161.91	9.5	0.0	0.0
20	21.359	0.047	0.427	0.36	2.95e-03	5.89	4.80e-02	168.14	1.4	0.0	0.0
21	24.138	0.041	0.416	2.04	1.66e-02	3.58e-03	2.91e-05	0.05	4.14e-04	0.0	0.0
22	27.737	0.036	0.404	2.10	1.71e-02	0.07	5.50e-04	36.25	0.3	0.0	0.0
23	28.075	0.036	0.403	0.03	2.62e-04	4.58e-06	0.0	0.06	5.19e-04	0.0	0.0
24	29.528	0.034	0.400	7.22	5.88e-02	9.36e-03	7.62e-05	21.88	0.2	0.0	0.0
25	42.467	0.024	0.378	4.26e-03	3.47e-05	0.02	1.92e-04	262.51	2.1	0.0	0.0

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
26	52.479	0.019	0.368	2.95e-03	2.40e-05	5.13	4.18e-02	49.78	0.4	0.0	0.0
27	54.471	0.018	0.366	2.96	2.41e-02	0.39	3.16e-03	9.85	8.02e-02	0.0	0.0
28	62.858	0.016	0.361	0.01	1.06e-04	3.30e-04	2.69e-06	27.04	0.2	0.0	0.0
29	63.327	0.016	0.361	0.98	7.97e-03	8.86e-04	7.22e-06	572.89	4.7	0.0	0.0
30	64.235	0.016	0.360	0.25	2.08e-03	2.59e-03	2.11e-05	1616.41	13.2	0.0	0.0
31	86.481	0.012	0.352	0.08	6.26e-04	0.02	1.44e-04	7.30e-04	5.94e-06	0.0	0.0
32	88.129	0.011	0.351	0.24	1.92e-03	0.07	5.76e-04	214.13	1.7	0.0	0.0
33	89.173	0.011	0.351	11.99	9.76e-02	5.25e-03	4.28e-05	5.24	4.27e-02	0.0	0.0
34	93.756	0.011	0.350	0.25	2.00e-03	8.87e-04	7.22e-06	0.15	1.19e-03	0.0	0.0
35	140.763	0.007	0.342	8.53e-04	6.95e-06	0.02	1.98e-04	366.42	3.0	0.0	0.0
36	149.736	0.007	0.342	0.90	7.32e-03	9.66e-03	7.87e-05	0.01	8.98e-05	0.0	0.0
37	150.200	0.007	0.341	1.38e-03	1.12e-05	0.01	9.71e-05	0.38	3.09e-03	0.0	0.0
38	155.393	0.006	0.341	1211.41	9.9	2.24e-05	0.0	5.48e-03	4.46e-05	0.0	0.0
39	163.803	0.006	0.340	2.74	2.24e-02	3.36e-06	0.0	6.63e-03	5.40e-05	0.0	0.0
40	172.766	0.006	0.340	2.28	1.86e-02	0.0	0.0	3.55e-03	2.89e-05	0.0	0.0
41	179.222	0.006	0.339	617.06	5.0	9.07e-05	0.0	7.61e-03	6.20e-05	0.0	0.0
42	214.772	0.005	0.337	0.01	9.65e-05	1.57e-06	0.0	1.14e-03	9.28e-06	0.0	0.0
43	265.044	0.004	0.335	0.0	0.0	3.86e-04	3.14e-06	5.71e-04	4.65e-06	0.0	0.0
44	269.464	0.004	0.335	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45	275.671	0.004	0.335	4.45e-03	3.63e-05	2.14e-04	1.74e-06	8.82e-04	7.18e-06	0.0	0.0
46	295.706	0.003	0.335	5.24e-03	4.27e-05	0.0	0.02	0.02	1.34e-04	0.0	0.0
47	295.923	0.003	0.335	4.72e-04	3.84e-06	5.19e-06	0.0	0.13	1.06e-03	0.0	0.0
48	311.492	0.003	0.334	2.21e-03	1.80e-05	0.0	0.0	5.97e-05	0.0	0.0	0.0
49	340.402	0.003	0.334	6.47e-06	0.0	0.0	0.0	7.76e-05	0.0	0.0	0.0
50	445.140	0.002	0.332	6.08e-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	492.042	0.002	0.332	0.09	7.27e-04	2.15e-04	1.75e-06	7.45e-03	6.07e-05	0.0	0.0
52	511.164	0.002	0.331	0.0	0.0	0.0	0.0	3.55	2.89e-02	0.0	0.0
53	529.373	0.002	0.331	5.22e-03	4.25e-05	0.0	0.0	9.53e-06	0.0	0.0	0.0
54	641.216	0.002	0.331	2.02e-04	1.65e-06	0.0	0.0	1.17e-06	0.0	0.0	0.0
55	698.053	0.001	0.330	1.25e-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56	703.424	0.001	0.330	6.82e-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57	730.282	0.001	0.330	0.0	0.0	0.0	0.0	6.49e-06	0.0	0.0	0.0
58	745.547	0.001	0.330	8.42e-04	6.86e-06	1.19e-05	0.0	5.64e-04	4.60e-06	0.0	0.0
59	914.940	0.001	0.330	0.0	0.0	4.08e-05	0.0	1.32e-04	1.08e-06	0.0	0.0
60	938.412	0.001	0.330	4.18e-04	3.41e-06	8.83e-06	0.0	2.87e-04	2.34e-06	0.0	0.0
Risulta				1.228e+04		1.228e+04		1.228e+04			
In percentuale				100.00		100.00		100.00			

CDC	Tipo	Sigla Id	Note
5	Edk	CDC=Ed (dinamico SLU) alfa=0.0 (ecc. -)	
			categoria suolo: C
			fattore di sito S = 1.000
			ordinata spettro (tratto Tb-Tc) = 0.609 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.376 sec.
			fattore q: 1.500
			fattore per spost. mu d: 1.527
			classe di duttilità CD: ND
			numero di modi considerati: 60
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	daN	m	m	m	m	m	m			
5.55	2935.12	2.98	-0.41	0.0	0.06	2.98	-0.19	2.031	2.7935e-05	0.152
5.45	93.20	2.98	-0.19	0.0	0.0	2.98	-0.19	3.000	0.0	0.0
4.20	182.81	2.98	-0.19	0.0	0.0	2.98	-0.19	3.000	0.0	0.0
2.83	6686.73	1.90	4.69	0.0	0.09	1.85	5.21	1.440	0.030	0.211
2.73	517.12	1.90	5.21	0.0	0.09	1.90	5.21	2.681	0.0	0.0
0.10	1860.63	0.83	0.0	0.0	0.0	0.83	0.0	3.000	0.0	0.0
Risulta	1.228e+04									



Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.157	0.864	0.279	3544.15	28.9	3.48	2.84e-02	0.94	7.64e-03	0.0	0.0
2	2.661	0.376	0.609	6798.21	55.4	11.09	9.04e-02	2.66	2.17e-02	0.0	0.0
3	2.998	0.334	0.609	5.29	4.31e-02	1.113e+04	90.7	1.82	1.48e-02	0.0	0.0
4	4.441	0.225	0.609	10.87	8.85e-02	426.35	3.5	13.19	0.1	0.0	0.0
5	6.424	0.156	0.609	10.20	8.31e-02	176.21	1.4	1925.63	15.7	0.0	0.0
6	6.741	0.148	0.609	14.64	0.1	17.86	0.1	422.33	3.4	0.0	0.0
7	7.627	0.131	0.607	2.34	1.91e-02	450.71	3.7	351.56	2.9	0.0	0.0
8	8.885	0.113	0.567	7.54	6.14e-02	6.52	5.31e-02	12.09	9.85e-02	0.0	0.0
9	9.679	0.103	0.548	7.17	5.84e-02	1.49	1.22e-02	3263.37	26.6	0.0	0.0
10	10.068	0.099	0.539	0.29	2.33e-03	2.41	1.96e-02	11.58	9.43e-02	0.0	0.0
11	11.966	0.084	0.505	0.53	4.33e-03	0.94	7.65e-03	1.90	1.55e-02	0.0	0.0
12	13.247	0.075	0.488	0.17	1.42e-03	2.96e-03	2.41e-05	58.21	0.5	0.0	0.0
13	13.760	0.073	0.482	0.68	5.57e-03	0.02	1.50e-04	51.35	0.4	0.0	0.0
14	15.259	0.066	0.467	6.20	5.05e-02	0.54	4.36e-03	354.99	2.9	0.0	0.0
15	15.782	0.063	0.462	1.57	1.28e-02	1.78	1.45e-02	1017.70	8.3	0.0	0.0
16	16.199	0.062	0.459	1.49e-03	1.21e-05	4.12	3.35e-02	2.23	1.82e-02	0.0	0.0
17	17.411	0.057	0.450	2.10e-04	1.71e-06	0.75	6.08e-03	4.15	3.38e-02	0.0	0.0
18	20.140	0.050	0.433	0.01	9.87e-05	12.73	0.1	242.38	2.0	0.0	0.0
19	20.278	0.049	0.432	0.97	7.92e-03	1.22	9.93e-03	79.27	0.6	0.0	0.0
20	21.093	0.047	0.428	0.26	2.15e-03	15.28	0.1	1067.20	8.7	0.0	0.0
21	21.343	0.047	0.427	0.33	2.72e-03	5.37	4.37e-02	193.00	1.6	0.0	0.0
22	24.949	0.040	0.413	9.28	7.56e-02	0.17	1.42e-03	26.42	0.2	0.0	0.0
23	28.075	0.036	0.403	0.02	1.71e-04	1.31e-04	1.06e-06	0.28	2.28e-03	0.0	0.0
24	28.982	0.035	0.401	3.60	2.93e-02	3.80e-05	0.0	42.62	0.3	0.0	0.0
25	42.468	0.024	0.378	3.30e-03	2.69e-05	0.02	1.88e-04	262.84	2.1	0.0	0.0
26	52.477	0.019	0.368	1.94e-03	1.58e-05	5.13	4.18e-02	49.78	0.4	0.0	0.0
27	54.471	0.018	0.366	2.93	2.38e-02	0.39	3.17e-03	10.01	8.16e-02	0.0	0.0
28	62.994	0.016	0.361	0.21	1.70e-03	1.29e-03	1.05e-05	14.72	0.1	0.0	0.0
29	63.945	0.016	0.361	0.02	1.83e-04	9.38e-04	7.64e-06	2178.39	17.7	0.0	0.0
30	68.639	0.015	0.358	1.03	8.37e-03	1.23e-03	1.00e-05	23.43	0.2	0.0	0.0
31	86.490	0.012	0.352	0.08	6.63e-04	0.02	1.38e-04	9.31e-03	7.59e-05	0.0	0.0
32	88.151	0.011	0.351	0.18	1.45e-03	0.07	5.74e-04	215.25	1.8	0.0	0.0
33	89.204	0.011	0.351	12.29	0.1	6.48e-03	5.28e-05	3.74	3.05e-02	0.0	0.0
34	94.881	0.011	0.350	0.06	5.18e-04	4.10e-04	3.34e-06	0.04	3.37e-04	0.0	0.0
35	140.763	0.007	0.342	8.46e-04	6.89e-06	0.02	1.98e-04	366.42	3.0	0.0	0.0
36	149.736	0.007	0.342	0.90	7.35e-03	9.66e-03	7.87e-05	0.01	8.97e-05	0.0	0.0
37	150.200	0.007	0.341	1.35e-03	1.10e-05	0.01	9.71e-05	0.38	3.09e-03	0.0	0.0
38	155.394	0.006	0.341	1211.34	9.9	2.23e-05	0.0	5.47e-03	4.46e-05	0.0	0.0
39	163.800	0.006	0.340	2.74	2.23e-02	3.34e-06	0.0	6.64e-03	5.41e-05	0.0	0.0
40	172.746	0.006	0.340	2.29	1.86e-02	0.0	0.0	3.54e-03	2.88e-05	0.0	0.0
41	179.223	0.006	0.339	617.07	5.0	9.07e-05	0.0	7.61e-03	6.20e-05	0.0	0.0
42	214.775	0.005	0.337	0.01	9.48e-05	1.57e-06	0.0	1.14e-03	9.26e-06	0.0	0.0
43	265.044	0.004	0.335	0.0	0.0	3.86e-04	3.14e-06	5.71e-04	4.65e-06	0.0	0.0
44	275.671	0.004	0.335	4.46e-03	3.63e-05	2.14e-04	1.74e-06	8.81e-04	7.17e-06	0.0	0.0
45	295.706	0.003	0.335	5.24e-03	4.27e-05	0.0	0.0	0.02	1.34e-04	0.0	0.0
46	295.923	0.003	0.335	4.74e-04	3.86e-06	5.19e-06	0.0	0.13	1.06e-03	0.0	0.0
47	307.861	0.003	0.334	0.0	0.0	0.0	0.0	1.18e-04	0.0	0.0	0.0
48	344.413	0.003	0.333	1.59e-03	1.30e-05	0.0	0.0	4.39e-05	0.0	0.0	0.0
49	358.965	0.003	0.333	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	445.135	0.002	0.332	6.02e-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	492.042	0.002	0.332	0.09	7.27e-04	2.15e-04	1.75e-06	7.45e-03	6.07e-05	0.0	0.0
52	511.164	0.002	0.331	0.0	0.0	0.0	0.0	3.55	2.89e-02	0.0	0.0
53	529.370	0.002	0.331	5.21e-03	4.25e-05	0.0	0.0	9.57e-06	0.0	0.0	0.0
54	636.265	0.002	0.331	1.05e-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55	697.887	0.001	0.330	7.93e-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56	709.050	0.001	0.330	1.54e-04	1.25e-06	0.0	0.0	0.0	0.0	0.0	0.0
57	730.282	0.001	0.330	0.0	0.0	0.0	0.0	6.49e-06	0.0	0.0	0.0
58	745.547	0.001	0.330	8.42e-04	6.86e-06	1.19e-05	0.0	5.64e-04	4.60e-06	0.0	0.0
59	914.940	0.001	0.330	0.0	0.0	4.08e-05	0.0	1.32e-04	1.08e-06	0.0	0.0
60	938.412	0.001	0.330	4.18e-04	3.41e-06	8.83e-06	0.0	2.87e-04	2.34e-06	0.0	0.0
Risulta				1.228e+04		1.228e+04		1.228e+04			
In				100.00		100.00		100.00			
percentuale											

CDC	Tipo	Sigla Id	Note
6	Edk	CDC=Ed (dinamico SLU) alfa=90.00 (ecc. +)	
			categoria suolo: C
			fattore di sito S = 1.000



CDC	Tipo	Sigla Id	Note
			ordinata spettro (tratto Tb-Tc) = 0.609 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.329 sec.
			fattore q: 1.500
			fattore per spost. mu d: 1.602
			classe di duttilità CD: ND
			numero di modi considerati: 60
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	daN	m	m	m	m	m	m			
5.55	2935.12	2.98	-0.41	0.09	0.0	2.98	-0.19	2.031	2.7935e-05	0.152
5.45	93.20	2.98	-0.19	0.09	0.0	2.98	-0.19	3.000	0.0	0.0
4.20	182.81	2.98	-0.19	0.09	0.0	2.98	-0.19	3.000	0.0	0.0
2.83	6686.73	1.90	4.69	0.20	0.0	1.85	5.21	1.440	0.030	0.211
2.73	517.12	1.90	5.21	0.20	0.0	1.90	5.21	2.681	0.0	0.0
0.10	1860.63	0.83	0.0	0.09	0.0	0.83	0.0	3.000	0.0	0.0
Risulta	1.228e+04									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.158	0.863	0.279	3546.78	28.9	2.50	2.03e-02	0.97	7.89e-03	0.0	0.0
2	2.652	0.377	0.609	6780.63	55.2	1.83	1.49e-02	2.42	1.97e-02	0.0	0.0
3	3.039	0.329	0.609	1.57	1.28e-02	1.125e+04	91.7	1.98	1.62e-02	0.0	0.0
4	4.470	0.224	0.609	39.25	0.3	402.73	3.3	10.94	8.92e-02	0.0	0.0
5	6.410	0.156	0.609	5.11	4.16e-02	127.53	1.0	2067.51	16.8	0.0	0.0
6	7.110	0.141	0.609	3.11	2.53e-02	123.76	1.0	469.48	3.8	0.0	0.0
7	7.876	0.127	0.598	7.14	5.82e-02	308.32	2.5	120.62	1.0	0.0	0.0
8	9.439	0.106	0.553	12.77	0.1	2.08e-05	0.0	153.33	1.2	0.0	0.0
9	9.686	0.103	0.547	4.33	3.53e-02	1.62	1.32e-02	3198.44	26.1	0.0	0.0
10	10.775	0.093	0.525	0.26	2.10e-03	1.64	1.34e-02	1.82	1.49e-02	0.0	0.0
11	12.240	0.082	0.502	1.37	1.12e-02	0.66	5.39e-03	0.40	3.28e-03	0.0	0.0
12	13.257	0.075	0.488	0.37	3.01e-03	0.02	1.59e-04	54.65	0.4	0.0	0.0
13	13.705	0.073	0.483	0.12	9.83e-04	0.62	5.05e-03	63.66	0.5	0.0	0.0
14	14.343	0.070	0.476	1.27	1.04e-02	4.40	3.58e-02	0.97	7.94e-03	0.0	0.0
15	15.437	0.065	0.465	4.66	3.79e-02	0.14	1.16e-03	300.95	2.5	0.0	0.0
16	16.045	0.062	0.460	1.99	1.62e-02	2.94	2.39e-02	1144.84	9.3	0.0	0.0
17	17.355	0.058	0.450	0.0	0.0	0.88	7.16e-03	3.05	2.49e-02	0.0	0.0
18	19.888	0.050	0.435	1.44e-03	1.17e-05	13.15	0.1	252.04	2.1	0.0	0.0
19	21.241	0.047	0.428	1.47	1.20e-02	14.09	0.1	1043.92	8.5	0.0	0.0
20	21.668	0.046	0.426	0.47	3.84e-03	7.65	6.24e-02	88.72	0.7	0.0	0.0
21	21.848	0.046	0.425	0.48	3.93e-03	0.41	3.34e-03	94.63	0.8	0.0	0.0
22	26.242	0.038	0.409	6.82	5.56e-02	0.12	9.90e-04	24.99	0.2	0.0	0.0
23	28.075	0.036	0.403	0.02	1.98e-04	5.58e-05	0.0	0.22	1.81e-03	0.0	0.0
24	29.107	0.034	0.401	4.57	3.72e-02	3.00e-04	2.44e-06	39.72	0.3	0.0	0.0
25	40.656	0.025	0.380	6.82e-03	5.56e-05	0.02	1.86e-04	207.12	1.7	0.0	0.0
26	52.585	0.019	0.368	1.88e-04	1.53e-06	5.17	4.21e-02	49.91	0.4	0.0	0.0
27	54.438	0.018	0.366	2.51	2.04e-02	0.39	3.20e-03	8.74	7.12e-02	0.0	0.0
28	63.113	0.016	0.361	0.24	1.93e-03	5.90e-04	4.81e-06	1917.93	15.6	0.0	0.0
29	63.211	0.016	0.361	0.37	3.05e-03	8.89e-06	0.0	254.57	2.1	0.0	0.0
30	65.934	0.015	0.360	1.12	9.10e-03	1.32e-03	1.07e-05	62.03	0.5	0.0	0.0
31	86.767	0.012	0.352	0.11	9.34e-04	0.08	6.13e-04	258.68	2.1	0.0	0.0
32	87.870	0.011	0.352	5.05	4.12e-02	0.01	1.22e-04	5.72	4.66e-02	0.0	0.0
33	92.182	0.011	0.350	6.99	5.69e-02	6.35e-04	5.18e-06	0.05	3.91e-04	0.0	0.0
34	94.221	0.011	0.350	0.28	2.26e-03	5.65e-04	4.60e-06	0.02	1.56e-04	0.0	0.0
35	140.748	0.007	0.342	8.40e-04	6.84e-06	0.02	2.03e-04	366.77	3.0	0.0	0.0
36	145.262	0.007	0.342	0.0	0.0	0.01	9.83e-05	0.04	3.47e-04	0.0	0.0
37	155.204	0.006	0.341	686.64	5.6	4.45e-03	3.62e-05	5.38e-06	0.0	0.0	0.0
38	155.645	0.006	0.341	526.29	4.3	4.29e-03	3.50e-05	0.01	1.00e-04	0.0	0.0
39	164.423	0.006	0.340	2.12	1.72e-02	2.19e-06	0.0	6.71e-03	5.46e-05	0.0	0.0
40	173.634	0.006	0.340	2.60	2.12e-02	0.0	0.0	3.66e-03	2.98e-05	0.0	0.0
41	179.226	0.006	0.339	616.59	5.0	8.41e-05	0.0	7.62e-03	6.21e-05	0.0	0.0
42	214.765	0.005	0.337	0.01	9.72e-05	1.78e-06	0.0	1.15e-03	9.36e-06	0.0	0.0
43	241.084	0.004	0.336	0.0	0.0	4.67e-04	3.80e-06	3.23e-04	2.63e-06	0.0	0.0
44	282.298	0.004	0.335	0.0	0.0	3.93e-06	0.0	0.15	1.20e-03	0.0	0.0
45	304.765	0.003	0.334	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
46	309.582	0.003	0.334	1.82e-03	1.48e-05	1.61e-04	1.31e-06	7.33e-04	5.97e-06	0.0	0.0
47	311.489	0.003	0.334	5.86e-03	4.77e-05	5.44e-06	0.0	2.47e-04	2.01e-06	0.0	0.0
48	322.720	0.003	0.334	6.19e-05	0.0	0.0	0.0	1.27e-04	1.03e-06	0.0	0.0
49	326.910	0.003	0.334	1.84e-03	1.50e-05	0.0	0.0	2.44e-05	0.0	0.0	0.0
50	448.360	0.002	0.332	7.10e-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	492.402	0.002	0.332	0.09	7.24e-04	2.18e-04	1.77e-06	7.38e-03	6.01e-05	0.0	0.0
52	510.943	0.002	0.331	0.0	0.0	0.0	0.0	3.56	2.90e-02	0.0	0.0
53	529.385	0.002	0.331	5.21e-03	4.25e-05	0.0	0.0	9.49e-06	0.0	0.0	0.0
54	667.274	0.001	0.330	1.78e-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55	672.528	0.001	0.330	1.73e-04	1.41e-06	0.0	0.0	0.0	0.0	0.0	0.0
56	684.433	0.001	0.330	0.0	0.0	0.0	0.0	1.19e-05	0.0	0.0	0.0
57	698.091	0.001	0.330	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58	804.153	0.001	0.330	7.25e-04	5.91e-06	9.61e-06	0.0	5.14e-04	4.18e-06	0.0	0.0
59	855.383	0.001	0.330	0.0	0.0	4.72e-05	0.0	1.98e-04	1.61e-06	0.0	0.0
60	980.981	0.001	0.329	2.12e-04	1.73e-06	2.16e-06	0.0	2.22e-04	1.81e-06	0.0	0.0
Risulta				1.228e+04		1.228e+04		1.228e+04			
In percentuale				100.00		100.00		100.00			

CDC	Tipo	Sigla Id	Note
7	Edk	CDC=Ed (dinamico SLU) alfa=90.00 (ecc. -)	
			categoria suolo: C
			fattore di sito S = 1.000
			ordinata spettro (tratto Tb-Tc) = 0.609 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.340 sec.
			fattore q: 1.500
			fattore per spost. mu d: 1.583
			classe di duttilità CD: ND
			numero di modi considerati: 60
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	daN	m	m	m	m	m	m			
5.55	2935.12	2.98	-0.41	-0.09	0.0	2.98	-0.19	2.031	2.7935e-05	0.152
5.45	93.20	2.98	-0.19	-0.09	0.0	2.98	-0.19	3.000	0.0	0.0
4.20	182.81	2.98	-0.19	-0.09	0.0	2.98	-0.19	3.000	0.0	0.0
2.83	6686.73	1.90	4.69	-0.20	0.0	1.85	5.21	1.440	0.030	0.211
2.73	517.12	1.90	5.21	-0.20	0.0	1.90	5.21	2.681	0.0	0.0
0.10	1860.63	0.83	0.0	-0.09	0.0	0.83	0.0	3.000	0.0	0.0
Risulta	1.228e+04									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.158	0.863	0.279	3545.19	28.9	3.40	2.77e-02	0.96	7.85e-03	0.0	0.0
2	2.650	0.377	0.609	6724.68	54.8	98.64	0.8	2.19	1.78e-02	0.0	0.0
3	2.945	0.340	0.609	63.56	0.5	1.097e+04	89.4	1.80	1.46e-02	0.0	0.0
4	4.589	0.218	0.609	33.64	0.3	417.67	3.4	22.67	0.2	0.0	0.0
5	6.387	0.157	0.609	5.46	4.45e-02	231.01	1.9	2008.01	16.4	0.0	0.0
6	7.241	0.138	0.609	9.83	8.01e-02	7.15	5.82e-02	53.69	0.4	0.0	0.0
7	7.586	0.132	0.608	0.47	3.85e-03	479.10	3.9	700.31	5.7	0.0	0.0
8	9.429	0.106	0.553	14.90	0.1	9.45	7.70e-02	342.08	2.8	0.0	0.0
9	9.706	0.103	0.547	3.08	2.51e-02	0.36	2.93e-03	2864.60	23.3	0.0	0.0
10	10.722	0.093	0.526	0.29	2.40e-03	0.23	1.86e-03	4.06e-03	3.31e-05	0.0	0.0
11	12.238	0.082	0.502	1.32	1.07e-02	0.99	8.10e-03	0.44	3.56e-03	0.0	0.0
12	13.251	0.075	0.488	0.33	2.68e-03	0.03	2.52e-04	44.80	0.4	0.0	0.0
13	13.725	0.073	0.483	0.24	1.93e-03	0.44	3.57e-03	56.44	0.5	0.0	0.0
14	14.474	0.069	0.475	1.47	1.20e-02	8.10	6.60e-02	6.11	4.98e-02	0.0	0.0
15	15.297	0.065	0.467	6.15	5.01e-02	0.08	6.26e-04	844.63	6.9	0.0	0.0
16	15.684	0.064	0.463	0.07	5.78e-04	3.48	2.84e-02	460.17	3.7	0.0	0.0
17	17.325	0.058	0.450	3.63e-05	0.0	1.02	8.29e-03	3.68	3.00e-02	0.0	0.0
18	20.402	0.049	0.432	3.32e-03	2.70e-05	13.59	0.1	268.04	2.2	0.0	0.0
19	20.887	0.048	0.429	0.50	4.06e-03	17.60	0.1	1038.16	8.5	0.0	0.0

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
20	21.046	0.048	0.429	0.47	3.84e-03	2.95	2.41e-02	366.26	3.0	0.0	0.0
21	21.790	0.046	0.425	1.07	8.76e-03	0.04	3.33e-04	8.66	7.05e-02	0.0	0.0
22	26.241	0.038	0.409	6.75	5.50e-02	0.12	9.58e-04	23.52	0.2	0.0	0.0
23	28.074	0.036	0.403	0.02	1.62e-04	1.58e-04	1.28e-06	0.27	2.18e-03	0.0	0.0
24	29.123	0.034	0.401	4.60	3.75e-02	4.38e-04	3.57e-06	36.79	0.3	0.0	0.0
25	44.514	0.022	0.375	1.49e-03	1.22e-05	0.02	2.04e-04	345.88	2.8	0.0	0.0
26	52.378	0.019	0.368	2.90e-03	2.36e-05	5.04	4.11e-02	48.61	0.4	0.0	0.0
27	54.260	0.018	0.367	3.19	2.60e-02	0.43	3.51e-03	11.75	9.57e-02	0.0	0.0
28	63.407	0.016	0.361	1.01e-03	8.24e-06	7.08e-03	5.77e-05	8.98	7.32e-02	0.0	0.0
29	64.852	0.015	0.360	0.23	1.84e-03	4.59e-04	3.74e-06	1858.85	15.1	0.0	0.0
30	66.023	0.015	0.360	0.84	6.87e-03	2.57e-03	2.09e-05	311.13	2.5	0.0	0.0
31	83.357	0.012	0.353	1.98	1.62e-02	0.02	1.23e-04	0.10	7.98e-04	0.0	0.0
32	89.299	0.011	0.351	10.41	8.48e-02	0.03	2.05e-04	0.85	6.89e-03	0.0	0.0
33	90.275	0.011	0.351	0.12	9.91e-04	0.06	4.77e-04	164.13	1.3	0.0	0.0
34	94.215	0.011	0.350	0.15	1.19e-03	1.32e-03	1.07e-05	0.54	4.36e-03	0.0	0.0
35	140.776	0.007	0.342	8.63e-04	7.03e-06	0.02	1.96e-04	366.17	3.0	0.0	0.0
36	144.881	0.007	0.342	0.16	1.31e-03	9.16e-03	7.46e-05	7.61e-03	6.20e-05	0.0	0.0
37	155.386	0.006	0.341	1211.39	9.9	3.60e-05	0.0	5.74e-03	4.68e-05	0.0	0.0
38	156.031	0.006	0.341	0.01	9.58e-05	0.01	1.03e-04	0.63	5.12e-03	0.0	0.0
39	163.206	0.006	0.340	3.42	2.78e-02	1.14e-05	0.0	6.75e-03	5.50e-05	0.0	0.0
40	171.923	0.006	0.340	2.09	1.70e-02	0.0	0.0	3.45e-03	2.81e-05	0.0	0.0
41	179.220	0.006	0.339	617.36	5.0	9.44e-05	0.0	7.62e-03	6.21e-05	0.0	0.0
42	214.786	0.005	0.337	0.01	9.44e-05	1.39e-06	0.0	1.13e-03	9.19e-06	0.0	0.0
43	250.900	0.004	0.336	8.49e-03	6.92e-05	2.64e-04	2.15e-06	1.09e-03	8.90e-06	0.0	0.0
44	282.157	0.004	0.335	6.13e-03	5.00e-05	1.23e-06	0.0	3.45e-04	2.81e-06	0.0	0.0
45	297.890	0.003	0.334	0.0	0.0	3.02e-04	2.46e-06	1.87e-03	1.52e-05	0.0	0.0
46	304.765	0.003	0.334	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47	311.753	0.003	0.334	0.0	0.0	6.57e-06	0.0	0.15	1.20e-03	0.0	0.0
48	322.720	0.003	0.334	6.37e-05	0.0	0.0	0.0	1.23e-04	1.00e-06	0.0	0.0
49	326.910	0.003	0.334	1.82e-03	1.48e-05	0.0	0.0	2.30e-05	0.0	0.0	0.0
50	441.986	0.002	0.332	5.16e-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	491.760	0.002	0.332	0.09	7.29e-04	2.14e-04	1.74e-06	7.51e-03	6.11e-05	0.0	0.0
52	511.449	0.002	0.331	0.0	0.0	0.0	0.0	3.53	2.88e-02	0.0	0.0
53	529.360	0.002	0.331	5.22e-03	4.25e-05	0.0	0.0	9.60e-06	0.0	0.0	0.0
54	667.274	0.001	0.330	1.78e-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55	672.527	0.001	0.330	1.72e-04	1.40e-06	0.0	0.0	0.0	0.0	0.0	0.0
56	698.077	0.001	0.330	1.29e-05	0.0	0.0	0.0	5.46e-06	0.0	0.0	0.0
57	698.539	0.001	0.330	9.67e-04	7.87e-06	1.38e-05	0.0	6.09e-04	4.96e-06	0.0	0.0
58	787.333	0.001	0.330	0.0	0.0	0.0	0.0	3.21e-06	0.0	0.0	0.0
59	876.867	0.001	0.330	4.82e-04	3.92e-06	1.06e-05	0.0	3.13e-04	2.55e-06	0.0	0.0
60	968.890	0.001	0.330	1.69e-04	1.38e-06	2.26e-06	0.0	1.83e-04	1.49e-06	0.0	0.0
Risulta				1.228e+04		1.228e+04		1.228e+04			
In percentuale				100.00		100.00		100.00			

CDC	Tipo	Sigla Id	Note
8	Edk	CDC=Ed (dinamico SLD) alfa=0.0 (ecc. +)	
			categoria suolo: C
			fattore di sito S = 1.000
			ordinata spettro (tratto Tb-Tc) = 0.354 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.379 sec.
			numero di modi considerati: 60
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	daN	m	m	m	m	m	m			
5.55	2935.12	2.98	-0.41	0.0	-0.06	2.98	-0.19	2.031	2.7935e-05	0.152
5.45	93.20	2.98	-0.19	0.0	0.0	2.98	-0.19	3.000	0.0	0.0
4.20	182.81	2.98	-0.19	0.0	0.0	2.98	-0.19	3.000	0.0	0.0
2.83	6686.73	1.90	4.69	0.0	-0.09	1.85	5.21	1.440	0.030	0.211
2.73	517.12	1.90	5.21	0.0	-0.09	1.90	5.21	2.681	0.0	0.0
0.10	1860.63	0.83	0.0	0.0	0.0	0.83	0.0	3.000	0.0	0.0
Risulta	1.228e+04									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.160	0.862	0.154	3549.57	28.9	2.41	1.96e-02	0.99	8.10e-03	0.0	0.0
2	2.635	0.379	0.349	6721.75	54.8	43.66	0.4	2.01	1.63e-02	0.0	0.0
3	2.995	0.334	0.354	34.16	0.3	1.108e+04	90.2	1.89	1.54e-02	0.0	0.0
4	4.629	0.216	0.354	68.05	0.6	459.83	3.7	16.22	0.1	0.0	0.0
5	6.347	0.158	0.354	3.47	2.83e-02	195.43	1.6	1959.22	16.0	0.0	0.0
6	7.511	0.133	0.354	0.60	4.86e-03	409.37	3.3	756.13	6.2	0.0	0.0
7	7.986	0.125	0.354	3.38	2.75e-02	31.14	0.3	0.57	4.64e-03	0.0	0.0
8	9.653	0.104	0.315	11.53	9.39e-02	0.34	2.76e-03	3160.14	25.7	0.0	0.0
9	10.101	0.099	0.306	7.56	6.16e-02	0.46	3.78e-03	117.48	1.0	0.0	0.0
10	11.462	0.087	0.285	0.23	1.87e-03	0.23	1.84e-03	3.17	2.58e-02	0.0	0.0
11	12.673	0.079	0.269	2.42	1.97e-02	0.40	3.22e-03	0.37	3.02e-03	0.0	0.0
12	13.179	0.076	0.264	0.23	1.86e-03	8.77	7.14e-02	8.91	7.26e-02	0.0	0.0
13	13.267	0.075	0.263	1.80	1.47e-02	0.60	4.85e-03	43.98	0.4	0.0	0.0
14	13.942	0.072	0.256	0.62	5.09e-03	2.08	1.70e-02	58.95	0.5	0.0	0.0
15	15.560	0.064	0.242	6.37	5.19e-02	0.77	6.28e-03	1085.38	8.8	0.0	0.0
16	16.145	0.062	0.238	0.05	4.31e-04	2.48	2.02e-02	281.28	2.3	0.0	0.0
17	17.597	0.057	0.229	1.47e-03	1.20e-05	0.78	6.33e-03	0.59	4.78e-03	0.0	0.0
18	20.140	0.050	0.216	1.92e-03	1.57e-05	13.15	0.1	261.49	2.1	0.0	0.0
19	21.075	0.047	0.212	0.79	6.40e-03	15.55	0.1	1161.91	9.5	0.0	0.0
20	21.359	0.047	0.210	0.36	2.95e-03	5.89	4.80e-02	168.14	1.4	0.0	0.0
21	24.138	0.041	0.201	2.04	1.66e-02	3.58e-03	2.91e-05	0.05	4.14e-04	0.0	0.0
22	27.737	0.036	0.191	2.10	1.71e-02	0.07	5.50e-04	36.25	0.3	0.0	0.0
23	28.075	0.036	0.190	0.03	2.62e-04	4.58e-06	0.0	0.06	5.19e-04	0.0	0.0
24	29.528	0.034	0.187	7.22	5.88e-02	9.36e-03	7.62e-05	21.88	0.2	0.0	0.0
25	42.467	0.024	0.168	4.26e-03	3.47e-05	0.02	1.92e-04	262.51	2.1	0.0	0.0
26	52.479	0.019	0.159	2.95e-03	2.40e-05	5.13	4.18e-02	49.78	0.4	0.0	0.0
27	54.471	0.018	0.158	2.96	2.41e-02	0.39	3.16e-03	9.85	8.02e-02	0.0	0.0
28	62.858	0.016	0.154	0.01	1.06e-04	3.30e-04	2.69e-06	27.04	0.2	0.0	0.0
29	63.327	0.016	0.153	0.98	7.97e-03	8.86e-04	7.22e-06	572.89	4.7	0.0	0.0
30	64.235	0.016	0.153	0.25	2.08e-03	2.59e-03	2.11e-05	1616.41	13.2	0.0	0.0
31	86.481	0.012	0.146	0.08	6.26e-04	0.02	1.44e-04	7.30e-04	5.94e-06	0.0	0.0
32	88.129	0.011	0.145	0.24	1.92e-03	0.07	5.76e-04	214.13	1.7	0.0	0.0
33	89.173	0.011	0.145	11.99	9.76e-02	5.25e-03	4.28e-05	5.24	4.27e-02	0.0	0.0
34	93.756	0.011	0.144	0.25	2.00e-03	8.87e-04	7.22e-06	0.15	1.19e-03	0.0	0.0
35	140.763	0.007	0.138	8.53e-04	6.95e-06	0.02	1.98e-04	366.42	3.0	0.0	0.0
36	149.736	0.007	0.137	0.90	7.32e-03	9.66e-03	7.87e-05	0.01	8.98e-05	0.0	0.0
37	150.200	0.007	0.137	1.38e-03	1.12e-05	0.01	9.71e-05	0.38	3.09e-03	0.0	0.0
38	155.393	0.006	0.136	1211.41	9.9	2.24e-05	0.0	5.48e-03	4.46e-05	0.0	0.0
39	163.803	0.006	0.136	2.74	2.24e-02	3.36e-06	0.0	6.63e-03	5.40e-05	0.0	0.0
40	172.766	0.006	0.135	2.28	1.86e-02	0.0	0.0	3.55e-03	2.89e-05	0.0	0.0
41	179.222	0.006	0.135	617.06	5.0	9.07e-05	0.0	7.61e-03	6.20e-05	0.0	0.0
42	214.772	0.005	0.133	0.01	9.65e-05	1.57e-06	0.0	1.14e-03	9.28e-06	0.0	0.0
43	265.044	0.004	0.131	0.0	0.0	3.86e-04	3.14e-06	5.71e-04	4.65e-06	0.0	0.0
44	269.464	0.004	0.131	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45	275.671	0.004	0.131	4.45e-03	3.63e-05	2.14e-04	1.74e-06	8.82e-04	7.18e-06	0.0	0.0
46	295.706	0.003	0.131	5.24e-03	4.27e-05	0.0	0.0	0.02	1.34e-04	0.0	0.0
47	295.923	0.003	0.131	4.72e-04	3.84e-06	5.19e-06	0.0	0.13	1.06e-03	0.0	0.0
48	311.492	0.003	0.130	2.21e-03	1.80e-05	0.0	0.0	5.97e-05	0.0	0.0	0.0
49	340.402	0.003	0.130	6.47e-06	0.0	0.0	0.0	7.76e-05	0.0	0.0	0.0
50	445.140	0.002	0.129	6.08e-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	492.042	0.002	0.128	0.09	7.27e-04	2.15e-04	1.75e-06	7.45e-03	6.07e-05	0.0	0.0
52	511.164	0.002	0.128	0.0	0.0	0.0	0.0	3.55	2.89e-02	0.0	0.0
53	529.373	0.002	0.128	5.22e-03	4.25e-05	0.0	0.0	9.53e-06	0.0	0.0	0.0
54	641.216	0.002	0.127	2.02e-04	1.65e-06	0.0	0.0	1.17e-06	0.0	0.0	0.0
55	698.053	0.001	0.127	1.25e-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56	703.424	0.001	0.127	6.82e-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57	730.282	0.001	0.127	0.0	0.0	0.0	0.0	6.49e-06	0.0	0.0	0.0
58	745.547	0.001	0.127	8.42e-04	6.86e-06	1.19e-05	0.0	5.64e-04	4.60e-06	0.0	0.0
59	914.940	0.001	0.127	0.0	0.0	4.08e-05	0.0	1.32e-04	1.08e-06	0.0	0.0
60	938.412	0.001	0.126	4.18e-04	3.41e-06	8.83e-06	0.0	2.87e-04	2.34e-06	0.0	0.0
Risulta				1.228e+04		1.228e+04		1.228e+04			
In percentuale				100.00		100.00		100.00			

CDC	Tipo	Sigla Id	Note
9	Edk	CDC=Ed (dinamico SLD) alfa=0.0 (ecc. -)	

CDC	Tipo	Sigla Id	Note
			categoria suolo: C
			fattore di sito S = 1.000
			ordinata spettro (tratto Tb-Tc) = 0.354 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.376 sec.
			numero di modi considerati: 60
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	daN	m	m	m	m	m	m			
5.55	2935.12	2.98	-0.41	0.0	0.06	2.98	-0.19	2.031	2.7935e-05	0.152
5.45	93.20	2.98	-0.19	0.0	0.0	2.98	-0.19	3.000	0.0	0.0
4.20	182.81	2.98	-0.19	0.0	0.0	2.98	-0.19	3.000	0.0	0.0
2.83	6686.73	1.90	4.69	0.0	0.09	1.85	5.21	1.440	0.030	0.211
2.73	517.12	1.90	5.21	0.0	0.09	1.90	5.21	2.681	0.0	0.0
0.10	1860.63	0.83	0.0	0.0	0.0	0.83	0.0	3.000	0.0	0.0
Risulta	1.228e+04									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.157	0.864	0.153	3544.15	28.9	3.48	2.84e-02	0.94	7.64e-03	0.0	0.0
2	2.661	0.376	0.352	6798.21	55.4	11.09	9.04e-02	2.66	2.17e-02	0.0	0.0
3	2.998	0.334	0.354	5.29	4.31e-02	1.113e+04	90.7	1.82	1.48e-02	0.0	0.0
4	4.441	0.225	0.354	10.87	8.85e-02	426.35	3.5	13.19	0.1	0.0	0.0
5	6.424	0.156	0.354	10.20	8.31e-02	176.21	1.4	1925.63	15.7	0.0	0.0
6	6.741	0.148	0.354	14.64	0.1	17.86	0.1	422.33	3.4	0.0	0.0
7	7.627	0.131	0.354	2.34	1.91e-02	450.71	3.7	351.56	2.9	0.0	0.0
8	8.885	0.113	0.331	7.54	6.14e-02	6.52	5.31e-02	12.09	9.85e-02	0.0	0.0
9	9.679	0.103	0.314	7.17	5.84e-02	1.49	1.22e-02	3263.37	26.6	0.0	0.0
10	10.068	0.099	0.307	0.29	2.33e-03	2.41	1.96e-02	11.58	9.43e-02	0.0	0.0
11	11.966	0.084	0.278	0.53	4.33e-03	0.94	7.65e-03	1.90	1.55e-02	0.0	0.0
12	13.247	0.075	0.263	0.17	1.42e-03	2.96e-03	2.41e-05	58.21	0.5	0.0	0.0
13	13.760	0.073	0.258	0.68	5.57e-03	0.02	1.50e-04	51.35	0.4	0.0	0.0
14	15.259	0.066	0.245	6.20	5.05e-02	0.54	4.36e-03	354.99	2.9	0.0	0.0
15	15.782	0.063	0.241	1.57	1.28e-02	1.78	1.45e-02	1017.70	8.3	0.0	0.0
16	16.199	0.062	0.238	1.49e-03	1.21e-05	4.12	3.35e-02	2.23	1.82e-02	0.0	0.0
17	17.411	0.057	0.230	2.10e-04	1.71e-06	0.75	6.08e-03	4.15	3.38e-02	0.0	0.0
18	20.140	0.050	0.216	0.01	9.87e-05	12.73	0.1	242.38	2.0	0.0	0.0
19	20.278	0.049	0.215	0.97	7.92e-03	1.22	9.93e-03	79.27	0.6	0.0	0.0
20	21.093	0.047	0.212	0.26	2.15e-03	15.28	0.1	1067.20	8.7	0.0	0.0
21	21.343	0.047	0.211	0.33	2.72e-03	5.37	4.37e-02	193.00	1.6	0.0	0.0
22	24.949	0.040	0.198	9.28	7.56e-02	0.17	1.42e-03	26.42	0.2	0.0	0.0
23	28.075	0.036	0.190	0.02	1.71e-04	1.31e-04	1.06e-06	0.28	2.28e-03	0.0	0.0
24	28.982	0.035	0.188	3.60	2.93e-02	3.80e-05	0.0	42.62	0.3	0.0	0.0
25	42.468	0.024	0.168	3.30e-03	2.69e-05	0.02	1.88e-04	262.84	2.1	0.0	0.0
26	52.477	0.019	0.159	1.94e-03	1.58e-05	5.13	4.18e-02	49.78	0.4	0.0	0.0
27	54.471	0.018	0.158	2.93	2.38e-02	0.39	3.17e-03	10.01	8.16e-02	0.0	0.0
28	62.994	0.016	0.154	0.21	1.70e-03	1.29e-03	1.05e-05	14.72	0.1	0.0	0.0
29	63.945	0.016	0.153	0.02	1.83e-04	9.38e-04	7.64e-06	2178.39	17.7	0.0	0.0
30	68.639	0.015	0.151	1.03	8.37e-03	1.23e-03	1.00e-05	23.43	0.2	0.0	0.0
31	86.490	0.012	0.146	0.08	6.63e-04	0.02	1.38e-04	9.31e-03	7.59e-05	0.0	0.0
32	88.151	0.011	0.145	0.18	1.45e-03	0.07	5.74e-04	215.25	1.8	0.0	0.0
33	89.204	0.011	0.145	12.29	0.1	6.48e-03	5.28e-05	3.74	3.05e-02	0.0	0.0
34	94.881	0.011	0.144	0.06	5.18e-04	4.10e-04	3.34e-06	0.04	3.37e-04	0.0	0.0
35	140.763	0.007	0.138	8.46e-04	6.89e-06	0.02	1.98e-04	366.42	3.0	0.0	0.0
36	149.736	0.007	0.137	0.90	7.35e-03	9.66e-03	7.87e-05	0.01	8.97e-05	0.0	0.0
37	150.200	0.007	0.137	1.35e-03	1.10e-05	0.01	9.71e-05	0.38	3.09e-03	0.0	0.0
38	155.394	0.006	0.136	1211.34	9.9	2.23e-05	0.0	5.47e-03	4.46e-05	0.0	0.0
39	163.800	0.006	0.136	2.74	2.23e-02	3.34e-06	0.0	6.64e-03	5.41e-05	0.0	0.0
40	172.746	0.006	0.135	2.29	1.86e-02	0.0	0.0	3.54e-03	2.88e-05	0.0	0.0
41	179.223	0.006	0.135	617.07	5.0	9.07e-05	0.0	7.61e-03	6.20e-05	0.0	0.0
42	214.775	0.005	0.133	0.01	9.48e-05	1.57e-06	0.0	1.14e-03	9.26e-06	0.0	0.0
43	265.044	0.004	0.131	0.0	0.0	3.86e-04	3.14e-06	5.71e-04	4.65e-06	0.0	0.0
44	275.671	0.004	0.131	4.46e-03	3.63e-05	2.14e-04	1.74e-06	8.81e-04	7.17e-06	0.0	0.0
45	295.706	0.003	0.131	5.24e-03	4.27e-05	0.0	0.0	0.02	1.34e-04	0.0	0.0
46	295.923	0.003	0.131	4.74e-04	3.86e-06	5.19e-06	0.0	0.13	1.06e-03	0.0	0.0

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
47	307.861	0.003	0.130	0.0	0.0	0.0	0.0	1.18e-04	0.0	0.0	0.0
48	344.413	0.003	0.130	1.59e-03	1.30e-05	0.0	0.0	4.39e-05	0.0	0.0	0.0
49	358.965	0.003	0.130	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	445.135	0.002	0.129	6.02e-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	492.042	0.002	0.128	0.09	7.27e-04	2.15e-04	1.75e-06	7.45e-03	6.07e-05	0.0	0.0
52	511.164	0.002	0.128	0.0	0.0	0.0	0.0	3.55	2.89e-02	0.0	0.0
53	529.370	0.002	0.128	5.21e-03	4.25e-05	0.0	0.0	9.57e-06	0.0	0.0	0.0
54	636.265	0.002	0.127	1.05e-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55	697.887	0.001	0.127	7.93e-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56	709.050	0.001	0.127	1.54e-04	1.25e-06	0.0	0.0	0.0	0.0	0.0	0.0
57	730.282	0.001	0.127	0.0	0.0	0.0	0.0	6.49e-06	0.0	0.0	0.0
58	745.547	0.001	0.127	8.42e-04	6.86e-06	1.19e-05	0.0	5.64e-04	4.60e-06	0.0	0.0
59	914.940	0.001	0.127	0.0	0.0	4.08e-05	0.0	1.32e-04	1.08e-06	0.0	0.0
60	938.412	0.001	0.126	4.18e-04	3.41e-06	8.83e-06	0.0	2.87e-04	2.34e-06	0.0	0.0
Risulta In percentuale				1.228e+04 100.00		1.228e+04 100.00		1.228e+04 100.00			

CDC	Tipo	Sigla Id	Note
10	Edk	CDC=Ed (dinamico SLD) alfa=90.00 (ecc. +)	
			categoria suolo: C
			fattore di sito S = 1.000
			ordinata spettro (tratto Tb-Tc) = 0.354 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.329 sec.
			numero di modi considerati: 60
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	daN	m	m	m	m	m	m			
5.55	2935.12	2.98	-0.41	0.09	0.0	2.98	-0.19	2.031	2.7935e-05	0.152
5.45	93.20	2.98	-0.19	0.09	0.0	2.98	-0.19	3.000	0.0	0.0
4.20	182.81	2.98	-0.19	0.09	0.0	2.98	-0.19	3.000	0.0	0.0
2.83	6686.73	1.90	4.69	0.20	0.0	1.85	5.21	1.440	0.030	0.211
2.73	517.12	1.90	5.21	0.20	0.0	1.90	5.21	2.681	0.0	0.0
0.10	1860.63	0.83	0.0	0.09	0.0	0.83	0.0	3.000	0.0	0.0
Risulta	1.228e+04									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.158	0.863	0.153	3546.78	28.9	2.50	2.03e-02	0.97	7.89e-03	0.0	0.0
2	2.652	0.377	0.351	6780.63	55.2	1.83	1.49e-02	2.42	1.97e-02	0.0	0.0
3	3.039	0.329	0.354	1.57	1.28e-02	1.125e+04	91.7	1.98	1.62e-02	0.0	0.0
4	4.470	0.224	0.354	39.25	0.3	402.73	3.3	10.94	8.92e-02	0.0	0.0
5	6.410	0.156	0.354	5.11	4.16e-02	127.53	1.0	2067.51	16.8	0.0	0.0
6	7.110	0.141	0.354	3.11	2.53e-02	123.76	1.0	469.48	3.8	0.0	0.0
7	7.876	0.127	0.354	7.14	5.82e-02	308.32	2.5	120.62	1.0	0.0	0.0
8	9.439	0.106	0.319	12.77	0.1	2.08e-05	0.0	153.33	1.2	0.0	0.0
9	9.686	0.103	0.314	4.33	3.53e-02	1.62	1.32e-02	3198.44	26.1	0.0	0.0
10	10.775	0.093	0.295	0.26	2.10e-03	1.64	1.34e-02	1.82	1.49e-02	0.0	0.0
11	12.240	0.082	0.274	1.37	1.12e-02	0.66	5.39e-03	0.40	3.28e-03	0.0	0.0
12	13.257	0.075	0.263	0.37	3.01e-03	0.02	1.59e-04	54.65	0.4	0.0	0.0
13	13.705	0.073	0.258	0.12	9.83e-04	0.62	5.05e-03	63.66	0.5	0.0	0.0
14	14.343	0.070	0.252	1.27	1.04e-02	4.40	3.58e-02	0.97	7.94e-03	0.0	0.0
15	15.437	0.065	0.243	4.66	3.79e-02	0.14	1.16e-03	300.95	2.5	0.0	0.0
16	16.045	0.062	0.239	1.99	1.62e-02	2.94	2.39e-02	1144.84	9.3	0.0	0.0
17	17.355	0.058	0.230	0.0	0.0	0.88	7.16e-03	3.05	2.49e-02	0.0	0.0
18	19.888	0.050	0.217	1.44e-03	1.17e-05	13.15	0.1	252.04	2.1	0.0	0.0
19	21.241	0.047	0.211	1.47	1.20e-02	14.09	0.1	1043.92	8.5	0.0	0.0
20	21.668	0.046	0.209	0.47	3.84e-03	7.65	6.24e-02	88.72	0.7	0.0	0.0
21	21.848	0.046	0.209	0.48	3.93e-03	0.41	3.34e-03	94.63	0.8	0.0	0.0
22	26.242	0.038	0.194	6.82	5.56e-02	0.12	9.90e-04	24.99	0.2	0.0	0.0
23	28.075	0.036	0.190	0.02	1.98e-04	5.58e-05	0.0	0.22	1.81e-03	0.0	0.0

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
24	29.107	0.034	0.188	4.57	3.72e-02	3.00e-04	2.44e-06	39.72	0.3	0.0	0.0
25	40.656	0.025	0.170	6.82e-03	5.56e-05	0.02	1.86e-04	207.12	1.7	0.0	0.0
26	52.585	0.019	0.159	1.88e-04	1.53e-06	5.17	4.21e-02	49.91	0.4	0.0	0.0
27	54.438	0.018	0.158	2.51	2.04e-02	0.39	3.20e-03	8.74	7.12e-02	0.0	0.0
28	63.113	0.016	0.154	0.24	1.93e-03	5.90e-04	4.81e-06	1917.93	15.6	0.0	0.0
29	63.211	0.016	0.154	0.37	3.05e-03	8.89e-06	0.0	254.57	2.1	0.0	0.0
30	65.934	0.015	0.152	1.12	9.10e-03	1.32e-03	1.07e-05	62.03	0.5	0.0	0.0
31	86.767	0.012	0.146	0.11	9.34e-04	0.08	6.13e-04	258.68	2.1	0.0	0.0
32	87.870	0.011	0.145	5.05	4.12e-02	0.01	1.22e-04	5.72	4.66e-02	0.0	0.0
33	92.182	0.011	0.144	6.99	5.69e-02	6.35e-04	5.18e-06	0.05	3.91e-04	0.0	0.0
34	94.221	0.011	0.144	0.28	2.26e-03	5.65e-04	4.60e-06	0.02	1.56e-04	0.0	0.0
35	140.748	0.007	0.138	8.40e-04	6.84e-06	0.02	2.03e-04	366.77	3.0	0.0	0.0
36	145.262	0.007	0.137	0.0	0.0	0.01	9.83e-05	0.04	3.47e-04	0.0	0.0
37	155.204	0.006	0.136	686.64	5.6	4.45e-03	3.62e-05	5.38e-06	0.0	0.0	0.0
38	155.645	0.006	0.136	526.29	4.3	4.29e-03	3.50e-05	0.01	1.00e-04	0.0	0.0
39	164.423	0.006	0.136	2.12	1.72e-02	2.19e-06	0.0	6.71e-03	5.46e-05	0.0	0.0
40	173.634	0.006	0.135	2.60	2.12e-02	0.0	0.0	3.66e-03	2.98e-05	0.0	0.0
41	179.226	0.006	0.135	616.59	5.0	8.41e-05	0.0	7.62e-03	6.21e-05	0.0	0.0
42	214.765	0.005	0.133	0.01	9.72e-05	1.78e-06	0.0	1.15e-03	9.36e-06	0.0	0.0
43	241.084	0.004	0.132	0.0	0.0	4.67e-04	3.80e-06	3.23e-04	2.63e-06	0.0	0.0
44	282.298	0.004	0.131	0.0	0.0	3.93e-06	0.0	0.15	1.20e-03	0.0	0.0
45	304.765	0.003	0.131	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46	309.582	0.003	0.130	1.82e-03	1.48e-05	1.61e-04	1.31e-06	7.33e-04	5.97e-06	0.0	0.0
47	311.489	0.003	0.130	5.86e-03	4.77e-05	5.44e-06	0.0	2.47e-04	2.01e-06	0.0	0.0
48	322.720	0.003	0.130	6.19e-05	0.0	0.0	0.0	1.27e-04	1.03e-06	0.0	0.0
49	326.910	0.003	0.130	1.84e-03	1.50e-05	0.0	0.0	2.44e-05	0.0	0.0	0.0
50	448.360	0.002	0.129	7.10e-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	492.402	0.002	0.128	0.09	7.24e-04	2.18e-04	1.77e-06	7.38e-03	6.01e-05	0.0	0.0
52	510.943	0.002	0.128	0.0	0.0	0.0	0.0	3.56	2.90e-02	0.0	0.0
53	529.385	0.002	0.128	5.21e-03	4.25e-05	0.0	0.0	9.49e-06	0.0	0.0	0.0
54	667.274	0.001	0.127	1.78e-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55	672.528	0.001	0.127	1.73e-04	1.41e-06	0.0	0.0	0.0	0.0	0.0	0.0
56	684.433	0.001	0.127	0.0	0.0	0.0	0.0	1.19e-05	0.0	0.0	0.0
57	698.091	0.001	0.127	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58	804.153	0.001	0.127	7.25e-04	5.91e-06	9.61e-06	0.0	5.14e-04	4.18e-06	0.0	0.0
59	855.383	0.001	0.127	0.0	0.0	4.72e-05	0.0	1.98e-04	1.61e-06	0.0	0.0
60	980.981	0.001	0.126	2.12e-04	1.73e-06	2.16e-06	0.0	2.22e-04	1.81e-06	0.0	0.0
Risulta				1.228e+04		1.228e+04		1.228e+04			
In percentuale				100.00		100.00		100.00			

CDC	Tipo	Sigla Id	Note
11	Edk	CDC=Ed (dinamico SLD) alfa=90.00 (ecc. -)	
			categoria suolo: C
			fattore di sito S = 1.000
			ordinata spettro (tratto Tb-Tc) = 0.354 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.340 sec.
			numero di modi considerati: 60
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	daN	m	m	m	m	m	m			
5.55	2935.12	2.98	-0.41	-0.09	0.0	2.98	-0.19	2.031	2.7935e-05	0.152
5.45	93.20	2.98	-0.19	-0.09	0.0	2.98	-0.19	3.000	0.0	0.0
4.20	182.81	2.98	-0.19	-0.09	0.0	2.98	-0.19	3.000	0.0	0.0
2.83	6686.73	1.90	4.69	-0.20	0.0	1.85	5.21	1.440	0.030	0.211
2.73	517.12	1.90	5.21	-0.20	0.0	1.90	5.21	2.681	0.0	0.0
0.10	1860.63	0.83	0.0	-0.09	0.0	0.83	0.0	3.000	0.0	0.0
Risulta	1.228e+04									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			



Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
1	1.158	0.863	0.153	3545.19	28.9	3.40	2.77e-02	0.96	7.85e-03	0.0	0.0
2	2.650	0.377	0.351	6724.68	54.8	98.64	0.8	2.19	1.78e-02	0.0	0.0
3	2.945	0.340	0.354	63.56	0.5	1.097e+04	89.4	1.80	1.46e-02	0.0	0.0
4	4.589	0.218	0.354	33.64	0.3	417.67	3.4	22.67	0.2	0.0	0.0
5	6.387	0.157	0.354	5.46	4.45e-02	231.01	1.9	2008.01	16.4	0.0	0.0
6	7.241	0.138	0.354	9.83	8.01e-02	7.15	5.82e-02	53.69	0.4	0.0	0.0
7	7.586	0.132	0.354	0.47	3.85e-03	479.10	3.9	700.31	5.7	0.0	0.0
8	9.429	0.106	0.319	14.90	0.1	9.45	7.70e-02	342.08	2.8	0.0	0.0
9	9.706	0.103	0.314	3.08	2.51e-02	0.36	2.93e-03	2864.60	23.3	0.0	0.0
10	10.722	0.093	0.296	0.29	2.40e-03	0.23	1.86e-03	4.06e-03	3.31e-05	0.0	0.0
11	12.238	0.082	0.274	1.32	1.07e-02	0.99	8.10e-03	0.44	3.56e-03	0.0	0.0
12	13.251	0.075	0.263	0.33	2.68e-03	0.03	2.52e-04	44.80	0.4	0.0	0.0
13	13.725	0.073	0.258	0.24	1.93e-03	0.44	3.57e-03	56.44	0.5	0.0	0.0
14	14.474	0.069	0.251	1.47	1.20e-02	8.10	6.60e-02	6.11	4.98e-02	0.0	0.0
15	15.297	0.065	0.244	6.15	5.01e-02	0.08	6.26e-04	844.63	6.9	0.0	0.0
16	15.684	0.064	0.242	0.07	5.78e-04	3.48	2.84e-02	460.17	3.7	0.0	0.0
17	17.325	0.058	0.230	3.63e-05	0.0	1.02	8.29e-03	3.68	3.00e-02	0.0	0.0
18	20.402	0.049	0.214	3.32e-03	2.70e-05	13.59	0.1	268.04	2.2	0.0	0.0
19	20.887	0.048	0.212	0.50	4.06e-03	17.60	0.1	1038.16	8.5	0.0	0.0
20	21.046	0.048	0.212	0.47	3.84e-03	2.95	2.41e-02	366.26	3.0	0.0	0.0
21	21.790	0.046	0.209	1.07	8.76e-03	0.04	3.33e-04	8.66	7.05e-02	0.0	0.0
22	26.241	0.038	0.194	6.75	5.50e-02	0.12	9.58e-04	23.52	0.2	0.0	0.0
23	28.074	0.036	0.190	0.02	1.62e-04	1.58e-04	1.28e-06	0.27	2.18e-03	0.0	0.0
24	29.123	0.034	0.188	4.60	3.75e-02	4.38e-04	3.57e-06	36.79	0.3	0.0	0.0
25	44.514	0.022	0.166	1.49e-03	1.22e-05	0.02	2.04e-04	345.88	2.8	0.0	0.0
26	52.378	0.019	0.160	2.90e-03	2.36e-05	5.04	4.11e-02	48.61	0.4	0.0	0.0
27	54.260	0.018	0.158	3.19	2.60e-02	0.43	3.51e-03	11.75	9.57e-02	0.0	0.0
28	63.407	0.016	0.153	1.01e-03	8.24e-06	7.08e-03	5.77e-05	8.98	7.32e-02	0.0	0.0
29	64.852	0.015	0.153	0.23	1.84e-03	4.59e-04	3.74e-06	1858.85	15.1	0.0	0.0
30	66.023	0.015	0.152	0.84	6.87e-03	2.57e-03	2.09e-05	311.13	2.5	0.0	0.0
31	83.357	0.012	0.147	1.98	1.62e-02	0.02	1.23e-04	0.10	7.98e-04	0.0	0.0
32	89.299	0.011	0.145	10.41	8.48e-02	0.03	2.05e-04	0.85	6.89e-03	0.0	0.0
33	90.275	0.011	0.145	0.12	9.91e-04	0.06	4.77e-04	164.13	1.3	0.0	0.0
34	94.215	0.011	0.144	0.15	1.19e-03	1.32e-03	1.07e-05	0.54	4.36e-03	0.0	0.0
35	140.776	0.007	0.138	8.63e-04	7.03e-06	0.02	1.96e-04	366.17	3.0	0.0	0.0
36	144.881	0.007	0.137	0.16	1.31e-03	9.16e-03	7.46e-05	7.61e-03	6.20e-05	0.0	0.0
37	155.386	0.006	0.136	1211.39	9.9	3.60e-05	0.0	5.74e-03	4.68e-05	0.0	0.0
38	156.031	0.006	0.136	0.01	9.58e-05	0.01	1.03e-04	0.63	5.12e-03	0.0	0.0
39	163.206	0.006	0.136	3.42	2.78e-02	1.14e-05	0.0	6.75e-03	5.50e-05	0.0	0.0
40	171.923	0.006	0.135	2.09	1.70e-02	0.0	0.0	3.45e-03	2.81e-05	0.0	0.0
41	179.220	0.006	0.135	617.36	5.0	9.44e-05	0.0	7.62e-03	6.21e-05	0.0	0.0
42	214.786	0.005	0.133	0.01	9.44e-05	1.39e-06	0.0	1.13e-03	9.19e-06	0.0	0.0
43	250.900	0.004	0.132	8.49e-03	6.92e-05	2.64e-04	2.15e-06	1.09e-03	8.90e-06	0.0	0.0
44	282.157	0.004	0.131	6.13e-03	5.00e-05	1.23e-06	0.0	3.45e-04	2.81e-06	0.0	0.0
45	297.890	0.003	0.131	0.0	0.0	3.02e-04	2.46e-06	1.87e-03	1.52e-05	0.0	0.0
46	304.765	0.003	0.131	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47	311.753	0.003	0.130	0.0	0.0	6.57e-06	0.0	0.15	1.20e-03	0.0	0.0
48	322.720	0.003	0.130	6.37e-05	0.0	0.0	0.0	1.23e-04	1.00e-06	0.0	0.0
49	326.910	0.003	0.130	1.82e-03	1.48e-05	0.0	0.0	2.30e-05	0.0	0.0	0.0
50	441.986	0.002	0.129	5.16e-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	491.760	0.002	0.128	0.09	7.29e-04	2.14e-04	1.74e-06	7.51e-03	6.11e-05	0.0	0.0
52	511.449	0.002	0.128	0.0	0.0	0.0	0.0	3.53	2.88e-02	0.0	0.0
53	529.360	0.002	0.128	5.22e-03	4.25e-05	0.0	0.0	9.60e-06	0.0	0.0	0.0
54	667.274	0.001	0.127	1.78e-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55	672.527	0.001	0.127	1.72e-04	1.40e-06	0.0	0.0	0.0	0.0	0.0	0.0
56	698.077	0.001	0.127	1.29e-05	0.0	0.0	0.0	5.46e-06	0.0	0.0	0.0
57	698.539	0.001	0.127	9.67e-04	7.87e-06	1.38e-05	0.0	6.09e-04	4.96e-06	0.0	0.0
58	787.333	0.001	0.127	0.0	0.0	0.0	0.0	3.21e-06	0.0	0.0	0.0
59	876.867	0.001	0.127	4.82e-04	3.92e-06	1.06e-05	0.0	3.13e-04	2.55e-06	0.0	0.0
60	968.890	0.001	0.126	1.69e-04	1.38e-06	2.26e-06	0.0	1.83e-04	1.49e-06	0.0	0.0
Risulta				1.228e+04		1.228e+04		1.228e+04			
In percentuale				100.00		100.00		100.00			

CDC	Tipo	Sigla Id	Note
12	Edk	CDC=Ed (dinamico SLU) verticale	
			categoria suolo: C
			fattore di sito S = 1.000
			ordinata spettro (tratto Tb-Tc) = 0.470 g



CDC	Tipo	Sigla Id	Note
			fattore q: 1.500
			classe di duttilità CD: ND
			numero di modi considerati: 60
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	daN	m	m	m	m	m	m			
5.55	2935.12	2.98	-0.41	0.0	0.0	2.98	-0.19	2.031	2.7935e-05	0.152
5.45	93.20	2.98	-0.19	0.0	0.0	2.98	-0.19	3.000	0.0	0.0
4.20	182.81	2.98	-0.19	0.0	0.0	2.98	-0.19	3.000	0.0	0.0
2.83	6686.73	1.90	4.69	0.0	0.0	1.85	5.21	1.440	0.030	0.211
2.73	517.12	1.90	5.21	0.0	0.0	1.90	5.21	2.681	0.0	0.0
0.10	1860.63	0.83	0.0	0.0	0.0	0.83	0.0	3.000	0.0	0.0
Risulta	1.228e+04									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.158	0.863	0.082	3545.99	28.9	2.93	2.38e-02	0.97	7.87e-03	0.0	0.0
2	2.652	0.377	0.187	6766.01	55.1	26.98	0.2	2.32	1.89e-02	0.0	0.0
3	2.996	0.334	0.211	18.54	0.2	1.110e+04	90.4	1.87	1.52e-02	0.0	0.0
4	4.529	0.221	0.319	37.25	0.3	443.45	3.6	14.92	0.1	0.0	0.0
5	6.389	0.157	0.451	5.21	4.25e-02	183.04	1.5	2022.84	16.5	0.0	0.0
6	7.193	0.139	0.470	5.45	4.44e-02	91.26	0.7	348.70	2.8	0.0	0.0
7	7.646	0.131	0.470	4.47	3.64e-02	371.65	3.0	328.45	2.7	0.0	0.0
8	9.419	0.106	0.470	13.78	0.1	2.56	2.09e-02	184.34	1.5	0.0	0.0
9	9.688	0.103	0.470	4.06	3.31e-02	0.22	1.83e-03	3107.10	25.3	0.0	0.0
10	10.742	0.093	0.470	0.28	2.26e-03	0.63	5.14e-03	0.33	2.66e-03	0.0	0.0
11	12.239	0.082	0.470	1.35	1.10e-02	0.82	6.67e-03	0.40	3.29e-03	0.0	0.0
12	13.254	0.075	0.470	0.35	2.85e-03	0.03	2.24e-04	49.47	0.4	0.0	0.0
13	13.714	0.073	0.470	0.16	1.34e-03	0.53	4.35e-03	61.79	0.5	0.0	0.0
14	14.390	0.069	0.470	1.33	1.09e-02	5.82	4.74e-02	0.19	1.56e-03	0.0	0.0
15	15.388	0.065	0.470	5.55	4.52e-02	0.01	9.56e-05	510.54	4.2	0.0	0.0
16	15.829	0.063	0.470	0.95	7.75e-03	3.27	2.66e-02	858.39	7.0	0.0	0.0
17	17.340	0.058	0.470	1.16e-05	0.0	0.96	7.80e-03	3.34	2.72e-02	0.0	0.0
18	20.140	0.050	0.469	2.02e-03	1.65e-05	13.16	0.1	260.27	2.1	0.0	0.0
19	21.050	0.048	0.459	0.92	7.53e-03	15.34	0.1	1136.42	9.3	0.0	0.0
20	21.343	0.047	0.456	0.40	3.24e-03	5.98	4.87e-02	165.79	1.4	0.0	0.0
21	21.807	0.046	0.452	0.89	7.24e-03	0.18	1.44e-03	25.88	0.2	0.0	0.0
22	26.242	0.038	0.418	6.79	5.53e-02	0.12	9.62e-04	24.21	0.2	0.0	0.0
23	28.075	0.036	0.408	0.02	1.78e-04	1.09e-04	0.0	0.25	2.01e-03	0.0	0.0
24	29.115	0.034	0.402	4.59	3.74e-02	4.40e-04	3.59e-06	38.17	0.3	0.0	0.0
25	42.467	0.024	0.355	3.71e-03	3.02e-05	0.02	1.90e-04	262.68	2.1	0.0	0.0
26	52.478	0.019	0.336	2.33e-03	1.90e-05	5.13	4.18e-02	49.78	0.4	0.0	0.0
27	54.470	0.018	0.333	2.94	2.39e-02	0.39	3.16e-03	9.94	8.09e-02	0.0	0.0
28	62.986	0.016	0.322	0.17	1.35e-03	1.22e-03	9.95e-06	8.82	7.18e-02	0.0	0.0
29	63.890	0.016	0.321	0.08	6.66e-04	6.01e-04	4.89e-06	2101.76	17.1	0.0	0.0
30	65.952	0.015	0.319	1.02	8.33e-03	1.70e-03	1.39e-05	105.82	0.9	0.0	0.0
31	86.485	0.012	0.303	0.08	6.40e-04	0.02	1.41e-04	7.13e-04	5.80e-06	0.0	0.0
32	88.139	0.011	0.302	0.21	1.70e-03	0.07	5.75e-04	214.71	1.7	0.0	0.0
33	89.186	0.011	0.302	12.13	9.88e-02	5.79e-03	4.72e-05	4.53	3.69e-02	0.0	0.0
34	94.205	0.011	0.299	0.15	1.23e-03	6.49e-04	5.29e-06	0.09	7.33e-04	0.0	0.0
35	140.763	0.007	0.284	8.50e-04	6.93e-06	0.02	1.98e-04	366.42	3.0	0.0	0.0
36	149.736	0.007	0.282	0.90	7.33e-03	9.66e-03	7.87e-05	0.01	8.98e-05	0.0	0.0
37	150.200	0.007	0.282	1.37e-03	1.11e-05	0.01	9.71e-05	0.38	3.09e-03	0.0	0.0
38	155.393	0.006	0.281	1211.37	9.9	2.23e-05	0.0	5.48e-03	4.46e-05	0.0	0.0
39	163.800	0.006	0.279	2.75	2.24e-02	3.35e-06	0.0	6.64e-03	5.41e-05	0.0	0.0
40	172.752	0.006	0.278	2.28	1.86e-02	0.0	0.0	3.54e-03	2.89e-05	0.0	0.0
41	179.222	0.006	0.277	617.06	5.0	9.07e-05	0.0	7.61e-03	6.20e-05	0.0	0.0
42	214.773	0.005	0.273	0.01	9.57e-05	1.57e-06	0.0	1.14e-03	9.27e-06	0.0	0.0
43	265.044	0.004	0.269	0.0	0.0	3.86e-04	3.14e-06	5.71e-04	4.65e-06	0.0	0.0
44	275.671	0.004	0.269	4.46e-03	3.63e-05	2.14e-04	1.74e-06	8.81e-04	7.18e-06	0.0	0.0
45	295.706	0.003	0.267	5.24e-03	4.27e-05	0.0	0.0	0.02	1.34e-04	0.0	0.0
46	295.923	0.003	0.267	4.73e-04	3.85e-06	5.19e-06	0.0	0.13	1.06e-03	0.0	0.0
47	304.765	0.003	0.267	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	322.720	0.003	0.266	6.35e-05	0.0	0.0	0.0	1.25e-04	1.02e-06	0.0	0.0
49	326.910	0.003	0.266	1.83e-03	1.49e-05	0.0	0.0	2.48e-05	0.0	0.0	0.0
50	445.137	0.002	0.263	6.07e-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
51	492.042	0.002	0.262	0.09	7.27e-04	2.15e-04	1.75e-06	7.45e-03	6.07e-05	0.0	0.0
52	511.164	0.002	0.261	0.0	0.0	0.0	0.0	3.55	2.89e-02	0.0	0.0
53	529.372	0.002	0.261	5.22e-03	4.25e-05	0.0	0.0	9.55e-06	0.0	0.0	0.0
54	667.274	0.001	0.259	1.78e-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55	672.528	0.001	0.259	1.72e-04	1.40e-06	0.0	0.0	0.0	0.0	0.0	0.0
56	698.086	0.001	0.259	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57	730.282	0.001	0.259	0.0	0.0	0.0	0.0	6.49e-06	0.0	0.0	0.0
58	745.547	0.001	0.259	8.42e-04	6.86e-06	1.19e-05	0.0	5.64e-04	4.60e-06	0.0	0.0
59	914.940	0.001	0.258	0.0	0.0	4.08e-05	0.0	1.32e-04	1.08e-06	0.0	0.0
60	938.412	0.001	0.257	4.18e-04	3.41e-06	8.83e-06	0.0	2.87e-04	2.34e-06	0.0	0.0
Risulta				1.228e+04		1.228e+04		1.228e+04			
In percentuale				100.00		100.00		100.00			

CDC	Tipo	Sigla Id	Note
13	Edk	CDC=Ed (dinamico SLO) alfa=0.0 (ecc. +)	
			categoria suolo: C
			fattore di sito S = 1.000
			ordinata spettro (tratto Tb-Tc) = 0.285 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.379 sec.
			numero di modi considerati: 60
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	daN	m	m	m	m	m	m			
5.55	2935.12	2.98	-0.41	0.0	-0.06	2.98	-0.19	2.031	2.7935e-05	0.152
5.45	93.20	2.98	-0.19	0.0	0.0	2.98	-0.19	3.000	0.0	0.0
4.20	182.81	2.98	-0.19	0.0	0.0	2.98	-0.19	3.000	0.0	0.0
2.83	6686.73	1.90	4.69	0.0	-0.09	1.85	5.21	1.440	0.030	0.211
2.73	517.12	1.90	5.21	0.0	-0.09	1.90	5.21	2.681	0.0	0.0
0.10	1860.63	0.83	0.0	0.0	0.0	0.83	0.0	3.000	0.0	0.0
Risulta	1.228e+04									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.160	0.862	0.119	3549.57	28.9	2.41	1.96e-02	0.99	8.10e-03	0.0	0.0
2	2.635	0.379	0.271	6721.75	54.8	43.66	0.4	2.01	1.63e-02	0.0	0.0
3	2.995	0.334	0.285	34.16	0.3	1.108e+04	90.2	1.89	1.54e-02	0.0	0.0
4	4.629	0.216	0.285	68.05	0.6	459.83	3.7	16.22	0.1	0.0	0.0
5	6.347	0.158	0.285	3.47	2.83e-02	195.43	1.6	1959.22	16.0	0.0	0.0
6	7.511	0.133	0.285	0.60	4.86e-03	409.37	3.3	756.13	6.2	0.0	0.0
7	7.986	0.125	0.285	3.38	2.75e-02	31.14	0.3	0.57	4.64e-03	0.0	0.0
8	9.653	0.104	0.260	11.53	9.39e-02	0.34	2.76e-03	3160.14	25.7	0.0	0.0
9	10.101	0.099	0.253	7.56	6.16e-02	0.46	3.78e-03	117.48	1.0	0.0	0.0
10	11.462	0.087	0.235	0.23	1.87e-03	0.23	1.84e-03	3.17	2.58e-02	0.0	0.0
11	12.673	0.079	0.222	2.42	1.97e-02	0.40	3.22e-03	0.37	3.02e-03	0.0	0.0
12	13.179	0.076	0.217	0.23	1.86e-03	8.77	7.14e-02	8.91	7.26e-02	0.0	0.0
13	13.267	0.075	0.216	1.80	1.47e-02	0.60	4.85e-03	43.98	0.4	0.0	0.0
14	13.942	0.072	0.210	0.62	5.09e-03	2.08	1.70e-02	58.95	0.5	0.0	0.0
15	15.560	0.064	0.199	6.37	5.19e-02	0.77	6.28e-03	1085.38	8.8	0.0	0.0
16	16.145	0.062	0.195	0.05	4.31e-04	2.48	2.02e-02	281.28	2.3	0.0	0.0
17	17.597	0.057	0.187	1.47e-03	1.20e-05	0.78	6.33e-03	0.59	4.78e-03	0.0	0.0
18	20.140	0.050	0.176	1.92e-03	1.57e-05	13.15	0.1	261.49	2.1	0.0	0.0
19	21.075	0.047	0.173	0.79	6.40e-03	15.55	0.1	1161.91	9.5	0.0	0.0
20	21.359	0.047	0.172	0.36	2.95e-03	5.89	4.80e-02	168.14	1.4	0.0	0.0
21	24.138	0.041	0.164	2.04	1.66e-02	3.58e-03	2.91e-05	0.05	4.14e-04	0.0	0.0
22	27.737	0.036	0.155	2.10	1.71e-02	0.07	5.50e-04	36.25	0.3	0.0	0.0
23	28.075	0.036	0.155	0.03	2.62e-04	4.58e-06	0.0	0.06	5.19e-04	0.0	0.0
24	29.528	0.034	0.152	7.22	5.88e-02	9.36e-03	7.62e-05	21.88	0.2	0.0	0.0
25	42.467	0.024	0.136	4.26e-03	3.47e-05	0.02	1.92e-04	262.51	2.1	0.0	0.0
26	52.479	0.019	0.129	2.95e-03	2.40e-05	5.13	4.18e-02	49.78	0.4	0.0	0.0
27	54.471	0.018	0.128	2.96	2.41e-02	0.39	3.16e-03	9.85	8.02e-02	0.0	0.0

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
28	62.858	0.016	0.124	0.01	1.06e-04	3.30e-04	2.69e-06	27.04	0.2	0.0	0.0
29	63.327	0.016	0.124	0.98	7.97e-03	8.86e-04	7.22e-06	572.89	4.7	0.0	0.0
30	64.235	0.016	0.123	0.25	2.08e-03	2.59e-03	2.11e-05	1616.41	13.2	0.0	0.0
31	86.481	0.012	0.117	0.08	6.26e-04	0.02	1.44e-04	7.30e-04	5.94e-06	0.0	0.0
32	88.129	0.011	0.117	0.24	1.92e-03	0.07	5.76e-04	214.13	1.7	0.0	0.0
33	89.173	0.011	0.117	11.99	9.76e-02	5.25e-03	4.28e-05	5.24	4.27e-02	0.0	0.0
34	93.756	0.011	0.116	0.25	2.00e-03	8.87e-04	7.22e-06	0.15	1.19e-03	0.0	0.0
35	140.763	0.007	0.110	8.53e-04	6.95e-06	0.02	1.98e-04	366.42	3.0	0.0	0.0
36	149.736	0.007	0.110	0.90	7.32e-03	9.66e-03	7.87e-05	0.01	8.98e-05	0.0	0.0
37	150.200	0.007	0.110	1.38e-03	1.12e-05	0.01	9.71e-05	0.38	3.09e-03	0.0	0.0
38	155.393	0.006	0.109	1211.41	9.9	2.24e-05	0.0	5.48e-03	4.46e-05	0.0	0.0
39	163.803	0.006	0.109	2.74	2.24e-02	3.36e-06	0.0	6.63e-03	5.40e-05	0.0	0.0
40	172.766	0.006	0.108	2.28	1.86e-02	0.0	0.0	3.55e-03	2.89e-05	0.0	0.0
41	179.222	0.006	0.108	617.06	5.0	9.07e-05	0.0	7.61e-03	6.20e-05	0.0	0.0
42	214.772	0.005	0.107	0.01	9.65e-05	1.57e-06	0.0	1.14e-03	9.28e-06	0.0	0.0
43	265.044	0.004	0.105	0.0	0.0	3.86e-04	3.14e-06	5.71e-04	4.65e-06	0.0	0.0
44	269.464	0.004	0.105	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45	275.671	0.004	0.105	4.45e-03	3.63e-05	2.14e-04	1.74e-06	8.82e-04	7.18e-06	0.0	0.0
46	295.706	0.003	0.105	5.24e-03	4.27e-05	0.0	0.0	0.02	1.34e-04	0.0	0.0
47	295.923	0.003	0.105	4.72e-04	3.84e-06	5.19e-06	0.0	0.13	1.06e-03	0.0	0.0
48	311.492	0.003	0.104	2.21e-03	1.80e-05	0.0	0.0	5.97e-05	0.0	0.0	0.0
49	340.402	0.003	0.104	6.47e-06	0.0	0.0	0.0	7.76e-05	0.0	0.0	0.0
50	445.140	0.002	0.103	6.08e-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	492.042	0.002	0.102	0.09	7.27e-04	2.15e-04	1.75e-06	7.45e-03	6.07e-05	0.0	0.0
52	511.164	0.002	0.102	0.0	0.0	0.0	0.0	3.55	2.89e-02	0.0	0.0
53	529.373	0.002	0.102	5.22e-03	4.25e-05	0.0	0.0	9.53e-06	0.0	0.0	0.0
54	641.216	0.002	0.102	2.02e-04	1.65e-06	0.0	0.0	1.17e-06	0.0	0.0	0.0
55	698.053	0.001	0.102	1.25e-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56	703.424	0.001	0.102	6.82e-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57	730.282	0.001	0.101	0.0	0.0	0.0	0.0	6.49e-06	0.0	0.0	0.0
58	745.547	0.001	0.101	8.42e-04	6.86e-06	1.19e-05	0.0	5.64e-04	4.60e-06	0.0	0.0
59	914.940	0.001	0.101	0.0	0.0	4.08e-05	0.0	1.32e-04	1.08e-06	0.0	0.0
60	938.412	0.001	0.101	4.18e-04	3.41e-06	8.83e-06	0.0	2.87e-04	2.34e-06	0.0	0.0
Risulta				1.228e+04		1.228e+04		1.228e+04			
In percentuale				100.00		100.00		100.00			

CDC	Tipo	Sigla Id	Note
14	Edk	CDC=Ed (dinamico SLO) alfa=0.0 (ecc. -)	
			categoria suolo: C
			fattore di sito S = 1.000
			ordinata spettro (tratto Tb-Tc) = 0.285 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.376 sec.
			numero di modi considerati: 60
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	daN	m	m	m	m	m	m			
5.55	2935.12	2.98	-0.41	0.0	0.06	2.98	-0.19	2.031	2.7935e-05	0.152
5.45	93.20	2.98	-0.19	0.0	0.0	2.98	-0.19	3.000	0.0	0.0
4.20	182.81	2.98	-0.19	0.0	0.0	2.98	-0.19	3.000	0.0	0.0
2.83	6686.73	1.90	4.69	0.0	0.09	1.85	5.21	1.440	0.030	0.211
2.73	517.12	1.90	5.21	0.0	0.09	1.90	5.21	2.681	0.0	0.0
0.10	1860.63	0.83	0.0	0.0	0.0	0.83	0.0	3.000	0.0	0.0
Risulta	1.228e+04									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.157	0.864	0.119	3544.15	28.9	3.48	2.84e-02	0.94	7.64e-03	0.0	0.0
2	2.661	0.376	0.273	6798.21	55.4	11.09	9.04e-02	2.66	2.17e-02	0.0	0.0
3	2.998	0.334	0.285	5.29	4.31e-02	1.113e+04	90.7	1.82	1.48e-02	0.0	0.0
4	4.441	0.225	0.285	10.87	8.85e-02	426.35	3.5	13.19	0.1	0.0	0.0

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
5	6.424	0.156	0.285	10.20	8.31e-02	176.21	1.4	1925.63	15.7	0.0	0.0
6	6.741	0.148	0.285	14.64	0.1	17.86	0.1	422.33	3.4	0.0	0.0
7	7.627	0.131	0.285	2.34	1.91e-02	450.71	3.7	351.56	2.9	0.0	0.0
8	8.885	0.113	0.274	7.54	6.14e-02	6.52	5.31e-02	12.09	9.85e-02	0.0	0.0
9	9.679	0.103	0.259	7.17	5.84e-02	1.49	1.22e-02	3263.37	26.6	0.0	0.0
10	10.068	0.099	0.253	0.29	2.33e-03	2.41	1.96e-02	11.58	9.43e-02	0.0	0.0
11	11.966	0.084	0.229	0.53	4.33e-03	0.94	7.65e-03	1.90	1.55e-02	0.0	0.0
12	13.247	0.075	0.216	0.17	1.42e-03	2.96e-03	2.41e-05	58.21	0.5	0.0	0.0
13	13.760	0.073	0.212	0.68	5.57e-03	0.02	1.50e-04	51.35	0.4	0.0	0.0
14	15.259	0.066	0.201	6.20	5.05e-02	0.54	4.36e-03	354.99	2.9	0.0	0.0
15	15.782	0.063	0.198	1.57	1.28e-02	1.78	1.45e-02	1017.70	8.3	0.0	0.0
16	16.199	0.062	0.195	1.49e-03	1.21e-05	4.12	3.35e-02	2.23	1.82e-02	0.0	0.0
17	17.411	0.057	0.188	2.10e-04	1.71e-06	0.75	6.08e-03	4.15	3.38e-02	0.0	0.0
18	20.140	0.050	0.176	0.01	9.87e-05	12.73	0.1	242.38	2.0	0.0	0.0
19	20.278	0.049	0.176	0.97	7.92e-03	1.22	9.93e-03	79.27	0.6	0.0	0.0
20	21.093	0.047	0.173	0.26	2.15e-03	15.28	0.1	1067.20	8.7	0.0	0.0
21	21.343	0.047	0.172	0.33	2.72e-03	5.37	4.37e-02	193.00	1.6	0.0	0.0
22	24.949	0.040	0.161	9.28	7.56e-02	0.17	1.42e-03	26.42	0.2	0.0	0.0
23	28.075	0.036	0.155	0.02	1.71e-04	1.31e-04	1.06e-06	0.28	2.28e-03	0.0	0.0
24	28.982	0.035	0.153	3.60	2.93e-02	3.80e-05	0.0	42.62	0.3	0.0	0.0
25	42.468	0.024	0.136	3.30e-03	2.69e-05	0.02	1.88e-04	262.84	2.1	0.0	0.0
26	52.477	0.019	0.129	1.94e-03	1.58e-05	5.13	4.18e-02	49.78	0.4	0.0	0.0
27	54.471	0.018	0.128	2.93	2.38e-02	0.39	3.17e-03	10.01	8.16e-02	0.0	0.0
28	62.994	0.016	0.124	0.21	1.70e-03	1.29e-03	1.05e-05	14.72	0.1	0.0	0.0
29	63.945	0.016	0.124	0.02	1.83e-04	9.38e-04	7.64e-06	2178.39	17.7	0.0	0.0
30	68.639	0.015	0.122	1.03	8.37e-03	1.23e-03	1.00e-05	23.43	0.2	0.0	0.0
31	86.490	0.012	0.117	0.08	6.63e-04	0.02	1.38e-04	9.31e-03	7.59e-05	0.0	0.0
32	88.151	0.011	0.117	0.18	1.45e-03	0.07	5.74e-04	215.25	1.8	0.0	0.0
33	89.204	0.011	0.117	12.29	0.1	6.48e-03	5.28e-05	3.74	3.05e-02	0.0	0.0
34	94.881	0.011	0.116	0.06	5.18e-04	4.10e-04	3.34e-06	0.04	3.37e-04	0.0	0.0
35	140.763	0.007	0.110	8.46e-04	6.89e-06	0.02	1.98e-04	366.42	3.0	0.0	0.0
36	149.736	0.007	0.110	0.90	7.35e-03	9.66e-03	7.87e-05	0.01	8.97e-05	0.0	0.0
37	150.200	0.007	0.110	1.35e-03	1.10e-05	0.01	9.71e-05	0.38	3.09e-03	0.0	0.0
38	155.394	0.006	0.109	1211.34	9.9	2.23e-05	0.0	5.47e-03	4.46e-05	0.0	0.0
39	163.800	0.006	0.109	2.74	2.23e-02	3.34e-06	0.0	6.64e-03	5.41e-05	0.0	0.0
40	172.746	0.006	0.108	2.29	1.86e-02	0.0	0.0	3.54e-03	2.88e-05	0.0	0.0
41	179.223	0.006	0.108	617.07	5.0	9.07e-05	0.0	7.61e-03	6.20e-05	0.0	0.0
42	214.775	0.005	0.107	0.01	9.48e-05	1.57e-06	0.0	1.14e-03	9.26e-06	0.0	0.0
43	265.044	0.004	0.105	0.0	0.0	3.86e-04	3.14e-06	5.71e-04	4.65e-06	0.0	0.0
44	275.671	0.004	0.105	4.46e-03	3.63e-05	2.14e-04	1.74e-06	8.81e-04	7.17e-06	0.0	0.0
45	295.706	0.003	0.105	5.24e-03	4.27e-05	0.0	0.0	0.02	1.34e-04	0.0	0.0
46	295.923	0.003	0.105	4.74e-04	3.86e-06	5.19e-06	0.0	0.13	1.06e-03	0.0	0.0
47	307.861	0.003	0.104	0.0	0.0	0.0	0.0	1.18e-04	0.0	0.0	0.0
48	344.413	0.003	0.104	1.59e-03	1.30e-05	0.0	0.0	4.39e-05	0.0	0.0	0.0
49	358.965	0.003	0.104	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	445.135	0.002	0.103	6.02e-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	492.042	0.002	0.102	0.09	7.27e-04	2.15e-04	1.75e-06	7.45e-03	6.07e-05	0.0	0.0
52	511.164	0.002	0.102	0.0	0.0	0.0	0.0	3.55	2.89e-02	0.0	0.0
53	529.370	0.002	0.102	5.21e-03	4.25e-05	0.0	0.0	9.57e-06	0.0	0.0	0.0
54	636.265	0.002	0.102	1.05e-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55	697.887	0.001	0.102	7.93e-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56	709.050	0.001	0.101	1.54e-04	1.25e-06	0.0	0.0	0.0	0.0	0.0	0.0
57	730.282	0.001	0.101	0.0	0.0	0.0	0.0	6.49e-06	0.0	0.0	0.0
58	745.547	0.001	0.101	8.42e-04	6.86e-06	1.19e-05	0.0	5.64e-04	4.60e-06	0.0	0.0
59	914.940	0.001	0.101	0.0	0.0	4.08e-05	0.0	1.32e-04	1.08e-06	0.0	0.0
60	938.412	0.001	0.101	4.18e-04	3.41e-06	8.83e-06	0.0	2.87e-04	2.34e-06	0.0	0.0
Risulta				1.228e+04		1.228e+04		1.228e+04			
In percentuale				100.00		100.00		100.00			

CDC	Tipo	Sigla Id	Note
15	Edk	CDC=Ed (dinamico SLO) alfa=90.00 (ecc. +)	
			categoria suolo: C
			fattore di sito S = 1.000
			ordinata spettro (tratto Tb-Tc) = 0.285 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.329 sec.
			numero di modi considerati: 60

CDC	Tipo	Sigla Id	Note
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	daN	m	m	m	m	m	m			
5.55	2935.12	2.98	-0.41	0.09	0.0	2.98	-0.19	2.031	2.7935e-05	0.152
5.45	93.20	2.98	-0.19	0.09	0.0	2.98	-0.19	3.000	0.0	0.0
4.20	182.81	2.98	-0.19	0.09	0.0	2.98	-0.19	3.000	0.0	0.0
2.83	6686.73	1.90	4.69	0.20	0.0	1.85	5.21	1.440	0.030	0.211
2.73	517.12	1.90	5.21	0.20	0.0	1.90	5.21	2.681	0.0	0.0
0.10	1860.63	0.83	0.0	0.09	0.0	0.83	0.0	3.000	0.0	0.0
Risulta	1.228e+04									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X	%	M efficace Y	%	M efficace Z	%	Energia	Energia x v
	Hz	sec	g	x g		x g		x g			
				daN		daN		daN			
1	1.158	0.863	0.119	3546.78	28.9	2.50	2.03e-02	0.97	7.89e-03	0.0	0.0
2	2.652	0.377	0.272	6780.63	55.2	1.83	1.49e-02	2.42	1.97e-02	0.0	0.0
3	3.039	0.329	0.285	1.57	1.28e-02	1.125e+04	91.7	1.98	1.62e-02	0.0	0.0
4	4.470	0.224	0.285	39.25	0.3	402.73	3.3	10.94	8.92e-02	0.0	0.0
5	6.410	0.156	0.285	5.11	4.16e-02	127.53	1.0	2067.51	16.8	0.0	0.0
6	7.110	0.141	0.285	3.11	2.53e-02	123.76	1.0	469.48	3.8	0.0	0.0
7	7.876	0.127	0.285	7.14	5.82e-02	308.32	2.5	120.62	1.0	0.0	0.0
8	9.439	0.106	0.264	12.77	0.1	2.08e-05	0.0	153.33	1.2	0.0	0.0
9	9.686	0.103	0.259	4.33	3.53e-02	1.62	1.32e-02	3198.44	26.1	0.0	0.0
10	10.775	0.093	0.243	0.26	2.10e-03	1.64	1.34e-02	1.82	1.49e-02	0.0	0.0
11	12.240	0.082	0.226	1.37	1.12e-02	0.66	5.39e-03	0.40	3.28e-03	0.0	0.0
12	13.257	0.075	0.216	0.37	3.01e-03	0.02	1.59e-04	54.65	0.4	0.0	0.0
13	13.705	0.073	0.212	0.12	9.83e-04	0.62	5.05e-03	63.66	0.5	0.0	0.0
14	14.343	0.070	0.207	1.27	1.04e-02	4.40	3.58e-02	0.97	7.94e-03	0.0	0.0
15	15.437	0.065	0.200	4.66	3.79e-02	0.14	1.16e-03	300.95	2.5	0.0	0.0
16	16.045	0.062	0.196	1.99	1.62e-02	2.94	2.39e-02	1144.84	9.3	0.0	0.0
17	17.355	0.058	0.189	0.0	0.0	0.88	7.16e-03	3.05	2.49e-02	0.0	0.0
18	19.888	0.050	0.177	1.44e-03	1.17e-05	13.15	0.1	252.04	2.1	0.0	0.0
19	21.241	0.047	0.172	1.47	1.20e-02	14.09	0.1	1043.92	8.5	0.0	0.0
20	21.668	0.046	0.171	0.47	3.84e-03	7.65	6.24e-02	88.72	0.7	0.0	0.0
21	21.848	0.046	0.170	0.48	3.93e-03	0.41	3.34e-03	94.63	0.8	0.0	0.0
22	26.242	0.038	0.158	6.82	5.56e-02	0.12	9.90e-04	24.99	0.2	0.0	0.0
23	28.075	0.036	0.155	0.02	1.98e-04	5.58e-05	0.0	0.22	1.81e-03	0.0	0.0
24	29.107	0.034	0.153	4.57	3.72e-02	3.00e-04	2.44e-06	39.72	0.3	0.0	0.0
25	40.656	0.025	0.137	6.82e-03	5.56e-05	0.02	1.86e-04	207.12	1.7	0.0	0.0
26	52.585	0.019	0.129	1.88e-04	1.53e-06	5.17	4.21e-02	49.91	0.4	0.0	0.0
27	54.438	0.018	0.128	2.51	2.04e-02	0.39	3.20e-03	8.74	7.12e-02	0.0	0.0
28	63.113	0.016	0.124	0.24	1.93e-03	5.90e-04	4.81e-06	1917.93	15.6	0.0	0.0
29	63.211	0.016	0.124	0.37	3.05e-03	8.89e-06	0.0	254.57	2.1	0.0	0.0
30	65.934	0.015	0.123	1.12	9.10e-03	1.32e-03	1.07e-05	62.03	0.5	0.0	0.0
31	86.767	0.012	0.117	0.11	9.34e-04	0.08	6.13e-04	258.68	2.1	0.0	0.0
32	87.870	0.011	0.117	5.05	4.12e-02	0.01	1.22e-04	5.72	4.66e-02	0.0	0.0
33	92.182	0.011	0.116	6.99	5.69e-02	6.35e-04	5.18e-06	0.05	3.91e-04	0.0	0.0
34	94.221	0.011	0.116	0.28	2.26e-03	5.65e-04	4.60e-06	0.02	1.56e-04	0.0	0.0
35	140.748	0.007	0.110	8.40e-04	6.84e-06	0.02	2.03e-04	366.77	3.0	0.0	0.0
36	145.262	0.007	0.110	0.0	0.0	0.01	9.83e-05	0.04	3.47e-04	0.0	0.0
37	155.204	0.006	0.109	686.64	5.6	4.45e-03	3.62e-05	5.38e-06	0.0	0.0	0.0
38	155.645	0.006	0.109	526.29	4.3	4.29e-03	3.50e-05	0.01	1.00e-04	0.0	0.0
39	164.423	0.006	0.109	2.12	1.72e-02	2.19e-06	0.0	6.71e-03	5.46e-05	0.0	0.0
40	173.634	0.006	0.108	2.60	2.12e-02	0.0	0.0	3.66e-03	2.98e-05	0.0	0.0
41	179.226	0.006	0.108	616.59	5.0	8.41e-05	0.0	7.62e-03	6.21e-05	0.0	0.0
42	214.765	0.005	0.107	0.01	9.72e-05	1.78e-06	0.0	1.15e-03	9.36e-06	0.0	0.0
43	241.084	0.004	0.106	0.0	0.0	4.67e-04	3.80e-06	3.23e-04	2.63e-06	0.0	0.0
44	282.298	0.004	0.105	0.0	0.0	3.93e-06	0.0	0.15	1.20e-03	0.0	0.0
45	304.765	0.003	0.104	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46	309.582	0.003	0.104	1.82e-03	1.48e-05	1.61e-04	1.31e-06	7.33e-04	5.97e-06	0.0	0.0
47	311.489	0.003	0.104	5.86e-03	4.77e-05	5.44e-06	0.0	2.47e-04	2.01e-06	0.0	0.0
48	322.720	0.003	0.104	6.19e-05	0.0	0.0	0.0	1.27e-04	1.03e-06	0.0	0.0
49	326.910	0.003	0.104	1.84e-03	1.50e-05	0.0	0.0	2.44e-05	0.0	0.0	0.0
50	448.360	0.002	0.103	7.10e-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	492.402	0.002	0.102	0.09	7.24e-04	2.18e-04	1.77e-06	7.38e-03	6.01e-05	0.0	0.0
52	510.943	0.002	0.102	0.0	0.0	0.0	0.0	3.56	2.90e-02	0.0	0.0
53	529.385	0.002	0.102	5.21e-03	4.25e-05	0.0	0.0	9.49e-06	0.0	0.0	0.0

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
54	667.274	0.001	0.102	1.78e-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55	672.528	0.001	0.102	1.73e-04	1.41e-06	0.0	0.0	0.0	0.0	0.0	0.0
56	684.433	0.001	0.102	0.0	0.0	0.0	0.0	1.19e-05	0.0	0.0	0.0
57	698.091	0.001	0.102	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58	804.153	0.001	0.101	7.25e-04	5.91e-06	9.61e-06	0.0	5.14e-04	4.18e-06	0.0	0.0
59	855.383	0.001	0.101	0.0	0.0	4.72e-05	0.0	1.98e-04	1.61e-06	0.0	0.0
60	980.981	0.001	0.101	2.12e-04	1.73e-06	2.16e-06	0.0	2.22e-04	1.81e-06	0.0	0.0
Risulta				1.228e+04		1.228e+04		1.228e+04			
In percentuale				100.00		100.00		100.00			

CDC	Tipo	Sigla Id	Note
16	Edk	CDC=Ed (dinamico SLO) alfa=90.00 (ecc. -)	
			categoria suolo: C
			fattore di sito S = 1.000
			ordinata spettro (tratto Tb-Tc) = 0.285 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.340 sec.
			numero di modi considerati: 60
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	daN	m	m	m	m	m	m			
5.55	2935.12	2.98	-0.41	-0.09	0.0	2.98	-0.19	2.031	2.7935e-05	0.152
5.45	93.20	2.98	-0.19	-0.09	0.0	2.98	-0.19	3.000	0.0	0.0
4.20	182.81	2.98	-0.19	-0.09	0.0	2.98	-0.19	3.000	0.0	0.0
2.83	6686.73	1.90	4.69	-0.20	0.0	1.85	5.21	1.440	0.030	0.211
2.73	517.12	1.90	5.21	-0.20	0.0	1.90	5.21	2.681	0.0	0.0
0.10	1860.63	0.83	0.0	-0.09	0.0	0.83	0.0	3.000	0.0	0.0
Risulta	1.228e+04									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.158	0.863	0.119	3545.19	28.9	3.40	2.77e-02	0.96	7.85e-03	0.0	0.0
2	2.650	0.377	0.272	6724.68	54.8	98.64	0.8	2.19	1.78e-02	0.0	0.0
3	2.945	0.340	0.285	63.56	0.5	1.097e+04	89.4	1.80	1.46e-02	0.0	0.0
4	4.589	0.218	0.285	33.64	0.3	417.67	3.4	22.67	0.2	0.0	0.0
5	6.387	0.157	0.285	5.46	4.45e-02	231.01	1.9	2008.01	16.4	0.0	0.0
6	7.241	0.138	0.285	9.83	8.01e-02	7.15	5.82e-02	53.69	0.4	0.0	0.0
7	7.586	0.132	0.285	0.47	3.85e-03	479.10	3.9	700.31	5.7	0.0	0.0
8	9.429	0.106	0.264	14.90	0.1	9.45	7.70e-02	342.08	2.8	0.0	0.0
9	9.706	0.103	0.259	3.08	2.51e-02	0.36	2.93e-03	2864.60	23.3	0.0	0.0
10	10.722	0.093	0.244	0.29	2.40e-03	0.23	1.86e-03	4.06e-03	3.31e-05	0.0	0.0
11	12.238	0.082	0.226	1.32	1.07e-02	0.99	8.10e-03	0.44	3.56e-03	0.0	0.0
12	13.251	0.075	0.216	0.33	2.68e-03	0.03	2.52e-04	44.80	0.4	0.0	0.0
13	13.725	0.073	0.212	0.24	1.93e-03	0.44	3.57e-03	56.44	0.5	0.0	0.0
14	14.474	0.069	0.206	1.47	1.20e-02	8.10	6.60e-02	6.11	4.98e-02	0.0	0.0
15	15.297	0.065	0.201	6.15	5.01e-02	0.08	6.26e-04	844.63	6.9	0.0	0.0
16	15.684	0.064	0.198	0.07	5.78e-04	3.48	2.84e-02	460.17	3.7	0.0	0.0
17	17.325	0.058	0.189	3.63e-05	0.0	1.02	8.29e-03	3.68	3.00e-02	0.0	0.0
18	20.402	0.049	0.175	3.32e-03	2.70e-05	13.59	0.1	268.04	2.2	0.0	0.0
19	20.887	0.048	0.174	0.50	4.06e-03	17.60	0.1	1038.16	8.5	0.0	0.0
20	21.046	0.048	0.173	0.47	3.84e-03	2.95	2.41e-02	366.26	3.0	0.0	0.0
21	21.790	0.046	0.170	1.07	8.76e-03	0.04	3.33e-04	8.66	7.05e-02	0.0	0.0
22	26.241	0.038	0.158	6.75	5.50e-02	0.12	9.58e-04	23.52	0.2	0.0	0.0
23	28.074	0.036	0.155	0.02	1.62e-04	1.58e-04	1.28e-06	0.27	2.18e-03	0.0	0.0
24	29.123	0.034	0.153	4.60	3.75e-02	4.38e-04	3.57e-06	36.79	0.3	0.0	0.0
25	44.514	0.022	0.134	1.49e-03	1.22e-05	0.02	2.04e-04	345.88	2.8	0.0	0.0
26	52.378	0.019	0.129	2.90e-03	2.36e-05	5.04	4.11e-02	48.61	0.4	0.0	0.0
27	54.260	0.018	0.128	3.19	2.60e-02	0.43	3.51e-03	11.75	9.57e-02	0.0	0.0
28	63.407	0.016	0.124	1.01e-03	8.24e-06	7.08e-03	5.77e-05	8.98	7.32e-02	0.0	0.0
29	64.852	0.015	0.123	0.23	1.84e-03	4.59e-04	3.74e-06	1858.85	15.1	0.0	0.0
30	66.023	0.015	0.123	0.84	6.87e-03	2.57e-03	2.09e-05	311.13	2.5	0.0	0.0

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
31	83.357	0.012	0.118	1.98	1.62e-02	0.02	1.23e-04	0.10	7.98e-04	0.0	0.0
32	89.299	0.011	0.117	10.41	8.48e-02	0.03	2.05e-04	0.85	6.89e-03	0.0	0.0
33	90.275	0.011	0.116	0.12	9.91e-04	0.06	4.77e-04	164.13	1.3	0.0	0.0
34	94.215	0.011	0.116	0.15	1.19e-03	1.32e-03	1.07e-05	0.54	4.36e-03	0.0	0.0
35	140.776	0.007	0.110	8.63e-04	7.03e-06	0.02	1.96e-04	366.17	3.0	0.0	0.0
36	144.881	0.007	0.110	0.16	1.31e-03	9.16e-03	7.46e-05	7.61e-03	6.20e-05	0.0	0.0
37	155.386	0.006	0.109	1211.39	9.9	3.60e-05	0.0	5.74e-03	4.68e-05	0.0	0.0
38	156.031	0.006	0.109	0.01	9.58e-05	0.01	1.03e-04	0.63	5.12e-03	0.0	0.0
39	163.206	0.006	0.109	3.42	2.78e-02	1.14e-05	0.0	6.75e-03	5.50e-05	0.0	0.0
40	171.923	0.006	0.108	2.09	1.70e-02	0.0	0.0	3.45e-03	2.81e-05	0.0	0.0
41	179.220	0.006	0.108	617.36	5.0	9.44e-05	0.0	7.62e-03	6.21e-05	0.0	0.0
42	214.786	0.005	0.107	0.01	9.44e-05	1.39e-06	0.0	1.13e-03	9.19e-06	0.0	0.0
43	250.900	0.004	0.105	8.49e-03	6.92e-05	2.64e-04	2.15e-06	1.09e-03	8.90e-06	0.0	0.0
44	282.157	0.004	0.105	6.13e-03	5.00e-05	1.23e-06	0.0	3.45e-04	2.81e-06	0.0	0.0
45	297.890	0.003	0.105	0.0	0.0	3.02e-04	2.46e-06	1.87e-03	1.52e-05	0.0	0.0
46	304.765	0.003	0.104	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47	311.753	0.003	0.104	0.0	0.0	6.57e-06	0.0	0.15	1.20e-03	0.0	0.0
48	322.720	0.003	0.104	6.37e-05	0.0	0.0	0.0	1.23e-04	1.00e-06	0.0	0.0
49	326.910	0.003	0.104	1.82e-03	1.48e-05	0.0	0.0	2.30e-05	0.0	0.0	0.0
50	441.986	0.002	0.103	5.16e-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	491.760	0.002	0.102	0.09	7.29e-04	2.14e-04	1.74e-06	7.51e-03	6.11e-05	0.0	0.0
52	511.449	0.002	0.102	0.0	0.0	0.0	0.0	3.53	2.88e-02	0.0	0.0
53	529.360	0.002	0.102	5.22e-03	4.25e-05	0.0	0.0	9.60e-06	0.0	0.0	0.0
54	667.274	0.001	0.102	1.78e-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55	672.527	0.001	0.102	1.72e-04	1.40e-06	0.0	0.0	0.0	0.0	0.0	0.0
56	698.077	0.001	0.102	1.29e-05	0.0	0.0	0.0	5.46e-06	0.0	0.0	0.0
57	698.539	0.001	0.102	9.67e-04	7.87e-06	1.38e-05	0.0	6.09e-04	4.96e-06	0.0	0.0
58	787.333	0.001	0.101	0.0	0.0	0.0	0.0	3.21e-06	0.0	0.0	0.0
59	876.867	0.001	0.101	4.82e-04	3.92e-06	1.06e-05	0.0	3.13e-04	2.55e-06	0.0	0.0
60	968.890	0.001	0.101	1.69e-04	1.38e-06	2.26e-06	0.0	1.83e-04	1.49e-06	0.0	0.0
Risulta				1.228e+04		1.228e+04		1.228e+04			
In percentuale				100.00		100.00		100.00			

Cmb	Pilas.	1000 etaT/h	etaT	inter. h	Pilas.	1000 etaT/h	etaT	inter. h	Pilas.	1000 etaT/h	etaT	inter. h
			mm	cm			mm	cm			mm	cm
75	1	4.04	11.00	272.5	2	2.77	3.46	125.0	3	4.18	11.40	272.5
	4	2.79	7.60	272.5	5	5.40	22.69	420.0	6	5.54	23.29	420.0
	8	2.60	0.26	10.0	13	15.07	1.51	10.0	14	19.71	1.97	10.0
	26	15.70	1.57	10.0	27	10.18	1.02	10.0	28	13.03	1.30	10.0
	29	35.89	3.59	10.0	30	25.86	2.59	10.0	31	15.21	1.52	10.0
	32	0.44	0.04	10.0	33	12.97	1.30	10.0	34	8.50	0.85	10.0
	35	2.56	6.98	272.5	42	2.33	2.91	125.0				
76	1	4.47	12.18	272.5	2	1.99	2.49	125.0	3	4.10	11.17	272.5
	4	2.75	7.48	272.5	5	5.29	22.20	420.0	6	5.34	22.42	420.0
	8	54.43	5.44	10.0	13	49.68	4.97	10.0	14	19.43	1.94	10.0
	26	11.67	1.17	10.0	27	10.87	1.09	10.0	28	12.17	1.22	10.0
	29	20.21	2.02	10.0	30	25.11	2.51	10.0	31	3.01	0.30	10.0
	32	3.98	0.40	10.0	33	12.58	1.26	10.0	34	7.11	0.71	10.0
	35	3.27	8.90	272.5	42	2.16	2.70	125.0				
77	1	4.76	12.97	272.5	2	5.06	6.32	125.0	3	4.64	12.63	272.5
	4	3.61	9.84	272.5	5	6.32	26.53	420.0	6	6.30	26.44	420.0
	8	27.20	2.72	10.0	13	2.91	0.29	10.0	14	20.95	2.10	10.0
	26	11.52	1.15	10.0	27	10.86	1.09	10.0	28	14.73	1.47	10.0
	29	22.18	2.22	10.0	30	26.98	2.70	10.0	31	1.55	0.16	10.0
	32	1.55	0.15	10.0	33	12.69	1.27	10.0	34	17.16	1.72	10.0
	35	3.77	10.28	272.5	42	4.90	6.12	125.0				
78	1	4.58	12.49	272.5	2	5.10	6.38	125.0	3	4.63	12.61	272.5
	4	3.50	9.55	272.5	5	6.44	27.04	420.0	6	6.41	26.91	420.0
	8	24.73	2.47	10.0	13	61.89	6.19	10.0	14	21.25	2.13	10.0
	26	15.59	1.56	10.0	27	10.17	1.02	10.0	28	15.58	1.56	10.0
	29	37.88	3.79	10.0	30	27.75	2.77	10.0	31	16.67	1.67	10.0
	32	2.33	0.23	10.0	33	13.03	1.30	10.0	34	18.34	1.83	10.0
	35	3.45	9.40	272.5	42	4.92	6.15	125.0				
79	1	3.93	10.72	272.5	2	2.78	3.48	125.0	3	4.05	11.04	272.5
	4	3.03	8.25	272.5	5	5.41	22.71	420.0	6	5.55	23.33	420.0
	8	1.84	0.18	10.0	13	15.06	1.51	10.0	14	9.57	0.96	10.0
	26	13.19	1.32	10.0	27	10.14	1.01	10.0	28	12.46	1.25	10.0
	29	32.08	3.21	10.0	30	25.73	2.57	10.0	31	10.79	1.08	10.0



Cmb	Pilas.	1000 etaT/h	etaT	inter. h	Pilas.	1000 etaT/h	etaT	inter. h	Pilas.	1000 etaT/h	etaT	inter. h
	32	2.30	0.23	10.0	33	13.03	1.30	10.0	34	8.57	0.86	10.0
	35	2.86	7.79	272.5	42	2.31	2.89	125.0				
80	1	4.62	12.59	272.5	2	2.00	2.50	125.0	3	4.20	11.45	272.5
	4	2.44	6.66	272.5	5	5.28	22.16	420.0	6	5.33	22.39	420.0
	8	58.59	5.86	10.0	13	49.68	4.97	10.0	14	29.57	2.96	10.0
	26	14.18	1.42	10.0	27	10.91	1.09	10.0	28	12.57	1.26	10.0
	29	24.01	2.40	10.0	30	25.24	2.52	10.0	31	1.42	0.14	10.0
	32	1.89	0.19	10.0	33	12.52	1.25	10.0	34	7.04	0.70	10.0
	35	3.11	8.46	272.5	42	2.17	2.71	125.0				
81	1	4.90	13.35	272.5	2	5.06	6.32	125.0	3	4.73	12.90	272.5
	4	3.30	8.99	272.5	5	6.31	26.49	420.0	6	6.29	26.40	420.0
	8	31.36	3.14	10.0	13	2.90	0.29	10.0	14	31.10	3.11	10.0
	26	14.03	1.40	10.0	27	10.89	1.09	10.0	28	15.14	1.51	10.0
	29	25.99	2.60	10.0	30	27.11	2.71	10.0	31	2.87	0.29	10.0
	32	0.72	0.07	10.0	33	12.62	1.26	10.0	34	17.09	1.71	10.0
	35	3.54	9.65	272.5	42	4.89	6.11	125.0				
82	1	4.50	12.25	272.5	2	5.11	6.39	125.0	3	4.50	12.27	272.5
	4	3.77	10.27	272.5	5	6.44	27.05	420.0	6	6.42	26.95	420.0
	8	28.89	2.89	10.0	13	61.88	6.19	10.0	14	11.11	1.11	10.0
	26	13.07	1.31	10.0	27	10.14	1.01	10.0	28	15.03	1.50	10.0
	29	34.08	3.41	10.0	30	27.62	2.76	10.0	31	12.24	1.22	10.0
	32	0.42	0.04	10.0	33	13.10	1.31	10.0	34	18.40	1.84	10.0
	35	3.77	10.26	272.5	42	4.92	6.15	125.0				
83	1	3.97	10.82	272.5	2	2.78	3.47	125.0	3	4.07	11.09	272.5
	4	2.92	7.97	272.5	5	5.39	22.66	420.0	6	5.54	23.26	420.0
	8	5.87	0.59	10.0	13	11.18	1.12	10.0	14	20.53	2.05	10.0
	26	14.87	1.49	10.0	27	9.12	0.91	10.0	28	6.93	0.69	10.0
	29	45.60	4.56	10.0	30	25.00	2.50	10.0	31	17.76	1.78	10.0
	32	0.69	0.07	10.0	33	13.10	1.31	10.0	34	8.66	0.87	10.0
	35	2.78	7.57	272.5	42	2.31	2.89	125.0				
84	1	4.29	11.70	272.5	2	2.04	2.54	125.0	3	4.03	10.98	272.5
	4	2.96	8.08	272.5	5	5.29	22.21	420.0	6	5.34	22.42	420.0
	8	46.10	4.61	10.0	13	53.57	5.36	10.0	14	20.25	2.03	10.0
	26	10.84	1.08	10.0	27	9.81	0.98	10.0	28	3.96	0.40	10.0
	29	29.90	2.99	10.0	30	24.26	2.43	10.0	31	0.46	0.05	10.0
	32	3.26	0.33	10.0	33	12.72	1.27	10.0	34	7.28	0.73	10.0
	35	3.31	9.01	272.5	42	2.16	2.70	125.0				
85	1	4.62	12.60	272.5	2	5.06	6.33	125.0	3	4.58	12.48	272.5
	4	3.84	10.46	272.5	5	6.32	26.54	420.0	6	6.30	26.44	420.0
	8	18.88	1.89	10.0	13	6.75	0.68	10.0	14	21.77	2.18	10.0
	26	10.69	1.07	10.0	27	9.81	0.98	10.0	28	4.58	0.46	10.0
	29	31.88	3.19	10.0	30	26.13	2.61	10.0	31	0.99	0.10	10.0
	32	0.87	0.09	10.0	33	12.83	1.28	10.0	34	17.32	1.73	10.0
	35	3.89	10.61	272.5	42	4.91	6.14	125.0				
86	1	4.55	12.40	272.5	2	5.11	6.39	125.0	3	4.52	12.33	272.5
	4	3.67	10.00	272.5	5	6.43	27.01	420.0	6	6.40	26.89	420.0
	8	33.05	3.31	10.0	13	58.00	5.80	10.0	14	22.07	2.21	10.0
	26	14.76	1.48	10.0	27	9.13	0.91	10.0	28	7.56	0.76	10.0
	29	47.59	4.76	10.0	30	26.90	2.69	10.0	31	19.21	1.92	10.0
	32	3.05	0.30	10.0	33	13.18	1.32	10.0	34	18.50	1.85	10.0
	35	3.71	10.11	272.5	42	4.92	6.16	125.0				
87	1	3.88	10.57	272.5	2	2.79	3.49	125.0	3	3.94	10.73	272.5
	4	3.17	8.65	272.5	5	5.40	22.68	420.0	6	5.55	23.30	420.0
	8	10.02	1.00	10.0	13	11.18	1.12	10.0	14	10.39	1.04	10.0
	26	12.35	1.24	10.0	27	9.08	0.91	10.0	28	5.21	0.52	10.0
	29	41.78	4.18	10.0	30	24.87	2.49	10.0	31	13.33	1.33	10.0
	32	1.60	0.16	10.0	33	13.17	1.32	10.0	34	8.73	0.87	10.0
	35	3.09	8.42	272.5	42	2.30	2.87	125.0				
88	1	4.44	12.11	272.5	2	2.05	2.56	125.0	3	4.13	11.25	272.5
	4	2.65	7.23	272.5	5	5.28	22.17	420.0	6	5.33	22.38	420.0
	8	50.26	5.03	10.0	13	53.57	5.36	10.0	14	30.39	3.04	10.0
	26	13.35	1.33	10.0	27	9.85	0.98	10.0	28	5.66	0.57	10.0
	29	33.70	3.37	10.0	30	24.39	2.44	10.0	31	3.96	0.40	10.0
	32	1.20	0.12	10.0	33	12.66	1.27	10.0	34	7.21	0.72	10.0
	35	3.12	8.49	272.5	42	2.16	2.70	125.0				
89	1	4.76	12.96	272.5	2	5.06	6.33	125.0	3	4.67	12.73	272.5
	4	3.52	9.60	272.5	5	6.31	26.49	420.0	6	6.29	26.41	420.0
	8	23.04	2.30	10.0	13	6.75	0.67	10.0	14	31.92	3.19	10.0
	26	13.20	1.32	10.0	27	9.85	0.98	10.0	28	6.28	0.63	10.0
	29	35.69	3.57	10.0	30	26.26	2.63	10.0	31	5.41	0.54	10.0
	32	1.39	0.14	10.0	33	12.76	1.28	10.0	34	17.26	1.73	10.0



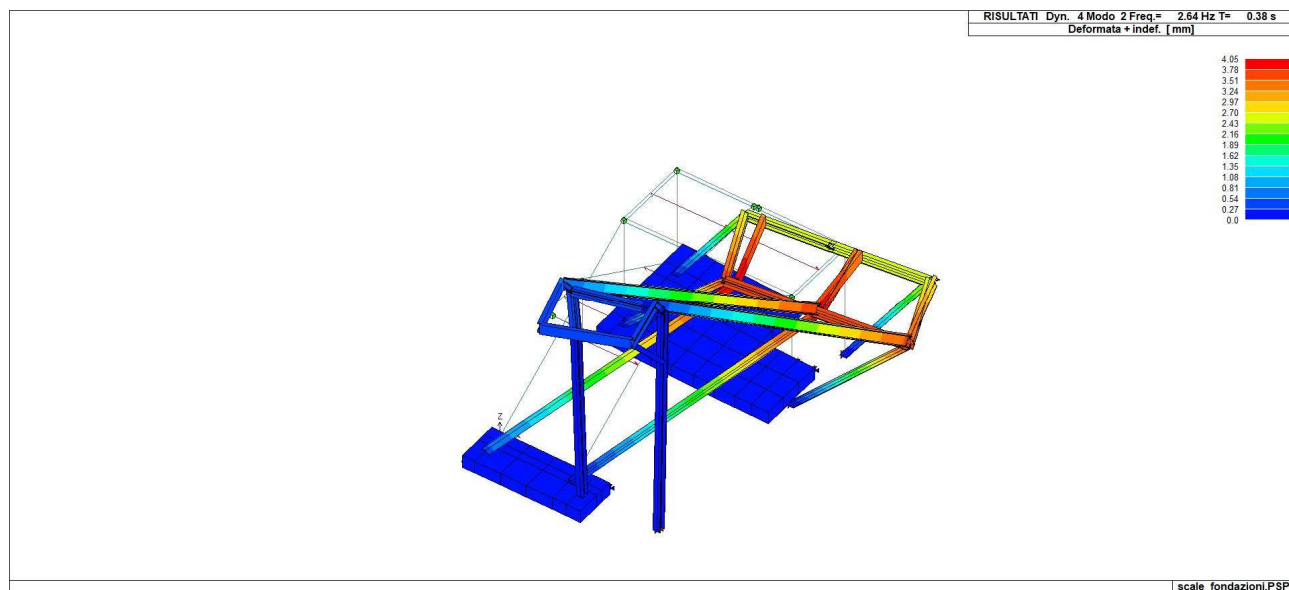
Cmb	Pilas.	1000 etaT/h	etaT	inter. h	Pilas.	1000 etaT/h	etaT	inter. h	Pilas.	1000 etaT/h	etaT	inter. h
	35	3.65	9.93	272.5	42	4.90	6.13	125.0				
90	1	4.48	12.20	272.5	2	5.12	6.40	125.0	3	4.40	12.00	272.5
	4	3.95	10.76	272.5	5	6.43	27.02	420.0	6	6.41	26.93	420.0
	8	37.21	3.72	10.0	13	57.99	5.80	10.0	14	11.94	1.19	10.0
	26	12.25	1.22	10.0	27	9.10	0.91	10.0	28	5.84	0.58	10.0
	29	43.78	4.38	10.0	30	26.77	2.68	10.0	31	14.78	1.48	10.0
	32	0.99	0.10	10.0	33	13.24	1.32	10.0	34	18.57	1.86	10.0
	35	4.03	10.98	272.5	42	4.93	6.16	125.0				
91	1	2.65	7.22	272.5	2	2.75	3.44	125.0	3	2.52	6.86	272.5
	4	2.34	6.37	272.5	5	1.79	7.50	420.0	6	2.77	11.64	420.0
	8	68.51	6.85	10.0	13	86.28	8.63	10.0	14	5.83	0.58	10.0
	26	10.91	1.09	10.0	27	2.36	0.24	10.0	28	6.54	0.65	10.0
	29	33.95	3.40	10.0	30	8.38	0.84	10.0	31	31.69	3.17	10.0
	32	4.87	0.49	10.0	33	4.58	0.46	10.0	34	3.02	0.30	10.0
	35	2.47	6.74	272.5	42	1.30	1.62	125.0				
92	1	3.61	9.83	272.5	2	1.14	1.43	125.0	3	2.16	5.90	272.5
	4	2.01	5.48	272.5	5	1.51	6.35	420.0	6	2.12	8.88	420.0
	8	104.62	10.46	10.0	13	129.45	12.95	10.0	14	5.01	0.50	10.0
	26	2.91	0.29	10.0	27	4.52	0.45	10.0	28	5.04	0.50	10.0
	29	18.63	1.86	10.0	30	6.05	0.60	10.0	31	14.98	1.50	10.0
	32	7.82	0.78	10.0	33	3.19	0.32	10.0	34	3.32	0.33	10.0
	35	3.51	9.57	272.5	42	0.60	0.74	125.0				
93	1	3.29	8.95	272.5	2	3.41	4.27	125.0	3	2.71	7.37	272.5
	4	2.69	7.33	272.5	5	2.33	9.78	420.0	6	3.01	12.64	420.0
	8	77.41	7.74	10.0	13	82.61	8.26	10.0	14	6.40	0.64	10.0
	26	2.75	0.28	10.0	27	4.47	0.45	10.0	28	6.35	0.64	10.0
	29	16.61	1.66	10.0	30	7.76	0.78	10.0	31	27.59	2.76	10.0
	32	5.36	0.54	10.0	33	3.51	0.35	10.0	34	7.31	0.73	10.0
	35	3.27	8.90	272.5	42	2.63	3.29	125.0				
94	1	3.39	9.23	272.5	2	3.01	3.76	125.0	3	2.50	6.83	272.5
	4	2.30	6.26	272.5	5	2.70	11.36	420.0	6	3.08	12.96	420.0
	8	95.71	9.57	10.0	13	133.12	13.31	10.0	14	7.45	0.74	10.0
	26	10.85	1.09	10.0	27	2.42	0.24	10.0	28	8.39	0.84	10.0
	29	35.96	3.60	10.0	30	10.30	1.03	10.0	31	33.14	3.31	10.0
	32	7.32	0.73	10.0	33	4.49	0.45	10.0	34	10.91	1.09	10.0
	35	3.23	8.81	272.5	42	2.56	3.20	125.0				
95	1	2.72	7.42	272.5	2	2.75	3.44	125.0	3	2.46	6.72	272.5
	4	2.30	6.26	272.5	5	1.77	7.43	420.0	6	2.76	11.61	420.0
	8	71.01	7.10	10.0	13	85.11	8.51	10.0	14	6.08	0.61	10.0
	26	10.66	1.07	10.0	27	2.08	0.21	10.0	28	6.58	0.66	10.0
	29	36.86	3.69	10.0	30	8.13	0.81	10.0	31	32.45	3.25	10.0
	32	5.08	0.51	10.0	33	4.62	0.46	10.0	34	3.04	0.30	10.0
	35	2.56	6.98	272.5	42	1.28	1.60	125.0				
96	1	3.52	9.59	272.5	2	1.14	1.42	125.0	3	2.19	5.98	272.5
	4	2.08	5.67	272.5	5	1.53	6.43	420.0	6	2.12	8.91	420.0
	8	102.12	10.21	10.0	13	130.62	13.06	10.0	14	5.24	0.52	10.0
	26	3.13	0.31	10.0	27	4.21	0.42	10.0	28	3.92	0.39	10.0
	29	15.74	1.57	10.0	30	5.80	0.58	10.0	31	19.11	1.91	10.0
	32	7.60	0.76	10.0	33	3.23	0.32	10.0	34	3.27	0.33	10.0
	35	3.44	9.39	272.5	42	0.61	0.76	125.0				
97	1	3.20	8.73	272.5	2	3.41	4.27	125.0	3	2.73	7.44	272.5
	4	2.77	7.53	272.5	5	2.34	9.83	420.0	6	3.02	12.67	420.0
	8	74.91	7.49	10.0	13	83.78	8.38	10.0	14	6.65	0.66	10.0
	26	3.00	0.30	10.0	27	4.17	0.42	10.0	28	3.35	0.33	10.0
	29	13.72	1.37	10.0	30	7.51	0.75	10.0	31	26.83	2.68	10.0
	32	5.15	0.51	10.0	33	3.55	0.36	10.0	34	7.36	0.74	10.0
	35	3.23	8.79	272.5	42	2.64	3.30	125.0				
98	1	3.45	9.41	272.5	2	3.01	3.76	125.0	3	2.45	6.68	272.5
	4	2.28	6.22	272.5	5	2.69	11.31	420.0	6	3.08	12.93	420.0
	8	98.21	9.82	10.0	13	131.95	13.19	10.0	14	7.70	0.77	10.0
	26	10.60	1.06	10.0	27	2.19	0.22	10.0	28	7.20	0.72	10.0
	29	38.87	3.89	10.0	30	10.06	1.01	10.0	31	33.91	3.39	10.0
	32	7.54	0.75	10.0	33	4.53	0.45	10.0	34	10.96	1.10	10.0
	35	3.33	9.08	272.5	42	2.56	3.19	125.0				
99	1	3.00	8.17	272.5	2	2.82	3.52	125.0	3	2.03	5.53	272.5
	4	2.27	6.19	272.5	5	1.69	7.09	420.0	6	2.80	11.75	420.0
	8	82.38	8.24	10.0	13	86.26	8.63	10.0	14	28.00	2.80	10.0
	26	2.52	0.25	10.0	27	2.23	0.22	10.0	28	2.77	0.28	10.0
	29	21.27	2.13	10.0	30	7.96	0.80	10.0	31	16.94	1.69	10.0
	32	2.21	0.22	10.0	33	4.77	0.48	10.0	34	3.16	0.32	10.0
	35	3.16	8.60	272.5	42	1.14	1.42	125.0				

Cmb	Pilas.	1000 etaT/h	etaT	inter. h	Pilas.	1000 etaT/h	etaT	inter. h	Pilas.	1000 etaT/h	etaT	inter. h
100	1	4.16	11.35	272.5	2	1.21	1.51	125.0	3	2.08	5.66	272.5
	4	1.46	3.97	272.5	5	1.35	5.68	420.0	6	2.11	8.87	420.0
	8	118.50	11.85	10.0	13	129.44	12.94	10.0	14	28.79	2.88	10.0
	26	5.92	0.59	10.0	27	4.65	0.47	10.0	28	3.13	0.31	10.0
	29	6.17	0.62	10.0	30	4.50	0.45	10.0	31	14.29	1.43	10.0
	32	0.87	0.09	10.0	33	2.97	0.30	10.0	34	3.54	0.35	10.0
	35	3.88	10.58	272.5	42	0.49	0.61	125.0				
101	1	3.87	10.53	272.5	2	3.46	4.32	125.0	3	2.66	7.26	272.5
	4	1.85	5.03	272.5	5	2.22	9.34	420.0	6	3.00	12.60	420.0
	8	91.28	9.13	10.0	13	82.60	8.26	10.0	14	40.20	4.02	10.0
	26	5.65	0.56	10.0	27	4.58	0.46	10.0	28	5.64	0.56	10.0
	29	4.18	0.42	10.0	30	8.18	0.82	10.0	31	12.84	1.28	10.0
	32	1.72	0.17	10.0	33	3.26	0.33	10.0	34	7.14	0.71	10.0
	35	3.35	9.13	272.5	42	2.55	3.19	125.0				
102	1	3.69	10.05	272.5	2	3.05	3.81	125.0	3	1.98	5.39	272.5
	4	2.62	7.15	272.5	5	2.65	11.12	420.0	6	3.12	13.09	420.0
	8	109.58	10.96	10.0	13	133.10	13.31	10.0	14	26.50	2.65	10.0
	26	2.71	0.27	10.0	27	2.34	0.23	10.0	28	5.31	0.53	10.0
	29	23.28	2.33	10.0	30	9.88	0.99	10.0	31	18.39	1.84	10.0
	32	0.46	0.05	10.0	33	4.72	0.47	10.0	34	11.13	1.11	10.0
	35	4.06	11.07	272.5	42	2.54	3.17	125.0				
103	1	3.08	8.38	272.5	2	2.82	3.53	125.0	3	1.98	5.38	272.5
	4	2.26	6.17	272.5	5	1.67	7.03	420.0	6	2.79	11.72	420.0
	8	84.88	8.49	10.0	13	85.09	8.51	10.0	14	27.76	2.78	10.0
	26	2.27	0.23	10.0	27	1.96	0.20	10.0	28	1.34	0.13	10.0
	29	24.17	2.42	10.0	30	7.70	0.77	10.0	31	17.70	1.77	10.0
	32	1.99	0.20	10.0	33	4.80	0.48	10.0	34	3.18	0.32	10.0
	35	3.26	8.88	272.5	42	1.12	1.40	125.0				
104	1	4.08	11.11	272.5	2	1.20	1.50	125.0	3	2.10	5.71	272.5
	4	1.50	4.09	272.5	5	1.37	5.75	420.0	6	2.12	8.90	420.0
	8	116.00	11.60	10.0	13	130.60	13.06	10.0	14	32.40	3.24	10.0
	26	5.68	0.57	10.0	27	4.34	0.43	10.0	28	2.49	0.25	10.0
	29	3.56	0.36	10.0	30	2.18	0.22	10.0	31	13.53	1.35	10.0
	32	0.68	0.07	10.0	33	3.01	0.30	10.0	34	3.49	0.35	10.0
	35	3.80	10.35	272.5	42	0.50	0.62	125.0				
105	1	3.78	10.31	272.5	2	3.46	4.32	125.0	3	2.68	7.30	272.5
	4	1.91	5.21	272.5	5	2.23	9.37	420.0	6	3.01	12.63	420.0
	8	88.78	8.88	10.0	13	83.76	8.38	10.0	14	40.45	4.04	10.0
	26	5.40	0.54	10.0	27	4.28	0.43	10.0	28	3.01	0.30	10.0
	29	1.97	0.20	10.0	30	7.94	0.79	10.0	31	12.08	1.21	10.0
	32	1.93	0.19	10.0	33	3.30	0.33	10.0	34	7.18	0.72	10.0
	35	3.28	8.94	272.5	42	2.56	3.20	125.0				
106	1	3.76	10.25	272.5	2	3.05	3.81	125.0	3	1.93	5.25	272.5
	4	2.64	7.20	272.5	5	2.64	11.08	420.0	6	3.11	13.06	420.0
	8	112.08	11.21	10.0	13	131.93	13.19	10.0	14	26.25	2.63	10.0
	26	2.50	0.25	10.0	27	2.11	0.21	10.0	28	1.80	0.18	10.0
	29	26.19	2.62	10.0	30	9.63	0.96	10.0	31	19.15	1.92	10.0
	32	0.63	0.06	10.0	33	4.76	0.48	10.0	34	11.18	1.12	10.0
	35	4.17	11.35	272.5	42	2.54	3.17	125.0				
139	1	3.08	8.40	272.5	2	2.04	2.55	125.0	3	3.21	8.75	272.5
	4	2.10	5.73	272.5	5	4.08	17.12	420.0	6	4.21	17.69	420.0
	8	4.30	0.43	10.0	13	7.57	0.76	10.0	14	15.15	1.52	10.0
	26	12.26	1.23	10.0	27	7.95	0.79	10.0	28	10.04	1.00	10.0
	29	27.94	2.79	10.0	30	19.93	1.99	10.0	31	11.94	1.19	10.0
	32	0.54	0.05	10.0	33	10.07	1.01	10.0	34	5.64	0.56	10.0
	35	1.89	5.16	272.5	42	1.56	1.95	125.0				
140	1	3.46	9.42	272.5	2	1.19	1.49	125.0	3	3.13	8.52	272.5
	4	2.04	5.56	272.5	5	3.99	16.74	420.0	6	4.04	16.95	420.0
	8	46.10	4.61	10.0	13	44.64	4.46	10.0	14	14.92	1.49	10.0
	26	9.06	0.91	10.0	27	8.51	0.85	10.0	28	9.37	0.94	10.0
	29	15.32	1.53	10.0	30	19.33	1.93	10.0	31	2.75	0.28	10.0
	32	3.41	0.34	10.0	33	9.76	0.98	10.0	34	4.46	0.45	10.0
	35	2.52	6.86	272.5	42	1.39	1.74	125.0				
141	1	3.75	10.21	272.5	2	4.28	5.35	125.0	3	3.67	9.99	272.5
	4	2.91	7.93	272.5	5	5.02	21.07	420.0	6	4.99	20.97	420.0
	8	18.88	1.89	10.0	13	2.32	0.23	10.0	14	16.44	1.64	10.0
	26	8.91	0.89	10.0	27	8.49	0.85	10.0	28	11.93	1.19	10.0
	29	17.28	1.73	10.0	30	21.20	2.12	10.0	31	1.30	0.13	10.0
	32	1.01	0.10	10.0	33	9.86	0.99	10.0	34	14.44	1.44	10.0
	35	3.01	8.21	272.5	42	4.11	5.14	125.0				
142	1	3.63	9.89	272.5	2	4.29	5.36	125.0	3	3.65	9.94	272.5

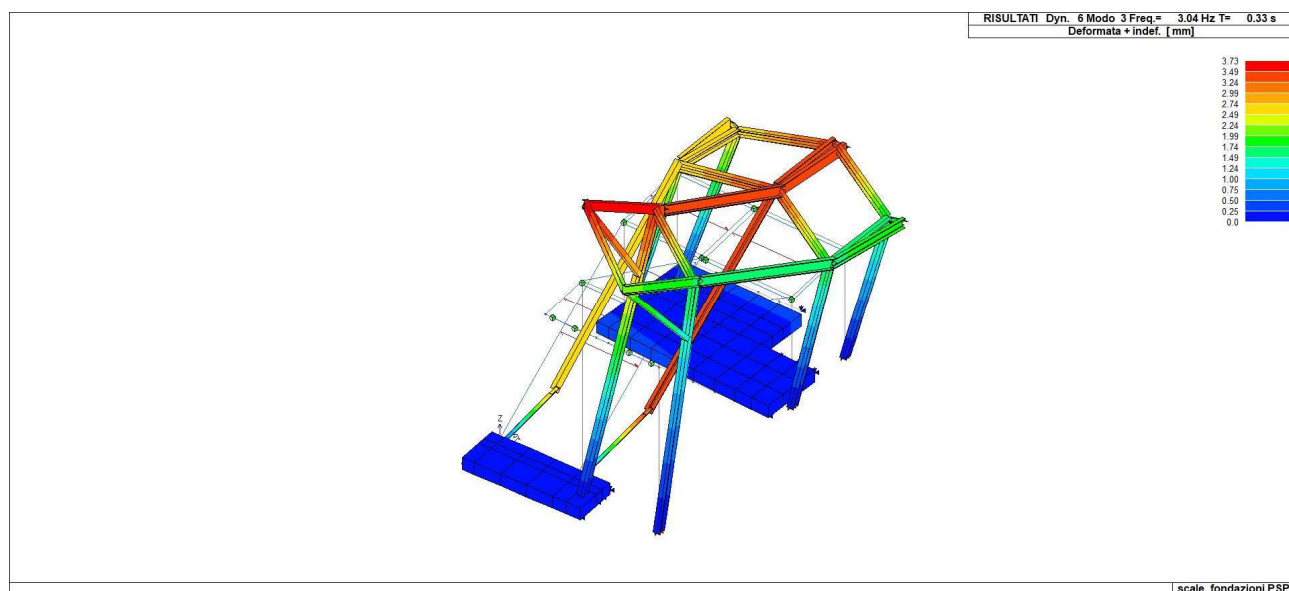
Cmb	Pilas.	1000 etaT/h	etaT	inter. h	Pilas.	1000 etaT/h	etaT	inter. h	Pilas.	1000 etaT/h	etaT	inter. h
	4	2.81	7.66	272.5	5	5.11	21.47	420.0	6	5.07	21.30	420.0
	8	22.98	2.30	10.0	13	54.37	5.44	10.0	14	16.69	1.67	10.0
	26	12.15	1.21	10.0	27	7.94	0.79	10.0	28	12.59	1.26	10.0
	29	29.93	2.99	10.0	30	21.81	2.18	10.0	31	13.39	1.34	10.0
	32	2.14	0.21	10.0	33	10.13	1.01	10.0	34	15.40	1.54	10.0
	35	2.79	7.60	272.5	42	4.12	5.15	125.0				
143	1	3.00	8.17	272.5	2	2.05	2.57	125.0	3	3.11	8.46	272.5
	4	2.29	6.23	272.5	5	4.08	17.13	420.0	6	4.22	17.72	420.0
	8	1.17	0.12	10.0	13	7.56	0.76	10.0	14	7.02	0.70	10.0
	26	10.26	1.03	10.0	27	7.93	0.79	10.0	28	9.59	0.96	10.0
	29	24.88	2.49	10.0	30	19.81	1.98	10.0	31	8.39	0.84	10.0
	32	2.10	0.21	10.0	33	10.12	1.01	10.0	34	5.70	0.57	10.0
	35	2.13	5.81	272.5	42	1.54	1.93	125.0				
144	1	3.58	9.76	272.5	2	1.19	1.48	125.0	3	3.21	8.74	272.5
	4	1.80	4.90	272.5	5	3.98	16.71	420.0	6	4.03	16.92	420.0
	8	49.45	4.95	10.0	13	44.64	4.46	10.0	14	23.04	2.30	10.0
	26	11.05	1.11	10.0	27	8.52	0.85	10.0	28	9.68	0.97	10.0
	29	18.37	1.84	10.0	30	19.45	1.95	10.0	31	0.80	0.08	10.0
	32	1.72	0.17	10.0	33	9.70	0.97	10.0	34	4.41	0.44	10.0
	35	2.40	6.54	272.5	42	1.39	1.74	125.0				
145	1	3.85	10.50	272.5	2	4.28	5.36	125.0	3	3.74	10.19	272.5
	4	2.66	7.24	272.5	5	5.01	21.04	420.0	6	4.99	20.95	420.0
	8	22.22	2.22	10.0	13	2.32	0.23	10.0	14	24.57	2.46	10.0
	26	10.90	1.09	10.0	27	8.50	0.85	10.0	28	12.25	1.23	10.0
	29	20.33	2.03	10.0	30	21.32	2.13	10.0	31	2.25	0.22	10.0
	32	0.87	0.09	10.0	33	9.80	0.98	10.0	34	14.39	1.44	10.0
	35	2.82	7.69	272.5	42	4.11	5.13	125.0				
146	1	3.57	9.72	272.5	2	4.29	5.36	125.0	3	3.55	9.68	272.5
	4	3.03	8.25	272.5	5	5.11	21.48	420.0	6	5.08	21.33	420.0
	8	26.32	2.63	10.0	13	54.36	5.44	10.0	14	8.57	0.86	10.0
	26	10.15	1.02	10.0	27	7.92	0.79	10.0	28	12.16	1.22	10.0
	29	26.87	2.69	10.0	30	21.69	2.17	10.0	31	9.84	0.98	10.0
	32	0.55	0.05	10.0	33	10.19	1.02	10.0	34	15.45	1.54	10.0
	35	3.04	8.30	272.5	42	4.12	5.15	125.0				
147	1	3.03	8.25	272.5	2	2.05	2.56	125.0	3	3.12	8.50	272.5
	4	2.20	5.99	272.5	5	4.07	17.10	420.0	6	4.21	17.67	420.0
	8	2.34	0.23	10.0	13	4.52	0.45	10.0	14	15.80	1.58	10.0
	26	11.62	1.16	10.0	27	7.13	0.71	10.0	28	5.40	0.54	10.0
	29	35.48	3.55	10.0	30	19.28	1.93	10.0	31	13.91	1.39	10.0
	32	0.45	0.04	10.0	33	10.17	1.02	10.0	34	5.76	0.58	10.0
	35	2.06	5.62	272.5	42	1.54	1.92	125.0				
148	1	3.32	9.04	272.5	2	1.19	1.49	125.0	3	3.08	8.38	272.5
	4	2.21	6.03	272.5	5	3.99	16.75	420.0	6	4.04	16.95	420.0
	8	39.62	3.96	10.0	13	47.72	4.77	10.0	14	15.57	1.56	10.0
	26	8.42	0.84	10.0	27	7.69	0.77	10.0	28	3.09	0.31	10.0
	29	22.84	2.28	10.0	30	18.68	1.87	10.0	31	0.78	0.08	10.0
	32	2.86	0.29	10.0	33	9.86	0.99	10.0	34	4.59	0.46	10.0
	35	2.53	6.91	272.5	42	1.38	1.73	125.0				
149	1	3.64	9.93	272.5	2	4.29	5.36	125.0	3	3.63	9.88	272.5
	4	3.09	8.41	272.5	5	5.02	21.07	420.0	6	4.99	20.98	420.0
	8	12.41	1.24	10.0	13	1.13	0.11	10.0	14	17.09	1.71	10.0
	26	8.27	0.83	10.0	27	7.69	0.77	10.0	28	3.70	0.37	10.0
	29	24.82	2.48	10.0	30	20.55	2.06	10.0	31	0.67	0.07	10.0
	32	0.54	0.05	10.0	33	9.97	1.00	10.0	34	14.57	1.46	10.0
	35	3.11	8.48	272.5	42	4.12	5.15	125.0				
150	1	3.61	9.84	272.5	2	4.29	5.37	125.0	3	3.57	9.74	272.5
	4	2.94	8.02	272.5	5	5.11	21.44	420.0	6	5.07	21.29	420.0
	8	29.46	2.95	10.0	13	51.29	5.13	10.0	14	17.35	1.73	10.0
	26	11.51	1.15	10.0	27	7.14	0.71	10.0	28	6.02	0.60	10.0
	29	37.48	3.75	10.0	30	21.17	2.12	10.0	31	15.37	1.54	10.0
	32	2.69	0.27	10.0	33	10.24	1.02	10.0	34	15.53	1.55	10.0
	35	3.00	8.16	272.5	42	4.13	5.16	125.0				
151	1	2.96	8.05	272.5	2	2.06	2.58	125.0	3	3.02	8.22	272.5
	4	2.40	6.53	272.5	5	4.07	17.11	420.0	6	4.21	17.70	420.0
	8	5.63	0.56	10.0	13	4.51	0.45	10.0	14	7.68	0.77	10.0
	26	9.62	0.96	10.0	27	7.11	0.71	10.0	28	4.03	0.40	10.0
	29	32.42	3.24	10.0	30	19.15	1.92	10.0	31	10.36	1.04	10.0
	32	1.56	0.16	10.0	33	10.22	1.02	10.0	34	5.82	0.58	10.0
	35	2.31	6.30	272.5	42	1.53	1.91	125.0				
152	1	3.44	9.37	272.5	2	1.20	1.49	125.0	3	3.15	8.59	272.5
	4	1.96	5.35	272.5	5	3.98	16.71	420.0	6	4.03	16.92	420.0

Cmb	Pilas.	1000 etaT/h	etaT	inter. h	Pilas.	1000 etaT/h	etaT	inter. h	Pilas.	1000 etaT/h	etaT	inter. h
	8	42.97	4.30	10.0	13	47.71	4.77	10.0	14	23.69	2.37	10.0
	26	10.41	1.04	10.0	27	7.70	0.77	10.0	28	4.42	0.44	10.0
	29	25.89	2.59	10.0	30	18.80	1.88	10.0	31	2.77	0.28	10.0
	32	1.19	0.12	10.0	33	9.81	0.98	10.0	34	4.53	0.45	10.0
	35	2.39	6.52	272.5	42	1.39	1.73	125.0				
153	1	3.75	10.21	272.5	2	4.29	5.36	125.0	3	3.69	10.07	272.5
	4	2.83	7.72	272.5	5	5.01	21.04	420.0	6	4.99	20.95	420.0
	8	15.75	1.57	10.0	13	1.12	0.11	10.0	14	25.22	2.52	10.0
	26	10.27	1.03	10.0	27	7.70	0.77	10.0	28	5.04	0.50	10.0
	29	27.88	2.79	10.0	30	20.67	2.07	10.0	31	4.22	0.42	10.0
	32	1.40	0.14	10.0	33	9.92	0.99	10.0	34	14.52	1.45	10.0
	35	2.91	7.93	272.5	42	4.12	5.14	125.0				
154	1	3.56	9.69	272.5	2	4.30	5.37	125.0	3	3.48	9.48	272.5
	4	3.17	8.63	272.5	5	5.11	21.46	420.0	6	5.08	21.32	420.0
	8	32.81	3.28	10.0	13	51.29	5.13	10.0	14	9.23	0.92	10.0
	26	9.52	0.95	10.0	27	7.13	0.71	10.0	28	4.66	0.47	10.0
	29	34.42	3.44	10.0	30	21.05	2.10	10.0	31	11.82	1.18	10.0
	32	1.03	0.10	10.0	33	10.30	1.03	10.0	34	15.58	1.56	10.0
	35	3.25	8.87	272.5	42	4.13	5.16	125.0				
155	1	2.06	5.61	272.5	2	2.40	3.00	125.0	3	2.02	5.52	272.5
	4	1.90	5.19	272.5	5	1.31	5.52	420.0	6	2.19	9.21	420.0
	8	52.70	5.27	10.0	13	64.98	6.50	10.0	14	4.39	0.44	10.0
	26	8.63	0.86	10.0	27	1.98	0.20	10.0	28	5.00	0.50	10.0
	29	26.96	2.70	10.0	30	6.44	0.64	10.0	31	25.36	2.54	10.0
	32	3.65	0.37	10.0	33	3.61	0.36	10.0	34	2.65	0.26	10.0
	35	1.94	5.27	272.5	42	1.20	1.50	125.0				
156	1	2.93	7.98	272.5	2	1.03	1.28	125.0	3	1.67	4.56	272.5
	4	1.56	4.24	272.5	5	1.12	4.72	420.0	6	1.60	6.73	420.0
	8	86.84	8.68	10.0	13	108.90	10.89	10.0	14	3.73	0.37	10.0
	26	2.45	0.24	10.0	27	3.65	0.37	10.0	28	3.93	0.39	10.0
	29	14.29	1.43	10.0	30	4.62	0.46	10.0	31	5.96	0.60	10.0
	32	6.48	0.65	10.0	33	2.46	0.25	10.0	34	3.81	0.38	10.0
	35	2.86	7.79	272.5	42	0.67	0.84	125.0				
157	1	2.60	7.09	272.5	2	3.04	3.80	125.0	3	2.21	6.03	272.5
	4	2.22	6.06	272.5	5	1.92	8.07	420.0	6	2.49	10.44	420.0
	8	59.63	5.96	10.0	13	62.06	6.21	10.0	14	5.11	0.51	10.0
	26	2.30	0.23	10.0	27	3.60	0.36	10.0	28	5.22	0.52	10.0
	29	13.50	1.35	10.0	30	6.29	0.63	10.0	31	22.17	2.22	10.0
	32	4.03	0.40	10.0	33	2.78	0.28	10.0	34	6.77	0.68	10.0
	35	2.61	7.11	272.5	42	2.36	2.95	125.0				
158	1	2.79	7.60	272.5	2	2.60	3.25	125.0	3	2.00	5.46	272.5
	4	1.85	5.04	272.5	5	2.22	9.33	420.0	6	2.49	10.44	420.0
	8	79.90	7.99	10.0	13	111.82	11.18	10.0	14	6.01	0.60	10.0
	26	8.57	0.86	10.0	27	2.05	0.20	10.0	28	6.84	0.68	10.0
	29	28.96	2.90	10.0	30	8.34	0.83	10.0	31	26.81	2.68	10.0
	32	6.10	0.61	10.0	33	3.51	0.35	10.0	34	9.69	0.97	10.0
	35	2.68	7.31	272.5	42	2.27	2.84	125.0				
159	1	2.12	5.76	272.5	2	2.40	3.01	125.0	3	1.98	5.40	272.5
	4	1.87	5.09	272.5	5	1.30	5.46	420.0	6	2.19	9.18	420.0
	8	54.64	5.46	10.0	13	64.06	6.41	10.0	14	4.59	0.46	10.0
	26	8.44	0.84	10.0	27	1.79	0.18	10.0	28	5.18	0.52	10.0
	29	29.22	2.92	10.0	30	6.25	0.62	10.0	31	25.95	2.60	10.0
	32	3.82	0.38	10.0	33	3.63	0.36	10.0	34	2.65	0.26	10.0
	35	2.00	5.46	272.5	42	1.19	1.48	125.0				
160	1	2.86	7.80	272.5	2	1.02	1.28	125.0	3	1.70	4.63	272.5
	4	1.61	4.38	272.5	5	1.14	4.79	420.0	6	1.61	6.75	420.0
	8	84.90	8.49	10.0	13	109.82	10.98	10.0	14	3.91	0.39	10.0
	26	2.61	0.26	10.0	27	3.42	0.34	10.0	28	3.27	0.33	10.0
	29	13.26	1.33	10.0	30	4.44	0.44	10.0	31	9.19	0.92	10.0
	32	6.32	0.63	10.0	33	2.49	0.25	10.0	34	3.77	0.38	10.0
	35	2.80	7.64	272.5	42	0.68	0.84	125.0				
161	1	2.54	6.91	272.5	2	3.04	3.80	125.0	3	2.23	6.09	272.5
	4	2.28	6.23	272.5	5	1.93	8.11	420.0	6	2.49	10.46	420.0
	8	57.68	5.77	10.0	13	62.98	6.30	10.0	14	5.30	0.53	10.0
	26	2.49	0.25	10.0	27	3.38	0.34	10.0	28	2.72	0.27	10.0
	29	11.25	1.13	10.0	30	6.10	0.61	10.0	31	21.58	2.16	10.0
	32	3.87	0.39	10.0	33	2.82	0.28	10.0	34	6.81	0.68	10.0
	35	2.58	7.03	272.5	42	2.37	2.96	125.0				
162	1	2.84	7.75	272.5	2	2.61	3.26	125.0	3	1.96	5.34	272.5
	4	1.84	5.02	272.5	5	2.21	9.29	420.0	6	2.48	10.42	420.0
	8	81.85	8.18	10.0	13	110.90	11.09	10.0	14	6.21	0.62	10.0

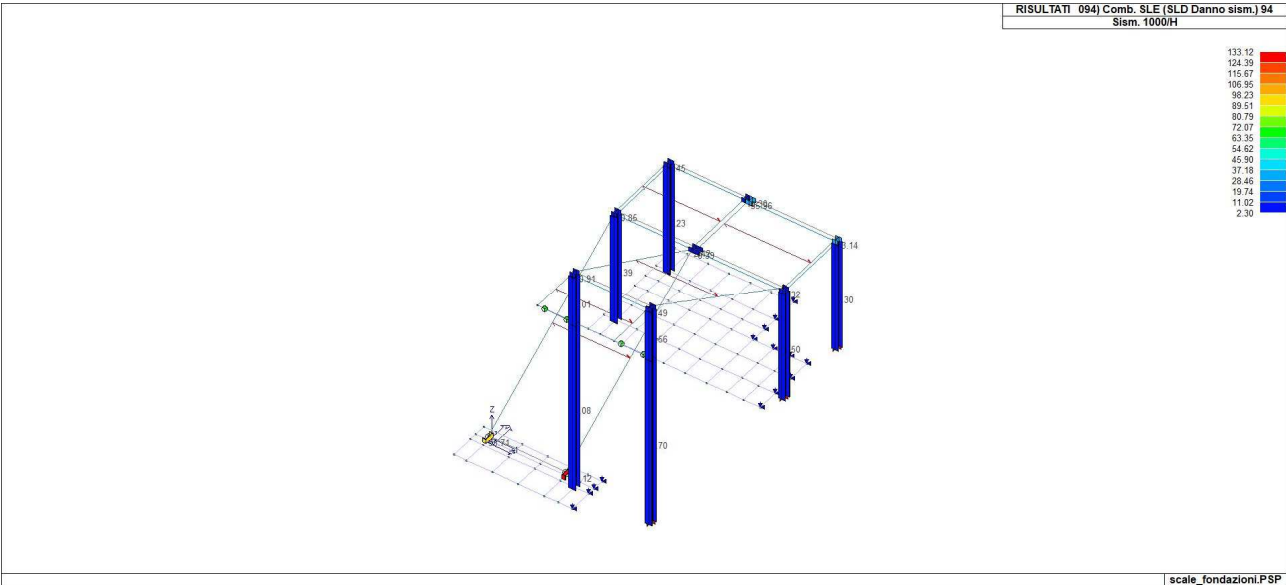
Cmb	Pilas.	1000 etaT/h	etaT	inter. h	Pilas.	1000 etaT/h	etaT	inter. h	Pilas.	1000 etaT/h	etaT	inter. h
	26	8.38	0.84	10.0	27	1.89	0.19	10.0	28	5.79	0.58	10.0
	29	31.23	3.12	10.0	30	8.15	0.82	10.0	31	27.40	2.74	10.0
	32	6.27	0.63	10.0	33	3.54	0.35	10.0	34	9.73	0.97	10.0
	35	2.76	7.52	272.5	42	2.27	2.84	125.0				
163	1	2.35	6.41	272.5	2	2.46	3.07	125.0	3	1.64	4.47	272.5
	4	1.80	4.90	272.5	5	1.22	5.14	420.0	6	2.21	9.29	420.0
	8	63.86	6.39	10.0	13	64.96	6.50	10.0	14	22.72	2.27	10.0
	26	1.97	0.20	10.0	27	1.92	0.19	10.0	28	1.94	0.19	10.0
	29	16.77	1.68	10.0	30	6.04	0.60	10.0	31	13.53	1.35	10.0
	32	2.11	0.21	10.0	33	3.75	0.37	10.0	34	2.69	0.27	10.0
	35	2.46	6.69	272.5	42	1.08	1.35	125.0				
164	1	3.37	9.18	272.5	2	1.07	1.33	125.0	3	1.59	4.32	272.5
	4	1.17	3.19	272.5	5	0.99	4.14	420.0	6	1.60	6.72	420.0
	8	98.00	9.80	10.0	13	108.88	10.89	10.0	14	16.85	1.69	10.0
	26	4.68	0.47	10.0	27	3.72	0.37	10.0	28	2.25	0.22	10.0
	29	5.55	0.56	10.0	30	5.00	0.50	10.0	31	11.79	1.18	10.0
	32	0.86	0.09	10.0	33	2.29	0.23	10.0	34	3.98	0.40	10.0
	35	3.19	8.69	272.5	42	0.63	0.78	125.0				
165	1	3.06	8.34	272.5	2	3.08	3.84	125.0	3	2.17	5.91	272.5
	4	1.54	4.18	272.5	5	1.84	7.72	420.0	6	2.48	10.40	420.0
	8	70.78	7.08	10.0	13	62.04	6.20	10.0	14	32.19	3.22	10.0
	26	4.40	0.44	10.0	27	3.65	0.36	10.0	28	4.75	0.47	10.0
	29	3.62	0.36	10.0	30	6.68	0.67	10.0	31	10.33	1.03	10.0
	32	1.73	0.17	10.0	33	2.58	0.26	10.0	34	6.64	0.66	10.0
	35	2.65	7.22	272.5	42	2.30	2.88	125.0				
166	1	3.04	8.28	272.5	2	2.63	3.28	125.0	3	1.58	4.32	272.5
	4	2.14	5.83	272.5	5	2.17	9.13	420.0	6	2.51	10.54	420.0
	8	91.06	9.11	10.0	13	111.80	11.18	10.0	14	21.21	2.12	10.0
	26	2.17	0.22	10.0	27	2.02	0.20	10.0	28	4.47	0.45	10.0
	29	18.78	1.88	10.0	30	7.94	0.79	10.0	31	14.98	1.50	10.0
	32	0.54	0.05	10.0	33	3.69	0.37	10.0	34	9.86	0.99	10.0
	35	3.35	9.14	272.5	42	2.26	2.83	125.0				
167	1	2.41	6.58	272.5	2	2.46	3.07	125.0	3	1.60	4.36	272.5
	4	1.79	4.88	272.5	5	1.21	5.09	420.0	6	2.21	9.26	420.0
	8	65.80	6.58	10.0	13	64.03	6.40	10.0	14	22.52	2.25	10.0
	26	1.77	0.18	10.0	27	1.73	0.17	10.0	28	1.25	0.12	10.0
	29	19.03	1.90	10.0	30	5.85	0.58	10.0	31	14.12	1.41	10.0
	32	1.94	0.19	10.0	33	3.78	0.38	10.0	34	2.69	0.27	10.0
	35	2.53	6.90	272.5	42	1.07	1.33	125.0				
168	1	3.30	9.00	272.5	2	1.06	1.33	125.0	3	1.60	4.36	272.5
	4	1.20	3.26	272.5	5	1.00	4.20	420.0	6	1.61	6.75	420.0
	8	96.06	9.61	10.0	13	109.80	10.98	10.0	14	19.68	1.97	10.0
	26	4.49	0.45	10.0	27	3.48	0.35	10.0	28	2.09	0.21	10.0
	29	3.54	0.35	10.0	30	4.81	0.48	10.0	31	11.19	1.12	10.0
	32	0.72	0.07	10.0	33	2.32	0.23	10.0	34	3.94	0.39	10.0
	35	3.12	8.50	272.5	42	0.63	0.79	125.0				
169	1	3.00	8.17	272.5	2	3.08	3.84	125.0	3	2.18	5.94	272.5
	4	1.59	4.33	272.5	5	1.85	7.75	420.0	6	2.48	10.42	420.0
	8	68.84	6.88	10.0	13	62.96	6.30	10.0	14	32.39	3.24	10.0
	26	4.21	0.42	10.0	27	3.42	0.34	10.0	28	2.59	0.26	10.0
	29	1.99	0.20	10.0	30	6.50	0.65	10.0	31	9.74	0.97	10.0
	32	1.89	0.19	10.0	33	2.62	0.26	10.0	34	6.67	0.67	10.0
	35	2.60	7.08	272.5	42	2.31	2.89	125.0				
170	1	3.10	8.43	272.5	2	2.63	3.29	125.0	3	1.54	4.20	272.5
	4	2.16	5.87	272.5	5	2.17	9.10	420.0	6	2.51	10.53	420.0
	8	93.01	9.30	10.0	13	110.87	11.09	10.0	14	21.02	2.10	10.0
	26	2.02	0.20	10.0	27	1.87	0.19	10.0	28	1.61	0.16	10.0
	29	21.04	2.10	10.0	30	7.76	0.78	10.0	31	15.57	1.56	10.0
	32	0.67	0.07	10.0	33	3.73	0.37	10.0	34	9.90	0.99	10.0
	35	3.44	9.36	272.5	42	2.26	2.83	125.0				
Cmb		1000 etaT/h										
		133.12										



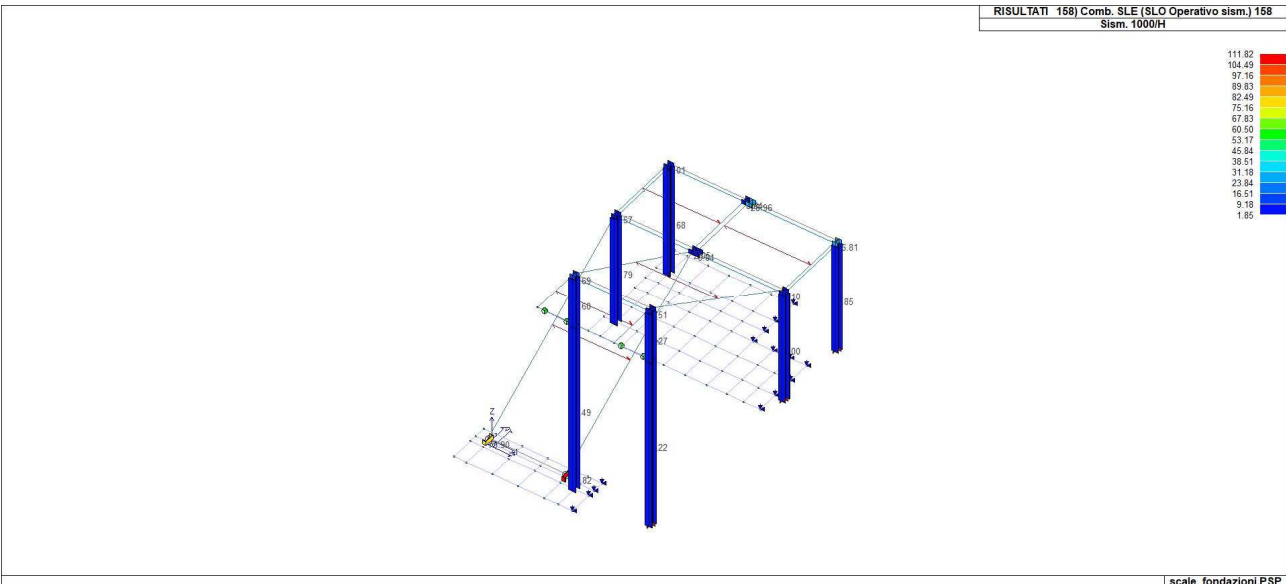
31\_RIS\_MODALX\_002\_CDC=Ed (dinamico SLU) alfa=0.0 (ecc. +)



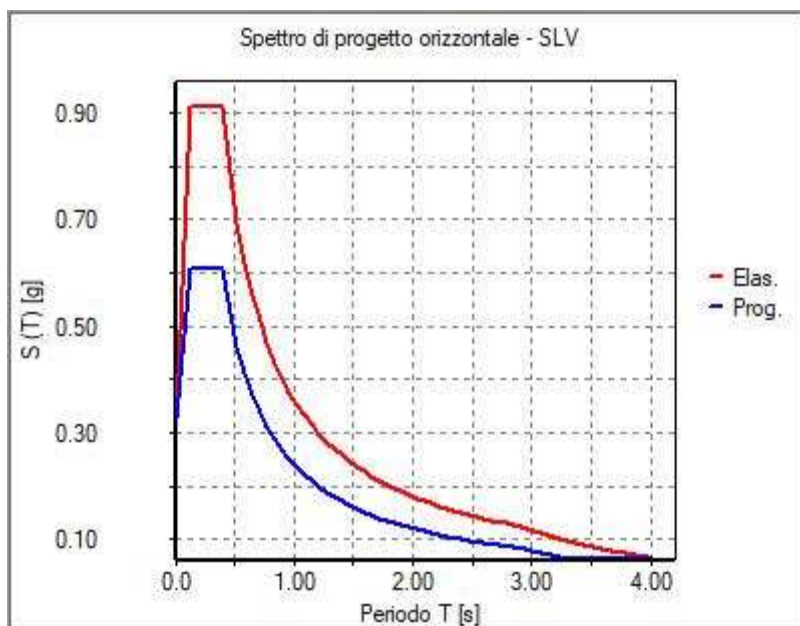
31\_RIS\_MODALY\_003\_CDC=Ed (dinamico SLU) alfa=90.00 (ecc. +)



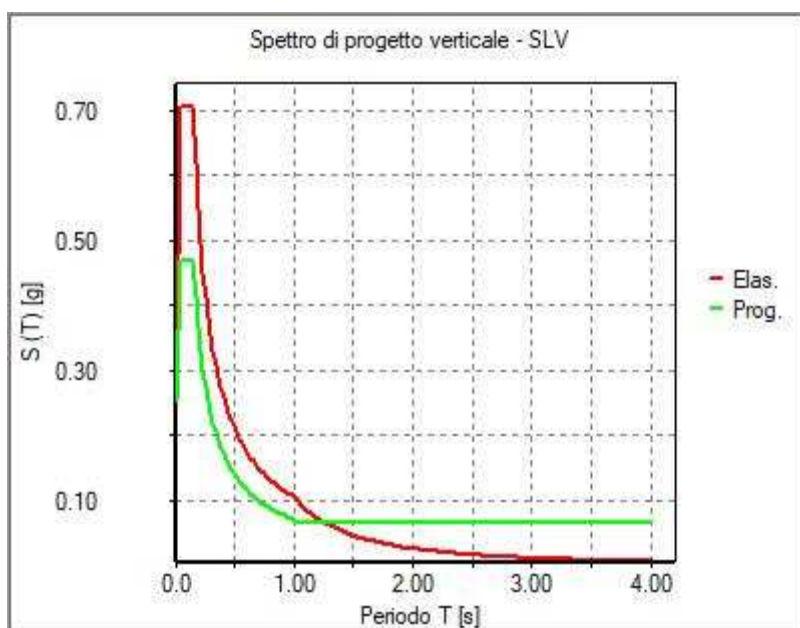
31\_RIS\_SLE\_094\_Comb. SLE (SLD Danno sism.) 94



31\_RIS\_SLE\_158\_Comb. SLE (SLO Operativo sism.) 158



31\_RIS\_SPETTRI\_PROGETTO\_SLV\_O



31\_RIS\_SPETTRI\_PROGETTO\_SLV\_V



# RISULTATI OPERE DI FONDAZIONE

## LEGENDA RISULTATI OPERE DI FONDAZIONE

Il controllo dei risultati delle analisi condotte, per quanto concerne le opere di fondazione, è possibile in relazione alle tabelle sotto riportate.

La prima tabella è riferita alle fondazioni tipo palo e plinto su pali.

Per questo tipo di fondazione vengono riportate le sei componenti di sollecitazione (esprese nel riferimento globale della struttura) per ogni palo componente l'opera.

In particolare viene riportato:

<b>Nodo</b>	numero del nodo a cui è applicato il plinto
<b>Tipo</b>	codice corrispondente al nome assegnato al tipo di plinto di fondazione: 3) palo singolo ( <i>PALO</i> ) 4) plinto su palo 5) plinto su due pali ( <i>PL.2P</i> ) 6) plinto su tre pali ( <i>PL.3P</i> ) 7) plinto su quattro pali ( <i>PL.4P</i> ) 8) plinto rettangolare su cinque pali ( <i>PL.5P.R</i> ) 9) plinto pentagonale su cinque pali ( <i>PL.5P</i> ) 10) plinto su sei pali ( <i>PL.6P</i> )
<b>Palo</b>	numero del palo
<b>Comb.</b>	combinazione di carico in cui si verificano le sei componenti di sollecitazione.
<b>Quota</b>	quota assoluta della sezione del palo per cui si riportano le sei componenti di sollecitazione.

L'azione  $F_z$  ( corrispondente allo sforzo normale nel palo) è costante poiché il peso del palo stesso non è considerato nella modellazione.

La seconda tabella è riferita alle fondazioni tipo plinto su suolo elastico.

Per questo tipo di fondazione vengono riportate le pressioni nei quattro vertici dell'impronta sul terreno.

In particolare viene riportato:

<b>Nodo</b>	numero del nodo a cui è applicato il plinto
<b>Tipo</b>	Codice identificativo del nome assegnato al plinto
<b>area</b>	area dell'impronta del plinto
<b>Wink O      Wink V</b>	coefficienti di Winkler (orizzontale e verticale) adottati
<b>Comb</b>	Combinazione di carico in cui si verificano i valori riportati
<b>Pt (P1 P2 P3 P4)</b>	valori di pressione nei vertici

La terza tabella è riferita alle fondazioni tipo platea su suolo elastico.

Per questo tipo di fondazione vengono riportate le pressioni in ogni vertice (nodo) degli elementi costituenti la platea.

La quarta tabella è riferita alle fondazioni tipo trave su suolo elastico.

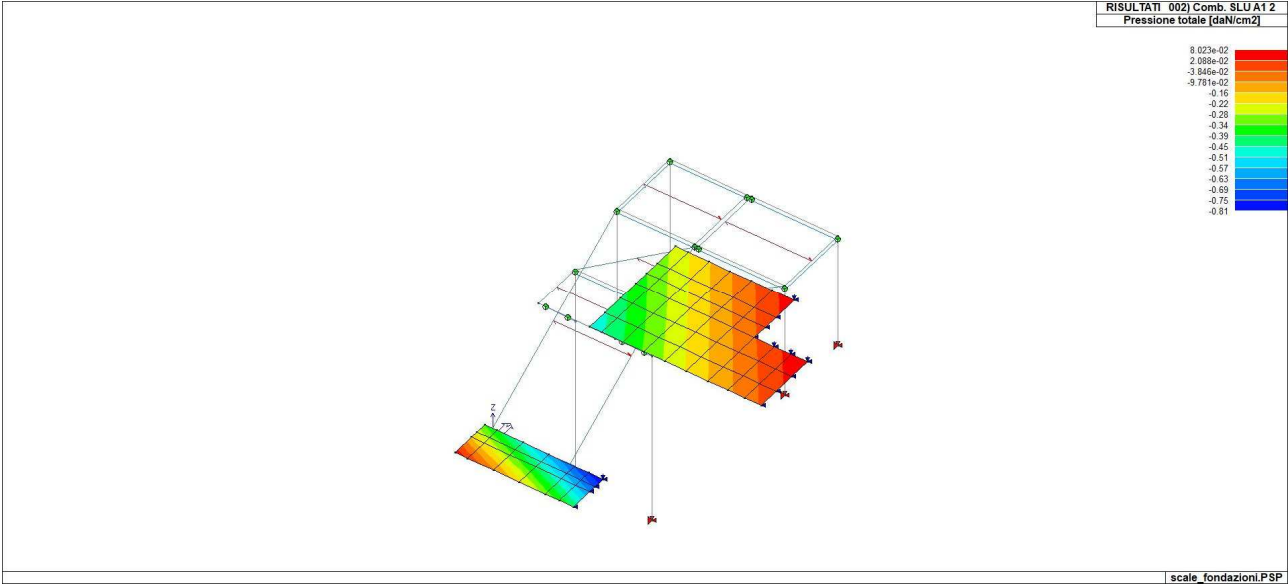
Per questo tipo di fondazione vengono riportate le pressioni alle estremità dell'elemento e la massima (in valore assoluto) pressione lungo lo sviluppo dell'elemento.

Vengono inoltre riportati, con funzione statistica, i valori massimo e minimo delle pressioni che compaiono nella tabella.

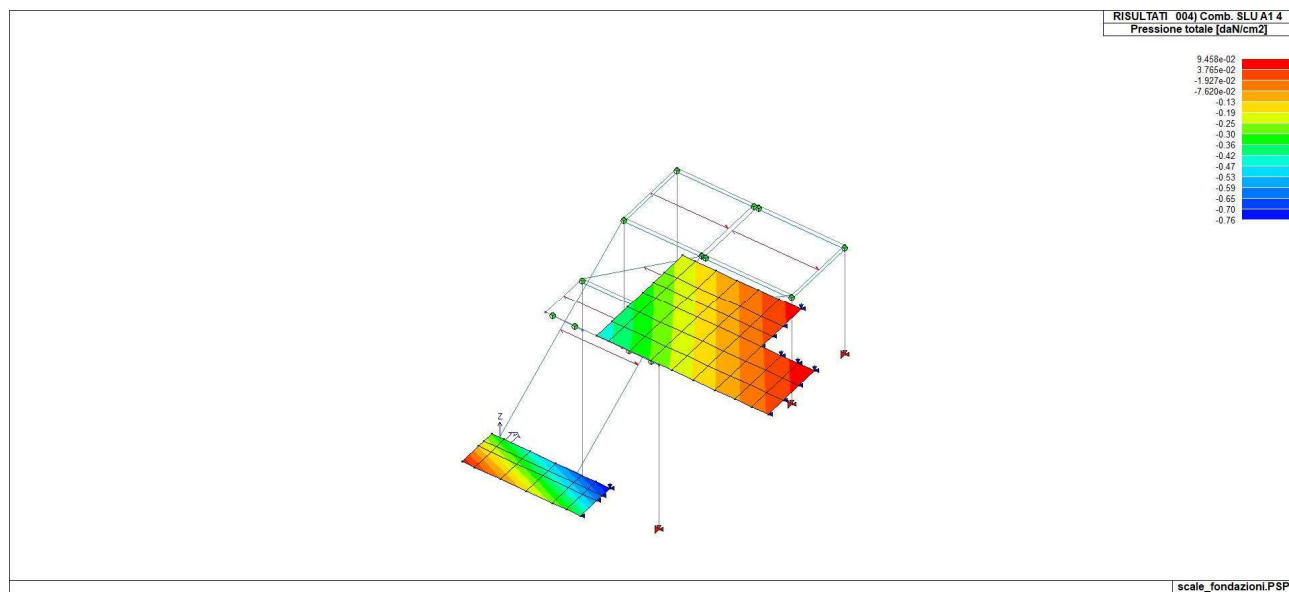
Nodo (G)	Pt 1/12	Pt 2/13	Pt 3...	Pt 4...							
	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2
1	-0.28	-0.20	-0.17	-0.16	-0.19	-0.24	-0.18				
2	-0.59	-0.41	-0.33	-0.30	-0.34	-0.43	-0.33				
3	-0.57	-0.40	-0.32	-0.30	-0.34	-0.45	-0.33				

Nodo (G)	Pt 1/12	Pt 2/13	Pt 3...	Pt 4...						
7	-0.27	-0.19	-0.17	-0.16	-0.30	-0.24	-0.22			
10	-0.42	-0.30	-0.24	-0.23	-0.41	-0.33	-0.31			
35	-0.35	-0.25	-0.21	-0.19	-0.35	-0.28	-0.26			
36	-0.31	-0.22	-0.19	-0.18	-0.26	-0.22	-0.21			
37	-0.38	-0.27	-0.22	-0.21	-0.31	-0.26	-0.25			
38	-0.29	-0.21	-0.18	-0.16	-0.30	-0.24	-0.22			
39	-0.25	-0.18	-0.15	-0.15	-0.21	-0.18	-0.17			
40	-0.23	-0.17	-0.14	-0.14	-0.25	-0.20	-0.19			
41	-0.19	-0.14	-0.12	-0.12	-0.16	-0.14	-0.14			
42	-0.18	-0.13	-0.12	-0.11	-0.21	-0.17	-0.16			
43	-0.14	-0.10	-0.10	-0.09	-0.13	-0.11	-0.11			
44	-0.12	-0.09	-0.09	-0.08	-0.17	-0.14	-0.13			
45	-0.09	-0.07	-0.07	-0.07	-0.10	-0.09	-0.08			
46	-0.09	-0.07	-0.07	-0.07	-0.14	-0.11	-0.10			
47	-0.08	-0.06	-0.06	-0.06	-0.09	-0.07	-0.06			
48	-0.08	-0.06	-0.06	-0.06	-0.12	-0.09	-0.08			
49	-0.08	-0.06	-0.06	-0.06	-0.08	-0.06	-0.05			
50	-0.07	-0.05	-0.05	-0.05	-0.22	-0.13	-0.10			
51	-0.27	-0.19	-0.16	-0.16	-0.22	-0.19	-0.18			
52	-0.33	-0.23	-0.20	-0.18	-0.28	-0.23	-0.22			
53	-0.21	-0.15	-0.13	-0.13	-0.17	-0.15	-0.14			
54	-0.15	-0.11	-0.10	-0.10	-0.13	-0.12	-0.12			
55	-0.10	-0.07	-0.07	-0.07	-0.11	-0.10	-0.09			
56	-0.09	-0.07	-0.07	-0.07	-0.10	-0.08	-0.07			
57	-0.08	-0.06	-0.06	-0.06	-0.10	-0.07	-0.06			
58	-0.07	-0.05	-0.05	-0.05	-0.10	-0.06	-0.05			
59	-0.06	-0.05	-0.05	-0.05	-0.09	-0.05	-0.03			
60	-0.24	-0.17	-0.15	-0.14	-0.23	-0.19	-0.18			
61	-0.30	-0.21	-0.18	-0.17	-0.28	-0.23	-0.22			
62	-0.18	-0.13	-0.12	-0.11	-0.20	-0.16	-0.15			
63	-0.12	-0.09	-0.09	-0.09	-0.17	-0.13	-0.12			
64	-0.09	-0.07	-0.07	-0.07	-0.15	-0.11	-0.10			
65	-0.08	-0.06	-0.06	-0.06	-0.14	-0.09	-0.08			
66	-0.33	-0.24	-0.20	-0.19	-0.32	-0.26	-0.24			
67	-0.25	-0.18	-0.16	-0.15	-0.40	-0.29	-0.26			
68	-0.08	-0.06	-0.06	-0.06	-0.17	-0.12	-0.10			
69	-0.21	-0.15	-0.13	-0.13	-0.27	-0.21	-0.19			
70	-0.15	-0.11	-0.10	-0.10	-0.23	-0.18	-0.16			
71	-0.10	-0.08	-0.08	-0.08	-0.20	-0.15	-0.13			
72	-0.09	-0.07	-0.07	-0.07	-0.18	-0.12	-0.11			
73	-0.08	-0.06	-0.06	-0.06	-0.17	-0.10	-0.09			
74	-0.30	-0.22	-0.18	-0.17	-0.33	-0.26	-0.24			
75	-0.37	-0.26	-0.22	-0.20	-0.31	-0.26	-0.25			
76	-0.16	-0.12	-0.11	-0.11	-0.33	-0.24	-0.21			
77	-0.46	-0.32	-0.26	-0.25	-0.44	-0.35	-0.33			
78	-0.22	-0.16	-0.14	-0.13	-0.37	-0.27	-0.24			
79	-0.10	-0.08	-0.08	-0.08	-0.30	-0.20	-0.18			
80	-0.09	-0.07	-0.07	-0.07	-0.26	-0.17	-0.15			
81	-0.08	-0.06	-0.06	-0.06	-0.24	-0.15	-0.12			
82	-0.41	-0.29	-0.24	-0.22	-0.35	-0.29	-0.28			
83	-0.07	-0.06	-0.06	-0.06	-0.11	-0.07	-0.06			
84	-0.07	-0.05	-0.05	-0.05	-0.08	-0.05	-0.04			
85	-0.46	-0.33	-0.27	-0.25	-0.50	-0.39	-0.36			
86	-0.39	-0.28	-0.23	-0.21	-0.44	-0.34	-0.32			
87	-0.33	-0.23	-0.20	-0.18	-0.38	-0.30	-0.27			
88	-0.27	-0.19	-0.16	-0.15	-0.33	-0.26	-0.24			
89	-0.21	-0.15	-0.13	-0.13	-0.29	-0.22	-0.20			
90	-0.16	-0.12	-0.11	-0.10	-0.25	-0.19	-0.17			
91	-0.11	-0.08	-0.08	-0.08	-0.22	-0.16	-0.14			
92	-0.09	-0.07	-0.07	-0.07	-0.20	-0.14	-0.12			
93	-0.50	-0.35	-0.29	-0.26	-0.54	-0.42	-0.39			
94	-0.75	-0.52	-0.41	-0.38	-0.41	-0.53	-0.41			
95	-0.35	-0.25	-0.21	-0.20	-0.25	-0.35	-0.24			
96	-0.81	-0.56	-0.44	-0.41	-0.44	-0.58	-0.43			
97	-0.41	-0.29	-0.24	-0.22	-0.29	-0.40	-0.27			
98	-0.34	-0.24	-0.20	-0.18	-0.21	-0.28	-0.21			
99	-0.07	-0.05	-0.05	-0.05	-0.03	-0.10	-0.02			
100	-0.08	-0.06	-0.06	-0.06	-0.05	-0.10	-0.04			
101	-0.21	-0.15	-0.13	-0.12	-0.15	-0.20	-0.14			
102	-0.16	-0.12	-0.11	-0.10	-0.13	-0.20	-0.12			
103	-0.10	-0.08	-0.08	-0.08	-0.13	-0.10	-0.09			

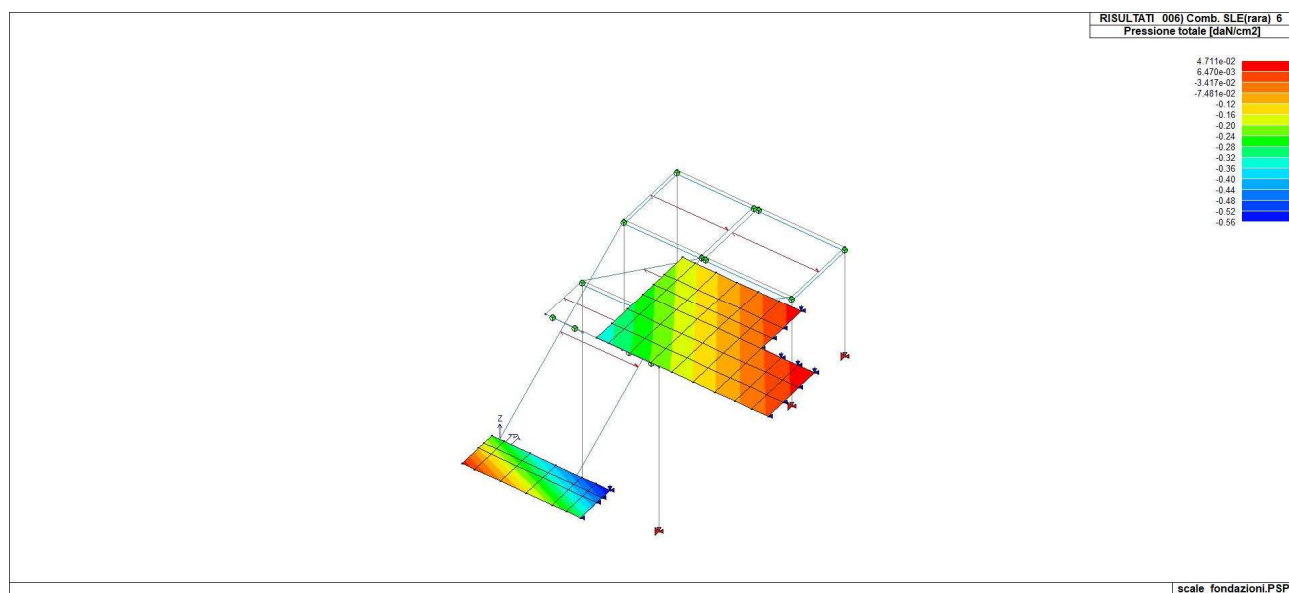
Nodo (G)	Pt 1/12	Pt 2/13	Pt 3...	Pt 4...							
104	-0.31	-0.22	-0.18	-0.17	-0.23	-0.20	-0.19				
105	-0.19	-0.14	-0.12	-0.12	-0.15	-0.20	-0.15				
106	-0.41	-0.29	-0.24	-0.22	-0.25	-0.30	-0.24				
107	-0.29	-0.21	-0.18	-0.17	-0.22	-0.30	-0.21				
108	-0.52	-0.36	-0.29	-0.27	-0.31	-0.39	-0.30				
109	-0.39	-0.27	-0.22	-0.21	-0.24	-0.29	-0.23				
110	-0.49	-0.34	-0.27	-0.25	-0.32	-0.28	-0.28				
111	-0.63	-0.44	-0.35	-0.32	-0.37	-0.50	-0.36				
112	-0.59	-0.41	-0.33	-0.30	-0.33	-0.38	-0.32				
113	-0.24	-0.17	-0.14	-0.14	-0.16	-0.23	-0.16				
114	-0.38	-0.27	-0.22	-0.21	-0.26	-0.23	-0.23				
115	-0.49	-0.34	-0.28	-0.25	-0.28	-0.33	-0.28				
116	-0.70	-0.49	-0.39	-0.35	-0.39	-0.48	-0.38				
117	-0.65	-0.45	-0.36	-0.33	-0.37	-0.48	-0.36				
118	-0.70	-0.49	-0.39	-0.36	-0.40	-0.53	-0.39				
Nodo (G)	Pt 1/12	Pt 2/13	Pt 3...	Pt 4...							
	-0.81										
	-0.02										



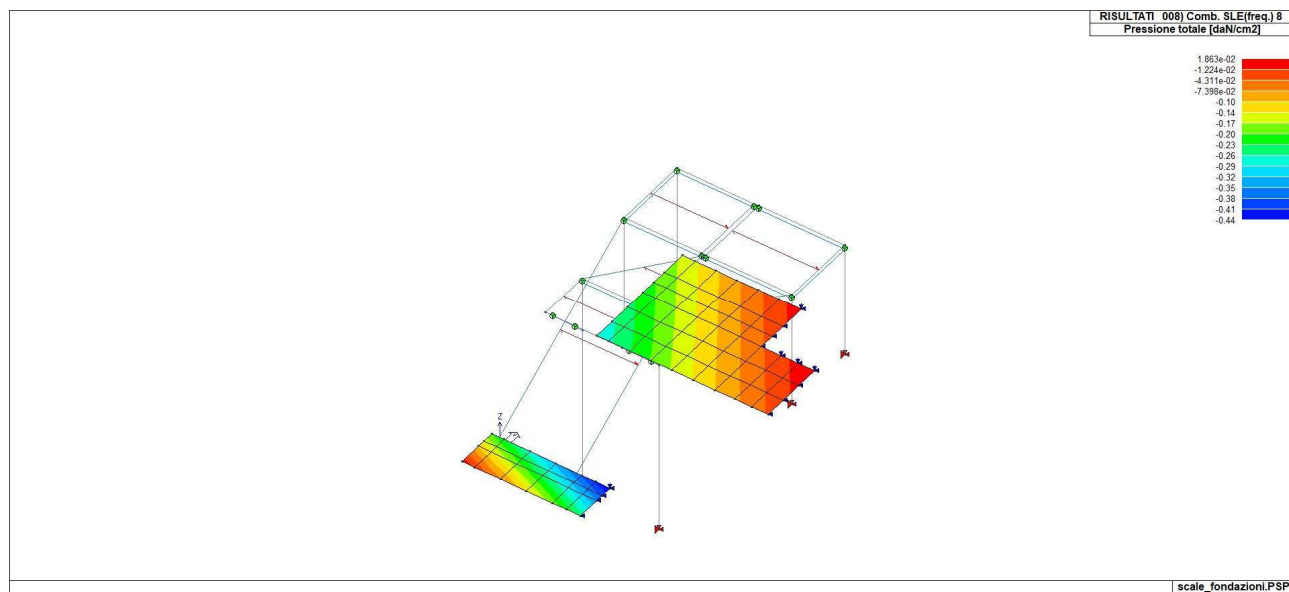
46\_RIS\_PRESSIONI\_002\_Comb. SLU A1 2



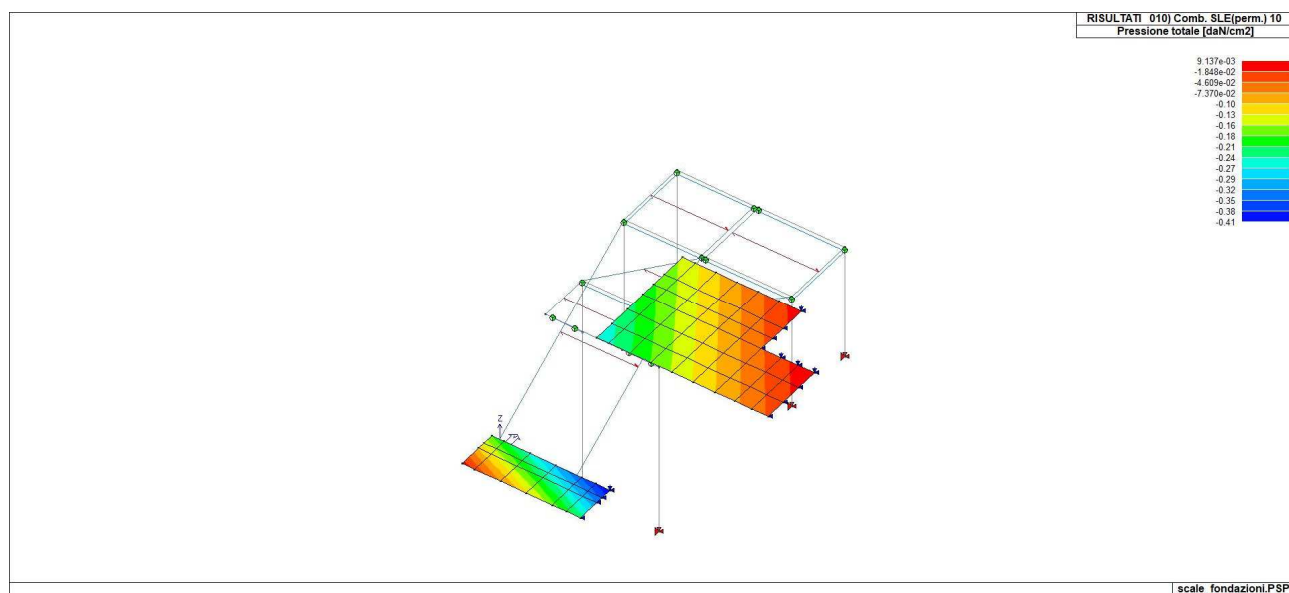
46\_RIS\_PRESSIONI\_004\_Comb. SLU A1 4



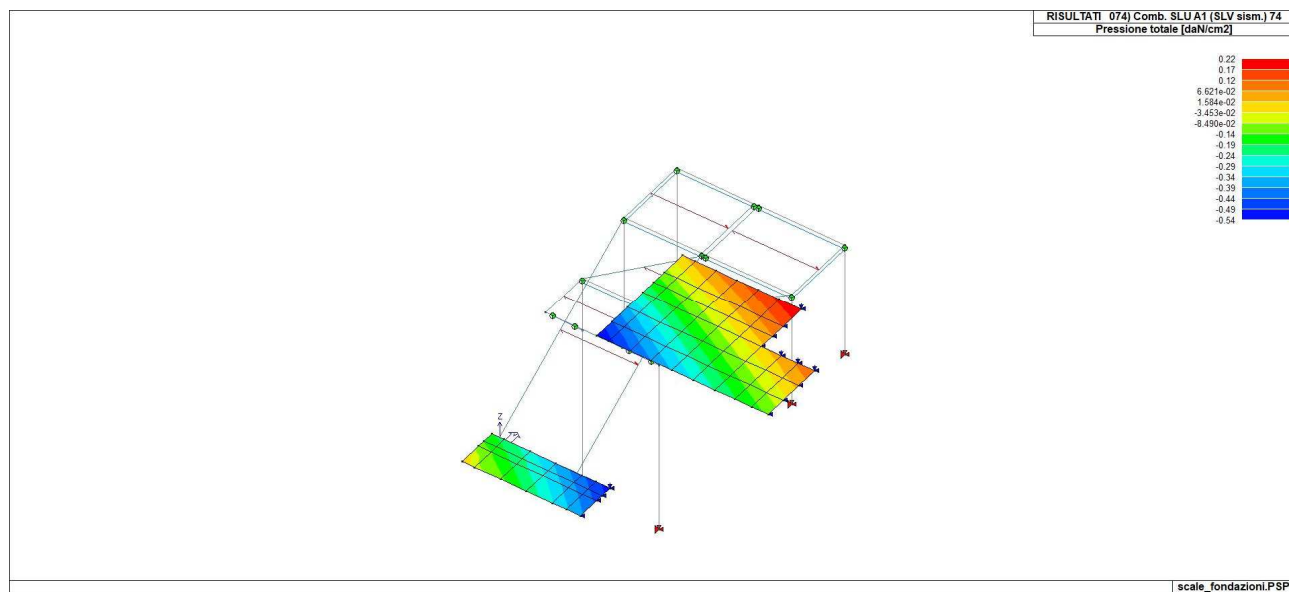
46\_RIS\_PRESSIONI\_006\_Comb. SLE(rara) 6



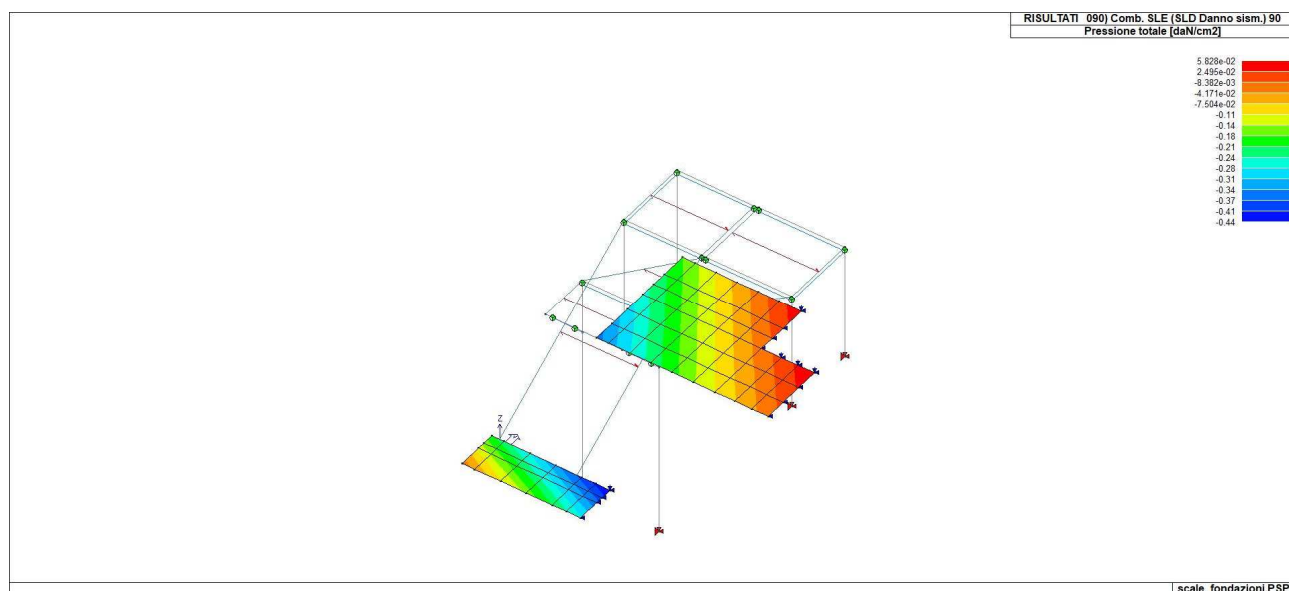
46\_RIS\_PRESSIONI\_008\_Comb. SLE(freq.) 8



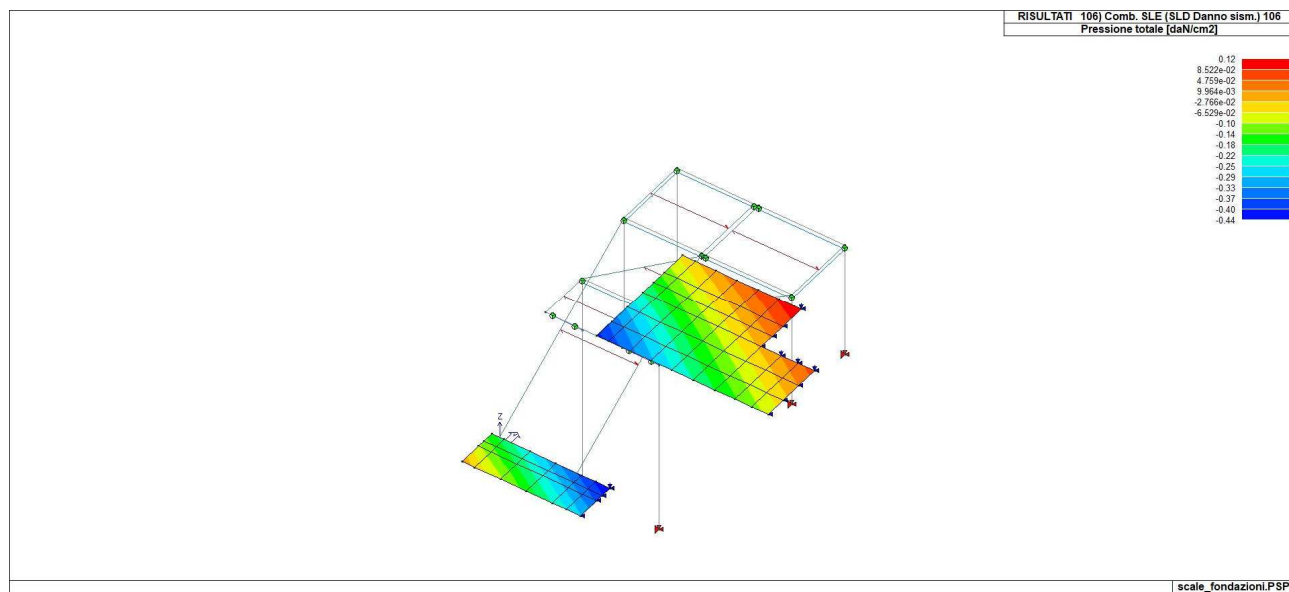
46\_RIS\_PRESSIONI\_010\_Comb. SLE(perm.) 10



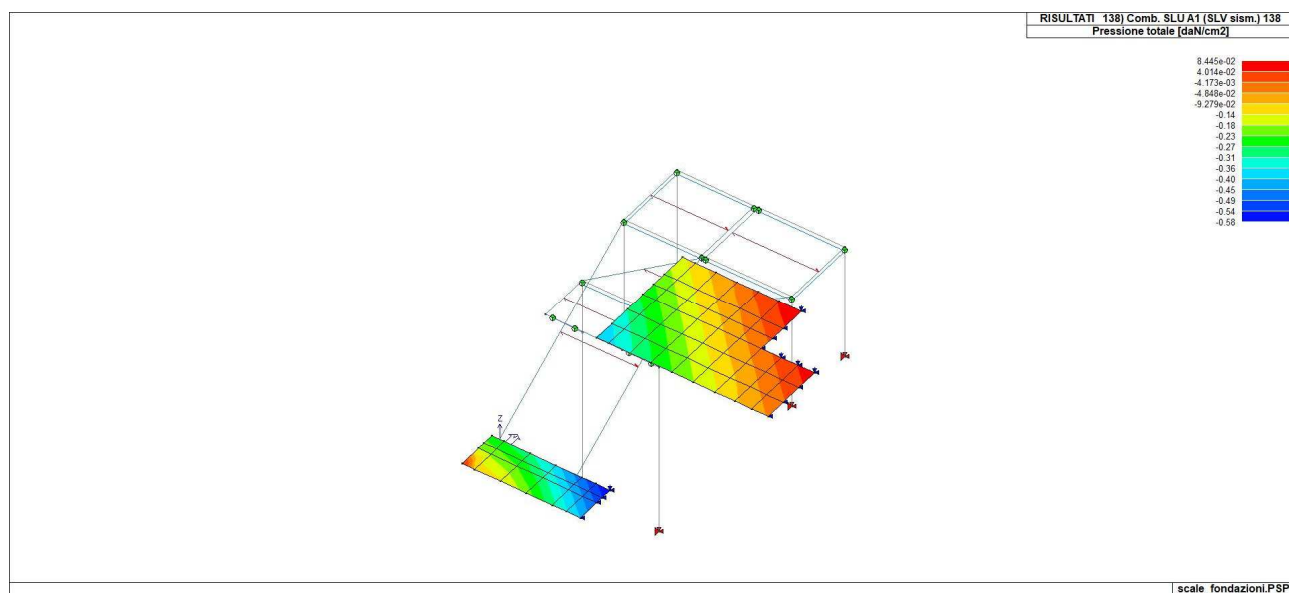
46\_RIS\_PRESSIONI\_074\_Comb. SLU A1 (SLV sism.) 74



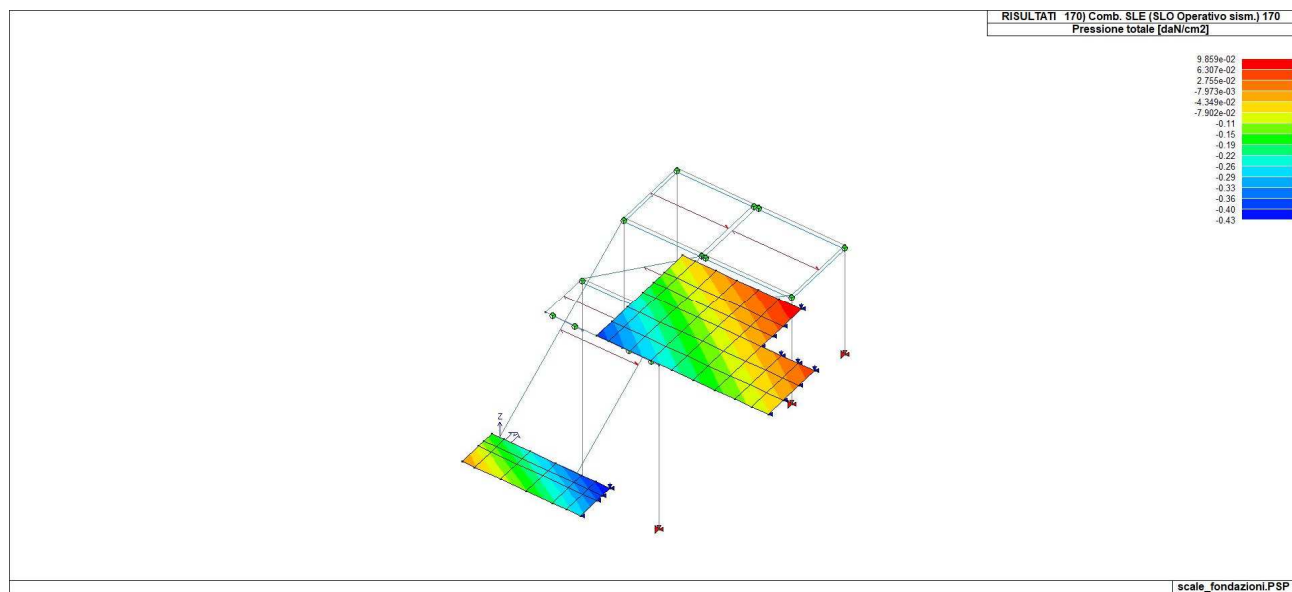
46\_RIS\_PRESSIONI\_090\_Comb. SLE (SLD Danno sism.) 90



46\_RIS\_PRESSIONI\_106\_Comb. SLE (SLD Danno sism.) 106



46\_RIS\_PRESSIONI\_138\_Comb. SLU A1 (SLV sism.) 138



46\_RIS\_PRESSIONI\_170\_Comb. SLE (SLO Operativo sism.) 170



# RISULTATI ELEMENTI TIPO TRAVE

## LEGENDA RISULTATI ELEMENTI TIPO TRAVE

Il controllo dei risultati delle analisi condotte, per quanto concerne gli elementi tipo trave, è possibile in relazione alle tabelle sotto riportate.

Gli elementi vengono suddivisi in relazione alle proprietà in elementi:

- tipo **pilastro**
- tipo **trave in elevazione**
- tipo **trave in fondazione**

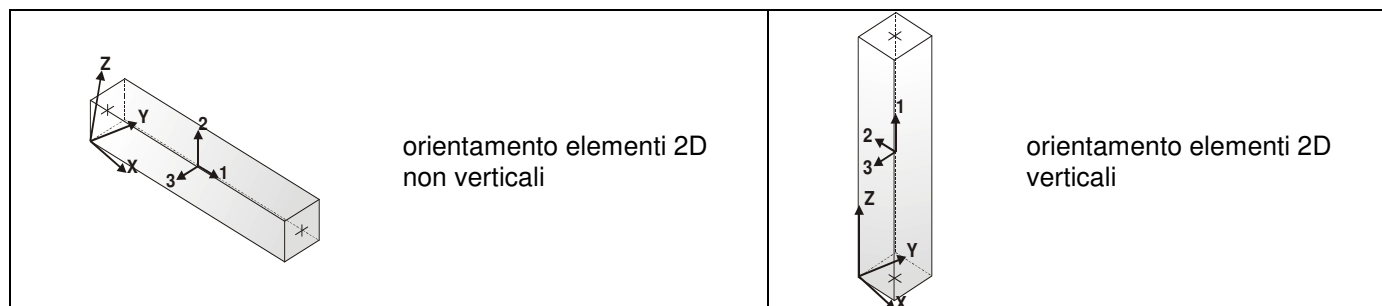
Per ogni elemento e per ogni combinazione (o caso di carico) vengono riportati i risultati più significativi.

Per gli elementi tipo *pilastro* sono riportati in tabella i seguenti valori:

<b>Pilas.</b>	numero dell'elemento pilastro
<b>Cmb</b>	combinazione in cui si verificano i valori riportati
<b>M3 mx/mn</b>	momento flettente in campata M3 max (prima riga) / min (seconda riga)
<b>M2 mx/mn</b>	momento flettente in campata M2 max (prima riga) / min (seconda riga)
<b>D2/D3</b>	freccia massima in direzione 2 (prima riga) / direzione 3 (seconda riga)
<b>Q2/Q3</b>	carico totale in direzione 2 (prima riga) / direzione 3 (seconda riga)
<b>Pos.</b>	ascissa del punto iniziale e finale dell'elemento
<b>N, V2, ecc..</b>	sei componenti di sollecitazione al piede ed in sommità dell'elemento

Per gli elementi tipo *trave in elevazione* sono riportati, oltre al numero dell'elemento, i medesimi risultati visti per i pilastri.

Per gli elementi tipo *trave in fondazione* (trave f.) sono riportati, oltre al numero dell'elemento, i medesimi risultati visti per i pilastri e la massima pressione sul terreno.



Pilas.	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		kN m	kN m	m	kN	cm	kN	kN	kN	kN m	kN m	kN m
1	2	1.42	11.70	1.71e-03	0.0	0.0	-62.70	1.07	5.96	2.68e-03	-4.54	-1.49
		-1.49	-4.54	-3.65e-03	0.0	272.5	-61.62	1.07	5.96	2.68e-03	11.70	1.42
1	3	0.09	1.36	2.26e-04	0.0	0.0	-8.19	0.08	0.72	2.92e-04	-0.60	-0.12
		-0.12	-0.60	-5.89e-04	0.0	272.5	-7.36	0.08	0.72	2.92e-04	1.36	0.09
1	5	0.09	1.36	2.26e-04	0.0	0.0	-8.19	0.08	0.72	2.92e-04	-0.60	-0.12
		-0.12	-0.60	-5.89e-04	0.0	272.5	-7.36	0.08	0.72	2.92e-04	1.36	0.09
1	6	0.96	7.98	1.17e-03	0.0	0.0	-42.89	0.72	4.07	1.83e-03	-3.11	-1.01
		-1.01	-3.11	-2.50e-03	0.0	272.5	-42.06	0.72	4.07	1.83e-03	7.98	0.96
1	7	0.09	1.36	2.26e-04	0.0	0.0	-8.19	0.08	0.72	2.92e-04	-0.60	-0.12
		-0.12	-0.60	-5.89e-04	0.0	272.5	-7.36	0.08	0.72	2.92e-04	1.36	0.09
1	8	0.70	5.99	8.88e-04	0.0	0.0	-32.48	0.53	3.06	1.37e-03	-2.36	-0.74
		-0.74	-2.36	-1.92e-03	0.0	272.5	-31.65	0.53	3.06	1.37e-03	5.99	0.70
1	9	0.09	1.36	2.26e-04	0.0	0.0	-8.19	0.08	0.72	2.92e-04	-0.60	-0.12
		-0.12	-0.60	-5.89e-04	0.0	272.5	-7.36	0.08	0.72	2.92e-04	1.36	0.09
1	10	0.61	5.33	7.93e-04	0.0	0.0	-29.01	0.46	2.73	1.21e-03	-2.11	-0.65
		-0.65	-2.11	-1.73e-03	0.0	272.5	-28.18	0.46	2.73	1.21e-03	5.33	0.61
1	24	12.29	22.07	-6.67e-03	0.0	0.0	-29.09	9.93	15.65	-7.61e-03	-20.60	-14.77
		-14.77	-20.60	-0.02	0.0	272.5	-28.26	9.93	15.65	-7.61e-03	22.07	12.29
1	61	29.38	5.70	0.02	0.0	0.0	-44.80	-19.66	-2.98	5.31e-04	5.70	29.38
		-24.19	-2.48	7.70e-03	0.0	272.5	-43.97	-19.66	-2.98	5.31e-04	-2.48	-24.19
1	64	25.42	13.15	-0.02	0.0	0.0	-13.22	20.59	8.44	1.89e-03	-9.91	-30.68
		-30.68	-9.91	-9.36e-03	0.0	272.5	-12.39	20.59	8.44	1.89e-03	13.15	25.42
1	67	22.85	3.02	-0.01	0.0	0.0	-6.58	18.51	0.76	6.70e-03	0.89	-27.58
		-27.58	0.89	3.17e-03	0.0	272.5	-5.75	18.51	0.76	6.70e-03	3.02	22.85
1	74	26.28	7.65	0.02	0.0	0.0	-51.44	-17.58	4.70	-4.28e-03	-5.10	26.28
		-21.62	-5.10	-4.88e-03	0.0	272.5	-50.61	-17.58	4.70	-4.28e-03	7.65	-21.62
1	81	7.23	14.64	-3.62e-03	0.0	0.0	-27.85	5.83	9.99	-4.00e-03	-12.60	-8.65
		-8.65	-12.60	-0.01	0.0	272.5	-27.02	5.83	9.99	-4.00e-03	14.64	7.23
1	100	16.63	2.26	0.01	0.0	0.0	-39.37	-11.12	-0.40	9.51e-04	2.26	16.63
		-13.66	1.13	4.10e-03	0.0	272.5	-38.54	-11.12	-0.40	9.51e-04	1.13	-13.66
1	101	14.88	9.54	-8.99e-03	0.0	0.0	-18.65	12.04	5.86	1.48e-03	-6.47	-17.93
		-17.93	-6.47	-5.90e-03	0.0	272.5	-17.82	12.04	5.86	1.48e-03	9.54	14.88
1	103	13.68	4.29	-8.25e-03	0.0	0.0	-17.15	11.07	1.74	4.56e-03	-0.49	-16.48
		-16.48	-0.49	1.52e-03	0.0	272.5	-16.32	11.07	1.74	4.56e-03	4.29	13.68
1	106	15.17	6.38	9.83e-03	0.0	0.0	-40.87	-10.14	3.72	-2.13e-03	-3.73	15.17
		-12.45	-3.73	-3.35e-03	0.0	272.5	-40.04	-10.14	3.72	-2.13e-03	6.38	-12.45
1	145	5.87	12.57	-2.72e-03	0.0	0.0	-28.03	4.73	8.38	-2.82e-03	-10.26	-7.01
		-7.01	-10.26	-0.01	0.0	272.5	-27.20	4.73	8.38	-2.82e-03	12.57	5.87
1	164	13.24	2.05	8.66e-03	0.0	0.0	-37.38	-8.85	0.29	9.54e-04	1.29	13.24
		-10.86	1.29	3.04e-03	0.0	272.5	-36.55	-8.85	0.29	9.54e-04	2.05	-10.86
1	165	12.09	8.62	-7.08e-03	0.0	0.0	-20.64	9.77	5.17	1.47e-03	-5.50	-14.55
		-14.55	-5.50	-4.91e-03	0.0	272.5	-19.81	9.77	5.17	1.47e-03	8.62	12.09
1	167	11.15	4.54	-6.50e-03	0.0	0.0	-19.47	9.02	1.97	3.87e-03	-0.85	-13.42
		-13.42	-0.85	1.03e-03	0.0	272.5	-18.64	9.02	1.97	3.87e-03	4.54	11.15
1	170	12.11	6.13	8.08e-03	0.0	0.0	-38.55	-8.09	3.49	-1.44e-03	-3.36	12.11
		-9.93	-3.36	-2.98e-03	0.0	272.5	-37.72	-8.09	3.49	-1.44e-03	6.13	-9.93
2	2	5.23e-03	-0.29	-1.95e-03	0.0	0.0	-45.93	5.39	0.32	2.94e-03	-0.69	-6.73
		-6.73	-0.69	-3.74e-03	0.0	125.0	-45.44	5.39	0.32	2.94e-03	-0.29	5.23e-03
2	3	1.49e-04	-0.11	-5.84e-05	0.0	0.0	-5.61	0.41	0.05	-5.57e-04	-0.17	-0.52
		-0.52	-0.17	-8.72e-04	0.0	125.0	-5.23	0.41	0.05	-5.57e-04	-0.11	1.49e-04
2	5	1.49e-04	-0.11	-5.84e-05	0.0	0.0	-5.61	0.41	0.05	-5.57e-04	-0.17	-0.52
		-0.52	-0.17	-8.72e-04	0.0	125.0	-5.23	0.41	0.05	-5.57e-04	-0.11	1.49e-04
2	6	3.51e-03	-0.21	-1.31e-03	0.0	0.0	-31.37	3.65	0.22	1.89e-03	-0.48	-4.56
		-4.56	-0.48	-2.61e-03	0.0	125.0	-30.99	3.65	0.22	1.89e-03	-0.21	3.51e-03
2	7	1.49e-04	-0.11	-5.84e-05	0.0	0.0	-5.61	0.41	0.05	-5.57e-04	-0.17	-0.52
		-0.52	-0.17	-8.72e-04	0.0	125.0	-5.23	0.41	0.05	-5.57e-04	-0.11	1.49e-04
2	8	2.50e-03	-0.18	-9.32e-04	0.0	0.0	-23.64	2.68	0.17	1.16e-03	-0.39	-3.35
		-3.35	-0.39	-2.09e-03	0.0	125.0	-23.26	2.68	0.17	1.16e-03	-0.18	2.50e-03
2	9	1.49e-04	-0.11	-5.84e-05	0.0	0.0	-5.61	0.41	0.05	-5.57e-04	-0.17	-0.52
		-0.52	-0.17	-8.72e-04	0.0	125.0	-5.23	0.41	0.05	-5.57e-04	-0.11	1.49e-04
2	10	2.16e-03	-0.17	-8.07e-04	0.0	0.0	-21.07	2.36	0.15	9.11e-04	-0.36	-2.94
		-2.94	-0.36	-1.91e-03	0.0	125.0	-20.69	2.36	0.15	9.11e-04	-0.17	2.16e-03
2	20	0.02	-7.19	-3.79e-03	0.0	0.0	-7.60	2.95	-4.30	-0.05	-7.19	-3.68
		-3.68	-12.61	6.30e-03	0.0	125.0	-7.22	2.95	-4.30	-0.05	-12.61	0.02
2	25	-0.01	12.27	2.18e-03	0.0	0.0	-34.53	1.76	4.60	0.06	6.48	-2.21
		-2.21	6.48	-0.01	0.0	125.0	-34.15	1.76	4.60	0.06	12.27	-0.01
2	54	-3.26e-03	-2.24	2.55e-03	0.0	0.0	-35.13	6.70	-0.99	-0.02	-2.24	-8.38
		-8.38	-3.55	7.27e-04	0.0	125.0	-34.75	6.70	-0.99	-0.02	-3.55	-3.26e-03
2	55	2.50	3.21	-4.17e-03	0.0	0.0	-7.00	-1.99	1.30	0.02	1.53	2.50

Pilas.	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		7.59e-03	1.53	-4.32e-03	0.0	125.0	-6.62	-1.99	1.30	0.02	3.21	7.59e-03
2	67	1.35	-2.50	-5.28e-03	0.0	0.0	0.57	-1.07	-1.42	-8.95e-03	-2.50	1.35
		0.01	-4.19	8.03e-04	0.0	125.0	0.95	-1.07	-1.42	-8.95e-03	-4.19	0.01
2	74	-0.01	3.86	3.66e-03	0.0	0.0	-42.70	5.78	1.72	0.01	1.78	-7.23
		-7.23	1.78	-4.34e-03	0.0	125.0	-42.32	5.78	1.72	0.01	3.86	-0.01
2	79	8.86e-03	-4.04	-2.41e-03	0.0	0.0	-12.18	2.48	-2.34	-0.03	-4.04	-3.09
		-3.09	-6.95	2.58e-03	0.0	125.0	-11.80	2.48	-2.34	-0.03	-6.95	8.86e-03
2	82	-4.54e-03	6.62	7.92e-04	0.0	0.0	-29.96	2.23	2.64	0.03	3.32	-2.80
		-2.80	3.32	-6.34e-03	0.0	125.0	-29.58	2.23	2.64	0.03	6.62	-4.54e-03
2	96	-1.78e-03	-1.32	1.25e-03	0.0	0.0	-27.93	4.68	-0.52	-0.01	-1.32	-5.85
		-5.85	-1.98	-6.68e-04	0.0	125.0	-27.55	4.68	-0.52	-0.01	-1.98	-1.78e-03
2	99	0.01	-1.60	-3.49e-03	0.0	0.0	-10.08	0.54	-0.66	-3.51e-03	-1.60	-0.67
		-0.67	-2.42	-5.10e-04	0.0	125.0	-9.70	0.54	-0.66	-3.51e-03	-2.42	0.01
2	103	0.01	-1.60	-3.49e-03	0.0	0.0	-10.03	0.55	-0.66	-3.38e-03	-1.60	-0.67
		-0.67	-2.42	-5.08e-04	0.0	125.0	-9.65	0.55	-0.66	-3.38e-03	-2.42	0.01
2	106	-5.71e-03	2.08	1.88e-03	0.0	0.0	-32.10	4.17	0.97	5.20e-03	0.89	-5.21
		-5.21	0.89	-3.32e-03	0.0	125.0	-31.72	4.17	0.97	5.20e-03	2.08	-5.71e-03
2	143	7.42e-03	-3.21	-2.07e-03	0.0	0.0	-14.08	2.43	-1.78	-0.02	-3.21	-3.03
		-3.03	-5.43	1.65e-03	0.0	125.0	-13.70	2.43	-1.78	-0.02	-5.43	7.42e-03
2	146	-3.09e-03	5.10	4.54e-04	0.0	0.0	-28.05	2.28	2.08	0.03	2.50	-2.85
		-2.85	2.50	-5.34e-03	0.0	125.0	-27.67	2.28	2.08	0.03	5.10	-3.09e-03
2	160	-1.05e-03	-1.10	8.63e-04	0.0	0.0	-26.66	4.22	-0.37	-0.01	-1.10	-5.28
		-5.28	-1.57	-9.45e-04	0.0	125.0	-26.28	4.22	-0.37	-0.01	-1.57	-1.05e-03
2	163	8.50e-03	-1.33	-2.96e-03	0.0	0.0	-12.27	0.89	-0.48	-2.36e-03	-1.33	-1.10
		-1.10	-1.92	-8.28e-04	0.0	125.0	-11.89	0.89	-0.48	-2.36e-03	-1.92	8.50e-03
2	167	8.46e-03	-1.33	-2.96e-03	0.0	0.0	-12.23	0.89	-0.48	-2.26e-03	-1.33	-1.10
		-1.10	-1.92	-8.26e-04	0.0	125.0	-11.85	0.89	-0.48	-2.26e-03	-1.92	8.46e-03
2	170	-4.13e-03	1.58	1.35e-03	0.0	0.0	-29.91	3.82	0.79	4.08e-03	0.61	-4.78
		-4.78	0.61	-3.00e-03	0.0	125.0	-29.52	3.82	0.79	4.08e-03	1.58	-4.13e-03
3	2	2.08	5.91	-9.23e-04	0.0	0.0	-63.41	1.63	-7.00	1.74e-03	5.91	-2.35
		-2.35	-13.17	2.16e-03	0.0	272.5	-62.33	1.63	-7.00	1.74e-03	-13.17	2.08
3	3	0.13	0.63	-7.37e-05	0.0	0.0	-8.32	0.11	-0.84	2.06e-04	0.63	-0.17
		-0.17	-1.67	-4.01e-04	0.0	272.5	-7.49	0.11	-0.84	2.06e-04	-1.67	0.13
3	5	0.13	0.63	-7.37e-05	0.0	0.0	-8.32	0.11	-0.84	2.06e-04	0.63	-0.17
		-0.17	-1.67	-4.01e-04	0.0	272.5	-7.49	0.11	-0.84	2.06e-04	-1.67	0.13
3	6	1.40	4.02	-6.25e-04	0.0	0.0	-43.38	1.10	-4.78	1.19e-03	4.02	-1.59
		-1.59	-9.00	1.46e-03	0.0	272.5	-42.55	1.10	-4.78	1.19e-03	-9.00	1.40
3	7	0.13	0.63	-7.37e-05	0.0	0.0	-8.32	0.11	-0.84	2.06e-04	0.63	-0.17
		-0.17	-1.67	-4.01e-04	0.0	272.5	-7.49	0.11	-0.84	2.06e-04	-1.67	0.13
3	8	1.02	3.00	-4.60e-04	0.0	0.0	-32.86	0.80	-3.60	8.94e-04	3.00	-1.16
		-1.16	-6.80	1.07e-03	0.0	272.5	-32.03	0.80	-3.60	8.94e-04	-6.80	1.02
3	9	0.13	0.63	-7.37e-05	0.0	0.0	-8.32	0.11	-0.84	2.06e-04	0.63	-0.17
		-0.17	-1.67	-4.01e-04	0.0	272.5	-7.49	0.11	-0.84	2.06e-04	-1.67	0.13
3	10	0.90	2.66	-4.05e-04	0.0	0.0	-29.36	0.70	-3.20	7.96e-04	2.66	-1.02
		-1.02	-6.07	9.44e-04	0.0	272.5	-28.53	0.70	-3.20	7.96e-04	-6.07	0.90
3	20	8.44	20.75	-4.27e-03	0.0	0.0	-32.62	6.87	-15.47	5.99e-03	20.75	-10.28
		-10.28	-22.62	0.02	0.0	272.5	-31.79	6.87	-15.47	5.99e-03	-22.62	8.44
3	22	1.12	21.99	4.92e-04	0.0	0.0	-39.55	-0.72	-16.36	0.01	21.99	1.12
		-0.84	-21.38	0.02	0.0	272.5	-38.72	-0.72	-16.36	0.01	-21.38	-0.84
3	43	21.30	8.46	-0.01	0.0	0.0	-14.43	17.38	-7.11	-6.33e-03	8.46	-26.07
		-26.07	-10.95	5.50e-03	0.0	272.5	-13.60	17.38	-7.11	-6.33e-03	-10.95	21.30
3	50	24.02	-1.19	0.01	0.0	0.0	-44.29	-15.97	0.70	7.92e-03	-3.13	24.02
		-19.50	-3.13	-6.40e-03	0.0	272.5	-43.46	-15.97	0.70	7.92e-03	-1.19	-19.50
3	54	22.20	7.75	9.29e-03	0.0	0.0	-47.47	-14.75	-6.62	0.01	7.75	22.20
		-18.01	-10.25	6.13e-03	0.0	272.5	-46.64	-14.75	-6.62	0.01	-10.25	-18.01
3	55	19.80	-1.89	-0.01	0.0	0.0	-11.24	16.16	0.21	-0.01	-2.42	-24.24
		-24.24	-2.42	-7.17e-03	0.0	272.5	-10.41	16.16	0.21	-0.01	-1.89	19.80
3	79	5.46	12.86	-2.74e-03	0.0	0.0	-30.17	4.44	-10.05	3.60e-03	12.86	-6.62
		-6.62	-15.22	0.01	0.0	272.5	-29.34	4.44	-10.05	3.60e-03	-15.22	5.46
3	80	0.07	13.58	2.45e-05	0.0	0.0	-34.20	0.02	-10.57	7.94e-03	13.58	1.61e-03
		1.61e-03	-14.51	0.01	0.0	272.5	-33.37	0.02	-10.57	7.94e-03	-14.51	0.07
3	91	12.55	6.17	-6.38e-03	0.0	0.0	-21.71	10.23	-5.64	-3.22e-03	6.17	-15.33
		-15.33	-9.22	3.40e-03	0.0	272.5	-20.88	10.23	-5.64	-3.22e-03	-9.22	12.55
3	94	13.29	-0.84	5.57e-03	0.0	0.0	-37.01	-8.82	-0.77	4.81e-03	-0.84	13.29
		-10.76	-2.92	-3.94e-03	0.0	272.5	-36.18	-8.82	-0.77	4.81e-03	-2.92	-10.76
3	96	12.23	5.43	5.13e-03	0.0	0.0	-38.84	-8.12	-4.99	7.37e-03	5.43	12.23
		-9.90	-8.14	3.63e-03	0.0	272.5	-38.01	-8.12	-4.99	7.37e-03	-8.14	-9.90
3	97	11.69	-0.10	-5.94e-03	0.0	0.0	-19.88	9.53	-1.42	-5.78e-03	-0.10	-14.28
		-14.28	-4.00	-4.48e-03	0.0	272.5	-19.05	9.53	-1.42	-5.78e-03	-4.00	11.69
3	143	4.54	10.59	-2.27e-03	0.0	0.0	-29.93	3.68	-8.52	2.91e-03	10.59	-5.49
		-5.49	-13.19	8.46e-03	0.0	272.5	-29.10	3.68	-8.52	2.91e-03	-13.19	4.54

Pilas.	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
3	144	0.19	11.15	-4.22e-05	0.0	0.0	-33.18	0.13	-8.93	6.40e-03	11.15	-0.15
		-0.15	-12.62	8.84e-03	0.0	272.5	-32.35	0.13	-8.93	6.40e-03	-12.62	0.19
3	155	10.28	5.40	-5.22e-03	0.0	0.0	-23.17	8.38	-5.11	-2.48e-03	5.40	-12.54
		-12.54	-8.53	2.81e-03	0.0	272.5	-22.34	8.38	-5.11	-2.48e-03	-8.53	10.28
3	158	10.50	-0.07	4.41e-03	0.0	0.0	-35.55	-6.97	-1.30	4.08e-03	-0.07	10.50
		-8.49	-3.61	-3.22e-03	0.0	272.5	-34.72	-6.97	-1.30	4.08e-03	-3.61	-8.49
3	160	9.67	4.81	4.06e-03	0.0	0.0	-36.97	-6.42	-4.58	6.06e-03	4.81	9.67
		-7.81	-7.67	3.00e-03	0.0	272.5	-36.14	-6.42	-4.58	6.06e-03	-7.67	-7.81
3	161	9.60	0.52	-4.87e-03	0.0	0.0	-21.74	7.82	-1.83	-4.47e-03	0.52	-11.72
		-11.72	-4.47	-3.65e-03	0.0	272.5	-20.91	7.82	-1.83	-4.47e-03	-4.47	9.60
4	2	2.14	1.79	-8.74e-04	0.0	0.0	-13.70	1.63	-2.84	1.33e-03	1.79	-2.31
		-2.31	-5.94	-2.26e-03	0.0	272.5	-12.62	1.63	-2.84	1.33e-03	-5.94	2.14
4	3	0.22	0.14	-6.89e-05	0.0	0.0	-2.89	0.16	-0.35	1.69e-04	0.14	-0.21
		-0.21	-0.81	-5.12e-04	0.0	272.5	-2.06	0.16	-0.35	1.69e-04	-0.81	0.22
4	5	0.22	0.14	-6.89e-05	0.0	0.0	-2.89	0.16	-0.35	1.69e-04	0.14	-0.21
		-0.21	-0.81	-5.12e-04	0.0	272.5	-2.06	0.16	-0.35	1.69e-04	-0.81	0.22
4	6	1.46	1.21	-5.92e-04	0.0	0.0	-9.52	1.11	-1.94	9.09e-04	1.21	-1.57
		-1.57	-4.07	-1.58e-03	0.0	272.5	-8.69	1.11	-1.94	9.09e-04	-4.07	1.46
4	7	0.22	0.14	-6.89e-05	0.0	0.0	-2.89	0.16	-0.35	1.69e-04	0.14	-0.21
		-0.21	-0.81	-5.12e-04	0.0	272.5	-2.06	0.16	-0.35	1.69e-04	-0.81	0.22
4	8	1.08	0.89	-4.35e-04	0.0	0.0	-7.53	0.82	-1.46	6.87e-04	0.89	-1.16
		-1.16	-3.09	-1.26e-03	0.0	272.5	-6.70	0.82	-1.46	6.87e-04	-3.09	1.08
4	9	0.22	0.14	-6.89e-05	0.0	0.0	-2.89	0.16	-0.35	1.69e-04	0.14	-0.21
		-0.21	-0.81	-5.12e-04	0.0	272.5	-2.06	0.16	-0.35	1.69e-04	-0.81	0.22
4	10	0.96	0.78	-3.83e-04	0.0	0.0	-6.87	0.73	-1.30	6.13e-04	0.78	-1.02
		-1.02	-2.77	-1.15e-03	0.0	272.5	-6.04	0.73	-1.30	6.13e-04	-2.77	0.96
4	36	6.98	15.76	-3.47e-03	0.0	0.0	-20.36	5.65	-11.50	4.03e-03	15.76	-8.41
		-8.41	-15.58	0.02	0.0	272.5	-19.53	5.65	-11.50	4.03e-03	-15.58	6.98
4	43	21.34	5.91	-0.01	0.0	0.0	-29.52	17.39	-4.73	-6.08e-03	5.91	-26.04
		-26.04	-7.00	2.28e-03	0.0	272.5	-28.69	17.39	-4.73	-6.08e-03	-7.00	21.34
4	44	20.66	6.38	-0.01	0.0	0.0	-31.07	16.83	-5.23	-5.66e-03	6.38	-25.20
		-25.20	-7.89	2.33e-03	0.0	272.5	-30.24	16.83	-5.23	-5.66e-03	-7.89	20.66
4	49	23.15	2.35	9.71e-03	0.0	0.0	17.34	-15.37	2.63	6.89e-03	-4.82	23.15
		-18.74	-4.82	-4.02e-03	0.0	272.5	18.17	-15.37	2.63	6.89e-03	2.35	-18.74
4	50	23.99	1.46	0.01	0.0	0.0	15.79	-15.93	2.13	7.31e-03	-4.35	23.99
		-19.42	-4.35	-4.14e-03	0.0	272.5	16.62	-15.93	2.13	7.31e-03	1.46	-19.42
4	87	4.66	9.32	-2.27e-03	0.0	0.0	-14.24	3.75	-7.06	2.46e-03	9.32	-5.56
		-5.56	-9.93	8.37e-03	0.0	272.5	-13.41	3.75	-7.06	2.46e-03	-9.93	4.66
4	91	12.61	3.87	-6.35e-03	0.0	0.0	-20.47	10.25	-3.42	-3.18e-03	3.87	-15.32
		-15.32	-5.46	1.23e-03	0.0	272.5	-19.64	10.25	-3.42	-3.18e-03	-5.46	12.61
4	94	13.27	-0.07	5.59e-03	0.0	0.0	6.74	-8.79	0.82	4.41e-03	-2.31	13.27
		-10.68	-2.31	-2.82e-03	0.0	272.5	7.57	-8.79	0.82	4.41e-03	-0.07	-10.68
4	151	3.92	7.44	-1.90e-03	0.0	0.0	-12.70	3.14	-5.79	1.99e-03	7.44	-4.65
		-4.65	-8.35	6.30e-03	0.0	272.5	-11.87	3.14	-5.79	1.99e-03	-8.35	3.92
4	155	10.34	3.21	-5.19e-03	0.0	0.0	-17.79	8.39	-2.97	-2.49e-03	3.21	-12.53
		-12.53	-4.88	9.04e-04	0.0	272.5	-16.96	8.39	-2.97	-2.49e-03	-4.88	10.34
4	158	10.48	-0.65	4.42e-03	0.0	0.0	4.06	-6.94	0.36	3.72e-03	-1.64	10.48
		-8.41	-1.64	-2.43e-03	0.0	272.5	4.89	-6.94	0.36	3.72e-03	-0.65	-8.41
5	2	1.40	-0.48	6.48e-04	0.0	0.0	-33.06	-0.90	-0.09	-4.03e-03	-0.48	1.40
		-2.36	-0.86	-4.14e-03	0.0	420.0	-31.40	-0.90	-0.09	-4.03e-03	-0.86	-2.36
5	3	0.06	-0.13	2.23e-05	0.0	0.0	-5.89	-0.04	-0.02	1.56e-04	-0.13	0.06
		-0.11	-0.21	-1.07e-03	0.0	420.0	-4.61	-0.04	-0.02	1.56e-04	-0.21	-0.11
5	5	0.06	-0.13	2.23e-05	0.0	0.0	-5.89	-0.04	-0.02	1.56e-04	-0.13	0.06
		-0.11	-0.21	-1.07e-03	0.0	420.0	-4.61	-0.04	-0.02	1.56e-04	-0.21	-0.11
5	6	0.94	-0.34	4.35e-04	0.0	0.0	-22.83	-0.60	-0.06	-2.67e-03	-0.34	0.94
		-1.59	-0.60	-2.90e-03	0.0	420.0	-21.55	-0.60	-0.06	-2.67e-03	-0.60	-1.59
5	7	0.06	-0.13	2.23e-05	0.0	0.0	-5.89	-0.04	-0.02	1.56e-04	-0.13	0.06
		-0.11	-0.21	-1.07e-03	0.0	420.0	-4.61	-0.04	-0.02	1.56e-04	-0.21	-0.11
5	8	0.68	-0.27	3.11e-04	0.0	0.0	-17.75	-0.43	-0.05	-1.82e-03	-0.27	0.68
		-1.14	-0.49	-2.35e-03	0.0	420.0	-16.47	-0.43	-0.05	-1.82e-03	-0.49	-1.14
5	9	0.06	-0.13	2.23e-05	0.0	0.0	-5.89	-0.04	-0.02	1.56e-04	-0.13	0.06
		-0.11	-0.21	-1.07e-03	0.0	420.0	-4.61	-0.04	-0.02	1.56e-04	-0.21	-0.11
5	10	0.59	-0.25	2.70e-04	0.0	0.0	-16.05	-0.38	-0.05	-1.54e-03	-0.25	0.59
		-1.00	-0.45	-2.17e-03	0.0	420.0	-14.77	-0.38	-0.05	-1.54e-03	-0.45	-1.00
5	19	0.09	13.20	-2.90e-03	0.0	0.0	-27.11	0.44	-4.79	0.01	13.20	-1.77
		-1.77	-7.11	0.04	0.0	420.0	-25.83	0.44	-4.79	0.01	-7.11	0.09
5	26	2.95	6.22	3.20e-03	0.0	0.0	-5.00	-1.19	4.69	-0.01	-13.70	2.95
		-2.08	-13.70	-0.05	0.0	420.0	-3.72	-1.19	4.69	-0.01	6.22	-2.08
5	30	1.72	12.72	1.65e-03	0.0	0.0	-32.36	-0.75	-4.79	0.02	12.72	1.72
		-1.39	-7.20	0.04	0.0	420.0	-31.08	-0.75	-4.79	0.02	-7.20	-1.39
5	31	-0.55	6.30	-1.35e-03	0.0	0.0	0.25	-4.70e-03	4.70	-0.02	-13.23	-0.55

Pilas.	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		-0.60	-13.23	-0.05	0.0	420.0	1.53	-4.70e-03	4.70	-0.02	6.30	-0.60
5	44	2.50	4.00	-8.25e-03	0.0	0.0	-16.51	2.06	-1.68	-0.01	4.00	-6.16
		-6.16	-2.85	0.01	0.0	420.0	-15.23	2.06	-1.68	-0.01	-2.85	2.50
5	49	7.33	1.96	8.54e-03	0.0	0.0	-15.59	-2.81	1.59	9.76e-03	-4.51	7.33
		-4.50	-4.51	-0.02	0.0	420.0	-14.31	-2.81	1.59	9.76e-03	1.96	-4.50
5	79	-0.25	7.07	-1.71e-03	0.0	0.0	-22.75	0.15	-2.68	4.12e-03	7.07	-0.89
		-0.89	-4.18	0.02	0.0	420.0	-21.47	0.15	-2.68	4.12e-03	-4.18	-0.25
5	82	2.06	3.28	2.01e-03	0.0	0.0	-9.36	-0.90	2.58	-7.20e-03	-7.57	2.06
		-1.74	-7.57	-0.03	0.0	420.0	-8.08	-0.90	2.58	-7.20e-03	3.28	-1.74
5	84	1.36	6.92	1.12e-03	0.0	0.0	-24.38	-0.65	-2.62	9.25e-03	6.92	1.36
		-1.35	-4.07	0.02	0.0	420.0	-23.10	-0.65	-2.62	9.25e-03	-4.07	-1.35
5	85	-0.19	3.18	-8.20e-04	0.0	0.0	-7.73	-0.10	2.53	-0.01	-7.43	-0.19
		-0.64	-7.43	-0.03	0.0	420.0	-6.45	-0.10	2.53	-0.01	3.18	-0.64
5	91	0.91	2.14	-4.63e-03	0.0	0.0	-15.48	0.98	-0.91	-7.60e-03	2.14	-3.22
		-3.22	-1.70	5.89e-03	0.0	420.0	-14.20	0.98	-0.91	-7.60e-03	-1.70	0.91
5	94	4.40	0.80	4.93e-03	0.0	0.0	-16.62	-1.74	0.82	4.53e-03	-2.65	4.40
		-2.91	-2.65	-0.01	0.0	420.0	-15.34	-1.74	0.82	4.53e-03	0.80	-2.91
5	143	-0.40	5.43	-1.34e-03	0.0	0.0	-21.23	0.04	-2.09	2.76e-03	5.43	-0.59
		-0.59	-3.34	0.02	0.0	420.0	-19.95	0.04	-2.09	2.76e-03	-3.34	-0.40
5	146	1.76	2.45	1.63e-03	0.0	0.0	-10.88	-0.80	2.00	-5.84e-03	-5.93	1.76
		-1.59	-5.93	-0.02	0.0	420.0	-9.60	-0.80	2.00	-5.84e-03	2.45	-1.59
5	148	1.22	5.31	9.40e-04	0.0	0.0	-22.54	-0.60	-2.04	6.91e-03	5.31	1.22
		-1.29	-3.26	0.02	0.0	420.0	-21.26	-0.60	-2.04	6.91e-03	-3.26	-1.29
5	149	-0.04	2.37	-6.41e-04	0.0	0.0	-9.57	-0.15	1.95	-9.99e-03	-5.82	-0.04
		-0.70	-5.82	-0.02	0.0	420.0	-8.29	-0.15	1.95	-9.99e-03	2.37	-0.70
5	158	3.65	0.52	4.00e-03	0.0	0.0	-16.58	-1.47	0.63	3.43e-03	-2.11	3.65
		-2.54	-2.11	-8.43e-03	0.0	420.0	-15.30	-1.47	0.63	3.43e-03	0.52	-2.54
6	2	12.02	-0.69	-2.75e-03	0.0	0.0	-37.06	-4.47	0.32	-3.56e-03	-2.03	12.02
		-6.73	-2.03	-3.68e-03	0.0	420.0	-35.40	-4.47	0.32	-3.56e-03	-0.69	-6.73
6	3	1.27	-0.17	-3.13e-04	0.0	0.0	-6.07	-0.42	0.05	1.55e-04	-0.37	1.27
		-0.52	-0.37	-1.02e-03	0.0	420.0	-4.79	-0.42	0.05	1.55e-04	-0.17	-0.52
6	5	1.27	-0.17	-3.13e-04	0.0	0.0	-6.07	-0.42	0.05	1.55e-04	-0.37	1.27
		-0.52	-0.37	-1.02e-03	0.0	420.0	-4.79	-0.42	0.05	1.55e-04	-0.17	-0.52
6	6	8.18	-0.48	-1.88e-03	0.0	0.0	-25.52	-3.03	0.22	-2.36e-03	-1.41	8.18
		-4.56	-1.41	-2.59e-03	0.0	420.0	-24.24	-3.03	0.22	-2.36e-03	-0.48	-4.56
6	7	1.27	-0.17	-3.13e-04	0.0	0.0	-6.07	-0.42	0.05	1.55e-04	-0.37	1.27
		-0.52	-0.37	-1.02e-03	0.0	420.0	-4.79	-0.42	0.05	1.55e-04	-0.17	-0.52
6	8	6.11	-0.39	-1.41e-03	0.0	0.0	-19.68	-2.25	0.17	-1.60e-03	-1.10	6.11
		-3.35	-1.10	-2.12e-03	0.0	420.0	-18.40	-2.25	0.17	-1.60e-03	-0.39	-3.35
6	9	1.27	-0.17	-3.13e-04	0.0	0.0	-6.07	-0.42	0.05	1.55e-04	-0.37	1.27
		-0.52	-0.37	-1.02e-03	0.0	420.0	-4.79	-0.42	0.05	1.55e-04	-0.17	-0.52
6	10	5.42	-0.36	-1.25e-03	0.0	0.0	-17.74	-1.99	0.15	-1.35e-03	-0.99	5.42
		-2.94	-0.99	-1.96e-03	0.0	420.0	-16.46	-1.99	0.15	-1.35e-03	-0.36	-2.94
6	35	1.86	12.35	-6.91e-03	0.0	0.0	1.05	-1.19	-4.63	9.01e-03	12.35	1.86
		-2.88	-7.00	0.04	0.0	420.0	2.32	-1.19	-4.63	9.01e-03	-7.00	-2.88
6	42	8.98	6.29	5.20e-03	0.0	0.0	-36.52	-2.79	4.93	-0.01	-14.33	8.98
		-3.01	-14.33	-0.05	0.0	420.0	-35.24	-2.79	4.93	-0.01	6.29	-3.01
6	54	15.46	2.49	0.01	0.0	0.0	-24.81	-5.69	-1.11	0.02	2.49	15.46
		-8.38	-2.24	9.97e-03	0.0	420.0	-23.53	-5.69	-1.11	0.02	-2.24	-8.38
6	66	15.80	1.82	0.01	0.0	0.0	-33.52	-5.44	1.73	0.01	-5.44	15.80
		-7.24	-5.44	-0.02	0.0	420.0	-32.24	-5.44	1.73	0.01	1.82	-7.24
6	87	3.49	6.27	-4.45e-03	0.0	0.0	-8.98	-1.60	-2.46	3.59e-03	6.27	3.49
		-3.10	-4.07	0.02	0.0	420.0	-7.70	-1.60	-2.46	3.59e-03	-4.07	-3.10
6	90	7.34	3.36	2.74e-03	0.0	0.0	-26.49	-2.38	2.76	-6.29e-03	-8.25	7.34
		-2.79	-8.25	-0.03	0.0	420.0	-25.22	-2.38	2.76	-6.29e-03	3.36	-2.79
6	96	11.12	0.97	7.57e-03	0.0	0.0	-20.25	-4.05	-0.55	0.01	0.97	11.12
		-5.85	-1.32	4.70e-03	0.0	420.0	-18.97	-4.05	-0.55	0.01	-1.32	-5.85
6	102	11.32	0.91	8.24e-03	0.0	0.0	-25.06	-3.91	1.01	6.95e-03	-3.38	11.32
		-5.22	-3.38	-0.01	0.0	420.0	-23.78	-3.91	1.01	6.95e-03	0.91	-5.22
6	151	3.87	4.64	-3.72e-03	0.0	0.0	-10.89	-1.67	-1.87	2.38e-03	4.64	3.87
		-3.04	-3.24	0.02	0.0	420.0	-9.61	-1.67	-1.87	2.38e-03	-3.24	-3.04
6	154	6.97	2.53	2.01e-03	0.0	0.0	-24.58	-2.31	2.18	-5.09e-03	-6.63	6.97
		-2.84	-6.63	-0.02	0.0	420.0	-23.30	-2.31	2.18	-5.09e-03	2.53	-2.84
6	160	10.01	0.53	5.94e-03	0.0	0.0	-19.82	-3.65	-0.39	7.88e-03	0.53	10.01
		-5.28	-1.10	3.21e-03	0.0	420.0	-18.55	-3.65	-0.39	7.88e-03	-1.10	-5.28
6	166	10.17	0.63	6.46e-03	0.0	0.0	-23.57	-3.54	0.82	5.42e-03	-2.85	10.17
		-4.78	-2.85	-8.33e-03	0.0	420.0	-22.29	-3.54	0.82	5.42e-03	0.63	-4.78
8	1	0.11	0.02	-5.53e-04	0.0	0.0	-2.60	0.0	-7.90e-03	0.03	0.02	0.11
		0.11	0.02	-3.13e-05	0.0	10.0	-2.56	0.0	-7.90e-03	0.03	0.02	0.11
8	2	-0.79	0.09	-2.89e-03	0.0	0.0	-17.19	0.0	-0.03	0.12	0.09	-0.79
		-0.79	0.08	-1.60e-04	0.0	10.0	-17.15	0.0	-0.03	0.12	0.08	-0.79

Pilas.	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
8	3	0.08	0.02	-4.25e-04	0.0	0.0	-2.00	0.0	-6.08e-03	0.02	0.02	0.08
		0.08	0.02	-2.41e-05	0.0	10.0	-1.97	0.0	-6.08e-03	0.02	0.02	0.08
8	4	-0.81	0.08	-2.76e-03	0.0	0.0	-16.59	0.0	-0.03	0.12	0.08	-0.81
		-0.81	0.08	-1.53e-04	0.0	10.0	-16.56	0.0	-0.03	0.12	0.08	-0.81
8	5	0.08	0.02	-4.25e-04	0.0	0.0	-2.00	0.0	-6.08e-03	0.02	0.02	0.08
		0.08	0.02	-2.41e-05	0.0	10.0	-1.97	0.0	-6.08e-03	0.02	0.02	0.08
8	6	-0.51	0.06	-1.98e-03	0.0	0.0	-11.73	0.0	-0.02	0.09	0.06	-0.51
		-0.51	0.06	-1.10e-04	0.0	10.0	-11.70	0.0	-0.02	0.09	0.06	-0.51
8	7	0.08	0.02	-4.25e-04	0.0	0.0	-2.00	0.0	-6.08e-03	0.02	0.02	0.08
		0.08	0.02	-2.41e-05	0.0	10.0	-1.97	0.0	-6.08e-03	0.02	0.02	0.08
8	8	-0.33	0.05	-1.52e-03	0.0	0.0	-8.81	0.0	-0.02	0.07	0.05	-0.33
		-0.33	0.04	-8.43e-05	0.0	10.0	-8.78	0.0	-0.02	0.07	0.04	-0.33
8	9	0.08	0.02	-4.25e-04	0.0	0.0	-2.00	0.0	-6.08e-03	0.02	0.02	0.08
		0.08	0.02	-2.41e-05	0.0	10.0	-1.97	0.0	-6.08e-03	0.02	0.02	0.08
8	10	-0.28	0.04	-1.36e-03	0.0	0.0	-7.84	0.0	-0.02	0.06	0.04	-0.28
		-0.28	0.04	-7.57e-05	0.0	10.0	-7.80	0.0	-0.02	0.06	0.04	-0.28
8	11	-1.18	-0.17	7.26e-04	0.0	0.0	-6.57	0.0	3.53	-0.13	-0.35	-1.18
		-1.18	-0.35	-5.92e-05	0.0	10.0	-6.54	0.0	3.53	-0.13	-0.17	-1.18
8	18	0.63	0.43	-3.45e-03	0.0	0.0	-9.10	0.0	-3.56	0.26	0.43	0.63
		0.63	0.25	-9.23e-05	0.0	10.0	-9.07	0.0	-3.56	0.26	0.25	0.63
8	61	7.86	-9.09e-04	-0.02	0.0	0.0	-7.54	0.0	1.07	-0.03	-0.06	7.86
		7.86	-0.06	-9.00e-05	0.0	10.0	-7.51	0.0	1.07	-0.03	-9.09e-04	7.86
8	64	-8.41	0.14	0.02	0.0	0.0	-8.14	0.0	-1.10	0.15	0.14	-8.41
		-8.41	0.08	-6.14e-05	0.0	10.0	-8.10	0.0	-1.10	0.15	0.08	-8.41
8	75	-1.02	-0.07	-2.49e-04	0.0	0.0	-7.98	0.0	1.37	-0.04	-0.13	-1.02
		-1.02	-0.13	-7.84e-05	0.0	10.0	-7.95	0.0	1.37	-0.04	-0.07	-1.02
8	78	0.47	0.21	-2.47e-03	0.0	0.0	-7.69	0.0	-1.40	0.17	0.21	0.47
		0.47	0.15	-7.31e-05	0.0	10.0	-7.66	0.0	-1.40	0.17	0.15	0.47
8	92	3.84	0.02	-0.01	0.0	0.0	-8.64	0.0	0.38	0.04	6.10e-03	3.84
		3.84	6.10e-03	-9.08e-05	0.0	10.0	-8.61	0.0	0.38	0.04	0.02	3.84
8	93	-4.39	0.08	7.74e-03	0.0	0.0	-7.04	0.0	-0.41	0.08	0.08	-4.39
		-4.39	0.06	-6.06e-05	0.0	10.0	-7.00	0.0	-0.41	0.08	0.06	-4.39
8	100	4.25	0.02	-0.01	0.0	0.0	-8.57	0.0	0.38	0.02	4.99e-03	4.25
		4.25	4.99e-03	-9.64e-05	0.0	10.0	-8.53	0.0	0.38	0.02	0.02	4.25
8	101	-4.80	0.08	9.13e-03	0.0	0.0	-7.11	0.0	-0.41	0.10	0.08	-4.80
		-4.80	0.06	-5.50e-05	0.0	10.0	-7.08	0.0	-0.41	0.10	0.06	-4.80
8	110	0.87	0.02	-7.30e-03	0.0	0.0	-13.63	0.0	0.70	0.06	-0.05	0.87
		0.87	-0.05	-1.57e-04	0.0	10.0	-13.60	0.0	0.70	0.06	0.02	0.87
8	111	-1.42	0.13	4.58e-03	0.0	0.0	-2.04	0.0	-0.73	0.06	0.13	-1.42
		-1.42	0.06	5.79e-06	0.0	10.0	-2.01	0.0	-0.73	0.06	0.06	-1.42
8	139	-0.89	-0.05	-4.24e-04	0.0	0.0	-7.95	0.0	1.10	-0.02	-0.09	-0.89
		-0.89	-0.09	-7.77e-05	0.0	10.0	-7.92	0.0	1.10	-0.02	-0.05	-0.89
8	142	0.34	0.18	-2.30e-03	0.0	0.0	-7.73	0.0	-1.13	0.14	0.18	0.34
		0.34	0.13	-7.37e-05	0.0	10.0	-7.69	0.0	-1.13	0.14	0.13	0.34
8	156	3.04	0.03	-8.68e-03	0.0	0.0	-8.48	0.0	0.30	0.05	0.01	3.04
		3.04	0.01	-8.78e-05	0.0	10.0	-8.45	0.0	0.30	0.05	0.03	3.04
8	157	-3.59	0.07	5.96e-03	0.0	0.0	-7.19	0.0	-0.33	0.07	0.07	-3.59
		-3.59	0.06	-6.36e-05	0.0	10.0	-7.16	0.0	-0.33	0.07	0.06	-3.59
8	164	3.37	0.03	-9.80e-03	0.0	0.0	-8.42	0.0	0.30	0.03	0.01	3.37
		3.37	0.01	-9.23e-05	0.0	10.0	-8.39	0.0	0.30	0.03	0.03	3.37
8	165	-3.92	0.07	7.08e-03	0.0	0.0	-7.25	0.0	-0.33	0.10	0.07	-3.92
		-3.92	0.05	-5.91e-05	0.0	10.0	-7.22	0.0	-0.33	0.10	0.05	-3.92
13	2	-14.23	-0.09	5.27e-03	0.0	0.0	-25.29	0.0	0.03	0.13	-0.09	-14.23
		-14.23	-0.09	1.71e-04	0.0	10.0	-25.24	0.0	0.03	0.13	-0.09	-14.23
13	3	-1.27	-0.02	4.89e-04	0.0	0.0	-2.70	0.0	6.34e-03	0.02	-0.02	-1.27
		-1.27	-0.02	2.56e-05	0.0	10.0	-2.66	0.0	6.34e-03	0.02	-0.02	-1.27
13	5	-1.27	-0.02	4.89e-04	0.0	0.0	-2.70	0.0	6.34e-03	0.02	-0.02	-1.27
		-1.27	-0.02	2.56e-05	0.0	10.0	-2.66	0.0	6.34e-03	0.02	-0.02	-1.27
13	6	-9.66	-0.06	3.58e-03	0.0	0.0	-17.22	0.0	0.02	0.09	-0.06	-9.66
		-9.66	-0.06	1.18e-04	0.0	10.0	-17.18	0.0	0.02	0.09	-0.06	-9.66
13	7	-1.27	-0.02	4.89e-04	0.0	0.0	-2.70	0.0	6.34e-03	0.02	-0.02	-1.27
		-1.27	-0.02	2.56e-05	0.0	10.0	-2.66	0.0	6.34e-03	0.02	-0.02	-1.27
13	8	-7.14	-0.05	2.65e-03	0.0	0.0	-12.86	0.0	0.02	0.07	-0.05	-7.14
		-7.14	-0.05	9.00e-05	0.0	10.0	-12.83	0.0	0.02	0.07	-0.05	-7.14
13	9	-1.27	-0.02	4.89e-04	0.0	0.0	-2.70	0.0	6.34e-03	0.02	-0.02	-1.27
		-1.27	-0.02	2.56e-05	0.0	10.0	-2.66	0.0	6.34e-03	0.02	-0.02	-1.27
13	10	-6.30	-0.04	2.34e-03	0.0	0.0	-11.41	0.0	0.02	0.06	-0.04	-6.30
		-6.30	-0.04	8.08e-05	0.0	10.0	-11.38	0.0	0.02	0.06	-0.04	-6.30
13	21	-5.71	0.30	6.46e-03	0.0	0.0	-8.66	0.0	-2.88	-0.19	0.30	-5.71
		-5.71	0.18	7.91e-05	0.0	10.0	-8.63	0.0	-2.88	-0.19	0.18	-5.71
13	24	-6.90	-0.26	-1.77e-03	0.0	0.0	-14.15	0.0	2.91	0.31	-0.39	-6.90

Pilas.	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		-6.90	-0.39	8.25e-05	0.0	10.0	-14.12	0.0	2.91	0.31	-0.26	-6.90
13	80	-6.41	0.11	4.97e-03	0.0	0.0	-10.60	0.0	-1.10	-0.07	0.11	-6.41
		-6.41	0.08	9.24e-05	0.0	10.0	-10.57	0.0	-1.10	-0.07	0.08	-6.41
13	81	-6.19	-0.16	-2.83e-04	0.0	0.0	-12.22	0.0	1.14	0.20	-0.20	-6.19
		-6.19	-0.20	6.93e-05	0.0	10.0	-12.18	0.0	1.14	0.20	-0.16	-6.19
13	91	-4.98	6.45e-03	-8.63e-03	0.0	0.0	-13.44	0.0	-0.33	0.02	6.45e-03	-4.98
		-4.98	-2.53e-03	6.83e-05	0.0	10.0	-13.40	0.0	-0.33	0.02	-2.53e-03	-4.98
13	92	-7.50	-4.25e-03	0.01	0.0	0.0	-9.19	0.0	-0.30	0.03	-4.25e-03	-7.50
		-7.50	-0.01	9.67e-05	0.0	10.0	-9.16	0.0	-0.30	0.03	-0.01	-7.50
13	93	-5.10	-0.07	-8.26e-03	0.0	0.0	-13.63	0.0	0.34	0.09	-0.09	-5.10
		-5.10	-0.09	6.50e-05	0.0	10.0	-13.59	0.0	0.34	0.09	-0.07	-5.10
13	94	-7.62	-0.08	0.01	0.0	0.0	-9.38	0.0	0.37	0.11	-0.10	-7.62
		-7.62	-0.10	9.34e-05	0.0	10.0	-9.35	0.0	0.37	0.11	-0.08	-7.62
13	107	-3.00	0.08	-4.85e-03	0.0	0.0	-8.06	0.0	-1.13	-0.05	0.08	-3.00
		-3.00	0.05	4.06e-06	0.0	10.0	-8.03	0.0	-1.13	-0.05	0.05	-3.00
13	109	-4.30	0.07	6.28e-03	0.0	0.0	-5.87	0.0	-1.11	-0.04	0.07	-4.30
		-4.30	0.05	1.87e-05	0.0	10.0	-5.84	0.0	-1.11	-0.04	0.05	-4.30
13	112	-8.30	-0.13	-1.59e-03	0.0	0.0	-16.95	0.0	1.15	0.17	-0.16	-8.30
		-8.30	-0.16	1.43e-04	0.0	10.0	-16.91	0.0	1.15	0.17	-0.13	-8.30
13	114	-9.60	-0.14	9.54e-03	0.0	0.0	-14.76	0.0	1.16	0.18	-0.17	-9.60
		-9.60	-0.17	1.58e-04	0.0	10.0	-14.72	0.0	1.16	0.18	-0.14	-9.60
13	144	-6.39	0.08	4.46e-03	0.0	0.0	-10.76	0.0	-0.88	-0.04	0.08	-6.39
		-6.39	0.05	9.00e-05	0.0	10.0	-10.73	0.0	-0.88	-0.04	0.05	-6.39
13	145	-6.21	-0.14	2.21e-04	0.0	0.0	-12.06	0.0	0.91	0.17	-0.17	-6.21
		-6.21	-0.17	7.16e-05	0.0	10.0	-12.02	0.0	0.91	0.17	-0.14	-6.21
13	155	-5.24	-4.24e-03	-6.50e-03	0.0	0.0	-13.04	0.0	-0.26	0.03	-4.24e-03	-5.24
		-5.24	-0.01	7.07e-05	0.0	10.0	-13.01	0.0	-0.26	0.03	-0.01	-5.24
13	156	-7.27	-0.01	0.01	0.0	0.0	-9.62	0.0	-0.24	0.04	-0.01	-7.27
		-7.27	-0.02	9.36e-05	0.0	10.0	-9.59	0.0	-0.24	0.04	-0.02	-7.27
13	157	-5.33	-0.07	-6.21e-03	0.0	0.0	-13.20	0.0	0.27	0.09	-0.08	-5.33
		-5.33	-0.08	6.81e-05	0.0	10.0	-13.16	0.0	0.27	0.09	-0.07	-5.33
13	158	-7.36	-0.07	0.01	0.0	0.0	-9.77	0.0	0.30	0.10	-0.09	-7.36
		-7.36	-0.09	9.10e-05	0.0	10.0	-9.74	0.0	0.30	0.10	-0.07	-7.36
14	2	0.0	0.02	8.25e-05	0.0	0.0	2.04	-18.63	0.17	-0.15	0.0	0.0
		-1.86	0.0	-1.59e-04	0.0	10.0	2.04	-18.63	0.17	-0.15	0.02	-1.86
14	3	0.0	1.57e-03	1.04e-05	0.0	0.0	0.06	-1.64	0.02	-0.01	0.0	0.0
		-0.16	0.0	-2.78e-05	0.0	10.0	0.06	-1.64	0.02	-0.01	1.57e-03	-0.16
14	4	0.0	0.02	7.93e-05	0.0	0.0	2.02	-18.14	0.16	-0.15	0.0	0.0
		-1.81	0.0	-1.50e-04	0.0	10.0	2.02	-18.14	0.16	-0.15	0.02	-1.81
14	5	0.0	1.57e-03	1.04e-05	0.0	0.0	0.06	-1.64	0.02	-0.01	0.0	0.0
		-0.16	0.0	-2.78e-05	0.0	10.0	0.06	-1.64	0.02	-0.01	1.57e-03	-0.16
14	6	0.0	0.01	5.64e-05	0.0	0.0	1.37	-12.64	0.11	-0.10	0.0	0.0
		-1.26	0.0	-1.09e-04	0.0	10.0	1.37	-12.64	0.11	-0.10	0.01	-1.26
14	7	0.0	1.57e-03	1.04e-05	0.0	0.0	0.06	-1.64	0.02	-0.01	0.0	0.0
		-0.16	0.0	-2.78e-05	0.0	10.0	0.06	-1.64	0.02	-0.01	1.57e-03	-0.16
14	8	0.0	8.34e-03	4.26e-05	0.0	0.0	0.98	-9.34	0.08	-0.08	0.0	0.0
		-0.93	0.0	-8.50e-05	0.0	10.0	0.98	-9.34	0.08	-0.08	8.34e-03	-0.93
14	9	0.0	1.57e-03	1.04e-05	0.0	0.0	0.06	-1.64	0.02	-0.01	0.0	0.0
		-0.16	0.0	-2.78e-05	0.0	10.0	0.06	-1.64	0.02	-0.01	1.57e-03	-0.16
14	10	0.0	7.37e-03	3.80e-05	0.0	0.0	0.85	-8.24	0.07	-0.07	0.0	0.0
		-0.82	0.0	-7.68e-05	0.0	10.0	0.85	-8.24	0.07	-0.07	7.37e-03	-0.82
14	53	0.33	0.0	1.86e-04	0.0	0.0	-3.16	3.34	-1.93	1.18	0.0	0.0
		0.0	-0.19	9.90e-04	0.0	10.0	-3.16	3.34	-1.93	1.18	-0.19	0.33
14	56	0.0	0.21	-1.10e-04	0.0	0.0	4.85	-19.81	2.08	-1.32	0.0	0.0
		-1.98	0.0	-1.14e-03	0.0	10.0	4.85	-19.81	2.08	-1.32	0.21	-1.98
14	70	0.48	0.0	2.14e-04	0.0	0.0	-4.22	4.76	-1.60	1.08	0.0	0.0
		0.0	-0.16	6.70e-03	0.0	10.0	-4.22	4.76	-1.60	1.08	-0.16	0.48
14	71	0.0	0.18	-1.38e-04	0.0	0.0	5.91	-21.24	1.75	-1.22	0.0	0.0
		-2.12	0.0	-6.86e-03	0.0	10.0	5.91	-21.24	1.75	-1.22	0.18	-2.12
14	92	0.0	0.0	1.28e-04	0.0	0.0	-1.65	-1.23	-1.00	0.71	0.0	0.0
		-0.12	-0.10	4.85e-04	0.0	10.0	-1.65	-1.23	-1.00	0.71	-0.10	-0.12
14	96	0.0	0.0	1.25e-04	0.0	0.0	-1.66	-1.19	-1.05	0.63	0.0	0.0
		-0.12	-0.10	5.09e-04	0.0	10.0	-1.66	-1.19	-1.05	0.63	-0.10	-0.12
14	97	0.0	0.12	-4.93e-05	0.0	0.0	3.35	-15.29	1.19	-0.77	0.0	0.0
		-1.53	0.0	-6.63e-04	0.0	10.0	3.35	-15.29	1.19	-0.77	0.12	-1.53
14	104	0.0	0.0	1.39e-04	0.0	0.0	-1.92	-1.01	-0.95	0.63	0.0	0.0
		-0.10	-0.09	3.89e-03	0.0	10.0	-1.92	-1.01	-0.95	0.63	-0.09	-0.10
14	105	0.0	0.11	-6.33e-05	0.0	0.0	3.61	-15.47	1.09	-0.77	0.0	0.0
		-1.55	0.0	-4.04e-03	0.0	10.0	3.61	-15.47	1.09	-0.77	0.11	-1.55
14	156	0.0	0.0	1.10e-04	0.0	0.0	-1.17	-2.59	-0.79	0.56	0.0	0.0
		-0.26	-0.08	3.56e-04	0.0	10.0	-1.17	-2.59	-0.79	0.56	-0.08	-0.26



Pilas.	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
14	160	0.0	0.0	1.08e-04	0.0	0.0	-1.17	-2.56	-0.82	0.50	0.0	0.0
		-0.26	-0.08	3.75e-04	0.0	10.0	-1.17	-2.56	-0.82	0.50	-0.08	-0.26
14	161	0.0	0.10	-3.23e-05	0.0	0.0	2.86	-13.92	0.97	-0.63	0.0	0.0
		-1.39	0.0	-5.29e-04	0.0	10.0	2.86	-13.92	0.97	-0.63	0.10	-1.39
14	168	0.0	0.0	1.20e-04	0.0	0.0	-1.38	-2.42	-0.74	0.50	0.0	0.0
		-0.24	-0.07	3.09e-03	0.0	10.0	-1.38	-2.42	-0.74	0.50	-0.07	-0.24
14	169	0.0	0.09	-4.36e-05	0.0	0.0	3.07	-14.06	0.89	-0.63	0.0	0.0
		-1.41	0.0	-3.24e-03	0.0	10.0	3.07	-14.06	0.89	-0.63	0.09	-1.41
26	1	0.21	0.0	2.26e-05	0.0	0.0	-5.14	2.13	-0.03	-0.01	0.0	0.0
		0.0	-2.83e-03	-1.31e-05	0.0	10.0	-5.14	2.13	-0.03	-0.01	-2.83e-03	0.21
26	2	1.86	0.0	1.61e-04	0.0	0.0	-37.17	18.63	-0.20	-0.13	0.0	0.0
		0.0	-0.02	2.72e-05	0.0	10.0	-37.17	18.63	-0.20	-0.13	-0.02	1.86
26	3	0.16	0.0	1.74e-05	0.0	0.0	-3.95	1.64	-0.02	-0.01	0.0	0.0
		0.0	-2.18e-03	-1.01e-05	0.0	10.0	-3.95	1.64	-0.02	-0.01	-2.18e-03	0.16
26	4	1.81	0.0	1.56e-04	0.0	0.0	-35.98	18.14	-0.19	-0.13	0.0	0.0
		0.0	-0.02	3.03e-05	0.0	10.0	-35.98	18.14	-0.19	-0.13	-0.02	1.81
26	5	0.16	0.0	1.74e-05	0.0	0.0	-3.95	1.64	-0.02	-0.01	0.0	0.0
		0.0	-2.18e-03	-1.01e-05	0.0	10.0	-3.95	1.64	-0.02	-0.01	-2.18e-03	0.16
26	6	1.26	0.0	1.10e-04	0.0	0.0	-25.31	12.64	-0.13	-0.09	0.0	0.0
		0.0	-0.01	1.68e-05	0.0	10.0	-25.31	12.64	-0.13	-0.09	-0.01	1.26
26	7	0.16	0.0	1.74e-05	0.0	0.0	-3.95	1.64	-0.02	-0.01	0.0	0.0
		0.0	-2.18e-03	-1.01e-05	0.0	10.0	-3.95	1.64	-0.02	-0.01	-2.18e-03	0.16
26	8	0.93	0.0	8.19e-05	0.0	0.0	-18.90	9.34	-0.10	-0.07	0.0	0.0
		0.0	-0.01	8.73e-06	0.0	10.0	-18.90	9.34	-0.10	-0.07	-0.01	0.93
26	9	0.16	0.0	1.74e-05	0.0	0.0	-3.95	1.64	-0.02	-0.01	0.0	0.0
		0.0	-2.18e-03	-1.01e-05	0.0	10.0	-3.95	1.64	-0.02	-0.01	-2.18e-03	0.16
26	10	0.82	0.0	7.27e-05	0.0	0.0	-16.76	8.24	-0.09	-0.06	0.0	0.0
		0.0	-8.92e-03	6.04e-06	0.0	10.0	-16.76	8.24	-0.09	-0.06	-8.92e-03	0.82
26	20	1.34	0.0	6.32e-05	0.0	0.0	-18.97	13.42	-9.21	0.92	0.0	0.0
		0.0	-0.92	2.27e-03	0.0	10.0	-18.97	13.42	-9.21	0.92	-0.92	1.34
26	25	0.31	0.90	8.22e-05	0.0	0.0	-14.56	3.05	9.03	-1.04	0.0	0.0
		0.0	0.0	-2.26e-03	0.0	10.0	-14.56	3.05	9.03	-1.04	0.90	0.31
26	62	0.0	0.0	1.81e-04	0.0	0.0	-13.64	-21.65	-0.88	1.65	0.0	0.0
		-2.16	-0.09	9.76e-04	0.0	10.0	-13.64	-21.65	-0.88	1.65	-0.09	-2.16
26	63	3.81	0.07	-3.54e-05	0.0	0.0	-19.89	38.12	0.70	-1.76	0.0	0.0
		0.0	0.0	-9.63e-04	0.0	10.0	-19.89	38.12	0.70	-1.76	0.07	3.81
26	79	1.17	0.0	6.58e-05	0.0	0.0	-17.18	11.74	-5.19	0.47	0.0	0.0
		0.0	-0.52	1.32e-03	0.0	10.0	-17.18	11.74	-5.19	0.47	-0.52	1.17
26	82	0.47	0.50	7.95e-05	0.0	0.0	-16.35	4.73	5.01	-0.59	0.0	0.0
		0.0	0.0	-1.30e-03	0.0	10.0	-16.35	4.73	5.01	-0.59	0.50	0.47
26	92	0.0	0.0	1.25e-04	0.0	0.0	-14.03	-5.24	-0.57	0.93	0.0	0.0
		-0.52	-0.06	-2.63e-04	0.0	10.0	-14.03	-5.24	-0.57	0.93	-0.06	-0.52
26	93	2.17	0.04	2.01e-05	0.0	0.0	-19.50	21.72	0.39	-1.04	0.0	0.0
		0.0	0.0	2.75e-04	0.0	10.0	-19.50	21.72	0.39	-1.04	0.04	2.17
26	100	0.0	0.0	1.34e-04	0.0	0.0	-14.08	-8.66	-0.39	0.90	0.0	0.0
		-0.87	-0.04	5.77e-04	0.0	10.0	-14.08	-8.66	-0.39	0.90	-0.04	-0.87
26	101	2.51	0.02	1.11e-05	0.0	0.0	-19.45	25.14	0.21	-1.01	0.0	0.0
		0.0	0.0	-5.65e-04	0.0	10.0	-19.45	25.14	0.21	-1.01	0.02	2.51
26	109	0.35	0.0	9.68e-05	0.0	0.0	-10.18	3.46	-1.28	0.54	0.0	0.0
		0.0	-0.13	4.43e-04	0.0	10.0	-10.18	3.46	-1.28	0.54	-0.13	0.35
26	112	1.30	0.11	4.86e-05	0.0	0.0	-23.35	13.01	1.10	-0.65	0.0	0.0
		0.0	0.0	-4.31e-04	0.0	10.0	-23.35	13.01	1.10	-0.65	0.11	1.30
26	143	1.11	0.0	6.69e-05	0.0	0.0	-17.11	11.08	-4.06	0.35	0.0	0.0
		0.0	-0.41	1.02e-03	0.0	10.0	-17.11	11.08	-4.06	0.35	-0.41	1.11
26	146	0.54	0.39	7.85e-05	0.0	0.0	-16.42	5.39	3.88	-0.46	0.0	0.0
		0.0	0.0	-1.01e-03	0.0	10.0	-16.42	5.39	3.88	-0.46	0.39	0.54
26	156	0.0	0.0	1.15e-04	0.0	0.0	-14.57	-2.62	-0.44	0.73	0.0	0.0
		-0.26	-0.04	-2.16e-04	0.0	10.0	-14.57	-2.62	-0.44	0.73	-0.04	-0.26
26	157	1.91	0.03	3.04e-05	0.0	0.0	-18.96	19.10	0.26	-0.84	0.0	0.0
		0.0	0.0	2.28e-04	0.0	10.0	-18.96	19.10	0.26	-0.84	0.03	1.91
26	164	0.0	0.0	1.22e-04	0.0	0.0	-14.60	-5.37	-0.29	0.70	0.0	0.0
		-0.54	-0.03	4.52e-04	0.0	10.0	-14.60	-5.37	-0.29	0.70	-0.03	-0.54
26	165	2.18	0.01	2.32e-05	0.0	0.0	-18.93	21.85	0.11	-0.82	0.0	0.0
		0.0	0.0	-4.40e-04	0.0	10.0	-18.93	21.85	0.11	-0.82	0.01	2.18
27	2	0.67	0.0	2.92e-04	0.0	0.0	-14.21	6.70	-0.22	-0.10	0.0	0.0
		0.0	-0.02	1.37e-05	0.0	10.0	-14.21	6.70	-0.22	-0.10	-0.02	0.67
27	3	0.06	0.0	3.65e-05	0.0	0.0	-1.97	0.56	-0.03	-0.01	0.0	0.0
		0.0	-2.58e-03	-1.09e-05	0.0	10.0	-1.97	0.56	-0.03	-0.01	-2.58e-03	0.06
27	5	0.06	0.0	3.65e-05	0.0	0.0	-1.97	0.56	-0.03	-0.01	0.0	0.0
		0.0	-2.58e-03	-1.09e-05	0.0	10.0	-1.97	0.56	-0.03	-0.01	-2.58e-03	0.06
27	6	0.45	0.0	2.00e-04	0.0	0.0	-9.73	4.54	-0.15	-0.07	0.0	0.0



Pilas.	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		0.0	-0.02	7.70e-06	0.0	10.0	-9.73	4.54	-0.15	-0.07	-0.02	0.45
27	7	0.06	0.0	3.65e-05	0.0	0.0	-1.97	0.56	-0.03	-0.01	0.0	0.0
		0.0	-2.58e-03	-1.09e-05	0.0	10.0	-1.97	0.56	-0.03	-0.01	-2.58e-03	0.06
27	8	0.33	0.0	1.51e-04	0.0	0.0	-7.40	3.35	-0.11	-0.05	0.0	0.0
		0.0	-0.01	2.11e-06	0.0	10.0	-7.40	3.35	-0.11	-0.05	-0.01	0.33
27	9	0.06	0.0	3.65e-05	0.0	0.0	-1.97	0.56	-0.03	-0.01	0.0	0.0
		0.0	-2.58e-03	-1.09e-05	0.0	10.0	-1.97	0.56	-0.03	-0.01	-2.58e-03	0.06
27	10	0.30	0.0	1.34e-04	0.0	0.0	-6.63	2.95	-0.10	-0.05	0.0	0.0
		0.0	-0.01	0.0	0.0	10.0	-6.63	2.95	-0.10	-0.05	-0.01	0.30
27	20	0.94	0.0	1.32e-04	0.0	0.0	-7.30	9.37	-5.44	2.79	0.0	0.0
		0.0	-0.54	1.73e-03	0.0	10.0	-7.30	9.37	-5.44	2.79	-0.54	0.94
27	25	0.0	0.52	1.37e-04	0.0	0.0	-5.96	-3.47	5.23	-2.88	0.0	0.0
		-0.35	0.0	-1.73e-03	0.0	10.0	-5.96	-3.47	5.23	-2.88	0.52	-0.35
27	44	1.00	0.0	1.21e-04	0.0	0.0	-3.62	10.04	-2.47	0.57	0.0	0.0
		0.0	-0.25	3.27e-04	0.0	10.0	-3.62	10.04	-2.47	0.57	-0.25	1.00
27	46	0.03	0.0	1.47e-04	0.0	0.0	-11.41	0.28	-1.05	1.05	0.0	0.0
		0.0	-0.11	7.24e-04	0.0	10.0	-11.41	0.28	-1.05	1.05	-0.11	0.03
27	47	0.56	0.09	1.22e-04	0.0	0.0	-1.85	5.62	0.85	-1.14	0.0	0.0
		0.0	0.0	-7.24e-04	0.0	10.0	-1.85	5.62	0.85	-1.14	0.09	0.56
27	49	0.0	0.23	1.48e-04	0.0	0.0	-9.63	-4.14	2.27	-0.66	0.0	0.0
		-0.41	0.0	-3.27e-04	0.0	10.0	-9.63	-4.14	2.27	-0.66	0.23	-0.41
27	79	0.60	0.0	1.34e-04	0.0	0.0	-6.65	6.02	-3.06	1.60	0.0	0.0
		0.0	-0.31	1.01e-03	0.0	10.0	-6.65	6.02	-3.06	1.60	-0.31	0.60
27	82	0.0	0.29	1.35e-04	0.0	0.0	-6.60	-0.12	2.85	-1.69	0.0	0.0
		-0.01	0.0	-1.00e-03	0.0	10.0	-6.60	-0.12	2.85	-1.69	0.29	-0.01
27	91	0.65	0.0	1.28e-04	0.0	0.0	-4.54	6.50	-1.36	0.33	0.0	0.0
		0.0	-0.14	1.98e-04	0.0	10.0	-4.54	6.50	-1.36	0.33	-0.14	0.65
27	92	0.08	0.0	1.43e-04	0.0	0.0	-9.07	0.82	-0.53	0.60	0.0	0.0
		0.0	-0.05	4.29e-04	0.0	10.0	-9.07	0.82	-0.53	0.60	-0.05	0.08
27	93	0.51	0.03	1.26e-04	0.0	0.0	-4.19	5.08	0.33	-0.69	0.0	0.0
		0.0	0.0	-4.28e-04	0.0	10.0	-4.19	5.08	0.33	-0.69	0.03	0.51
27	94	0.0	0.12	1.41e-04	0.0	0.0	-8.72	-0.60	1.16	-0.42	0.0	0.0
		-0.06	0.0	-1.97e-04	0.0	10.0	-8.72	-0.60	1.16	-0.42	0.12	-0.06
27	143	0.54	0.0	1.34e-04	0.0	0.0	-6.63	5.35	-2.40	1.23	0.0	0.0
		0.0	-0.24	7.81e-04	0.0	10.0	-6.63	5.35	-2.40	1.23	-0.24	0.54
27	146	0.05	0.22	1.35e-04	0.0	0.0	-6.63	0.55	2.20	-1.32	0.0	0.0
		0.0	0.0	-7.81e-04	0.0	10.0	-6.63	0.55	2.20	-1.32	0.22	0.05
27	155	0.58	0.0	1.29e-04	0.0	0.0	-4.94	5.79	-1.09	0.24	0.0	0.0
		0.0	-0.11	1.50e-04	0.0	10.0	-4.94	5.79	-1.09	0.24	-0.11	0.58
27	156	0.12	0.0	1.41e-04	0.0	0.0	-8.59	1.21	-0.43	0.46	0.0	0.0
		0.0	-0.04	3.37e-04	0.0	10.0	-8.59	1.21	-0.43	0.46	-0.04	0.12
27	157	0.47	0.02	1.28e-04	0.0	0.0	-4.67	4.69	0.23	-0.55	0.0	0.0
		0.0	0.0	-3.37e-04	0.0	10.0	-4.67	4.69	0.23	-0.55	0.02	0.47
27	164	0.16	0.0	1.44e-04	0.0	0.0	-8.28	1.63	-0.40	0.49	0.0	0.0
		0.0	-0.04	3.43e-04	0.0	10.0	-8.28	1.63	-0.40	0.49	-0.04	0.16
28	1	0.0	0.0	4.48e-05	0.0	0.0	-4.31	-0.54	-0.05	0.03	0.0	0.0
		-0.05	-5.48e-03	-4.28e-05	0.0	10.0	-4.31	-0.54	-0.05	0.03	-5.48e-03	-0.05
28	2	0.0	0.0	2.71e-04	0.0	0.0	-34.44	-5.07	-0.34	0.25	0.0	0.0
		-0.51	-0.03	-3.84e-05	0.0	10.0	-34.44	-5.07	-0.34	0.25	-0.03	-0.51
28	3	0.0	0.0	3.45e-05	0.0	0.0	-3.31	-0.42	-0.04	0.03	0.0	0.0
		-0.04	-4.21e-03	-3.29e-05	0.0	10.0	-3.31	-0.42	-0.04	0.03	-4.21e-03	-0.04
28	5	0.0	0.0	3.45e-05	0.0	0.0	-3.31	-0.42	-0.04	0.03	0.0	0.0
		-0.04	-4.21e-03	-3.29e-05	0.0	10.0	-3.31	-0.42	-0.04	0.03	-4.21e-03	-0.04
28	6	0.0	0.0	1.85e-04	0.0	0.0	-23.40	-3.43	-0.23	0.17	0.0	0.0
		-0.34	-0.02	-3.00e-05	0.0	10.0	-23.40	-3.43	-0.23	0.17	-0.02	-0.34
28	7	0.0	0.0	3.45e-05	0.0	0.0	-3.31	-0.42	-0.04	0.03	0.0	0.0
		-0.04	-4.21e-03	-3.29e-05	0.0	10.0	-3.31	-0.42	-0.04	0.03	-4.21e-03	-0.04
28	8	0.0	0.0	1.40e-04	0.0	0.0	-17.38	-2.53	-0.18	0.13	0.0	0.0
		-0.25	-0.02	-3.09e-05	0.0	10.0	-17.38	-2.53	-0.18	0.13	-0.02	-0.25
28	9	0.0	0.0	3.45e-05	0.0	0.0	-3.31	-0.42	-0.04	0.03	0.0	0.0
		-0.04	-4.21e-03	-3.29e-05	0.0	10.0	-3.31	-0.42	-0.04	0.03	-4.21e-03	-0.04
28	10	0.0	0.0	1.25e-04	0.0	0.0	-15.37	-2.23	-0.16	0.11	0.0	0.0
		-0.22	-0.02	-3.12e-05	0.0	10.0	-15.37	-2.23	-0.16	0.11	-0.02	-0.22
28	38	0.0	0.0	1.15e-04	0.0	0.0	-11.75	-12.07	-11.08	-2.98	0.0	0.0
		-1.21	-1.11	9.86e-04	0.0	10.0	-11.75	-12.07	-11.08	-2.98	-1.11	-1.21
28	39	0.76	1.08	1.35e-04	0.0	0.0	-18.98	7.61	10.76	3.21	0.0	0.0
		0.0	0.0	-1.05e-03	0.0	10.0	-18.98	7.61	10.76	3.21	1.08	0.76
28	61	0.0	0.0	-5.53e-04	0.0	0.0	-4.08	-18.38	-4.09	-1.49	0.0	0.0
		-1.84	-0.41	3.06e-04	0.0	10.0	-4.08	-18.38	-4.09	-1.49	-0.41	-1.84
28	62	0.0	0.0	-5.57e-04	0.0	0.0	-7.35	-20.51	-4.77	-1.00	0.0	0.0
		-2.05	-0.48	3.02e-04	0.0	10.0	-7.35	-20.51	-4.77	-1.00	-0.48	-2.05

Pilas.	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
28	63	1.61	0.45	8.07e-04	0.0	0.0	-23.38	16.05	4.45	1.23	0.0	0.0
		0.0	0.0	-3.65e-04	0.0	10.0	-23.38	16.05	4.45	1.23	0.45	1.61
28	64	1.39	0.38	8.03e-04	0.0	0.0	-26.65	13.92	3.77	1.72	0.0	0.0
		0.0	0.0	-3.68e-04	0.0	10.0	-26.65	13.92	3.77	1.72	0.38	1.39
28	88	0.0	0.0	1.21e-04	0.0	0.0	-12.39	-7.20	-6.28	-1.82	0.0	0.0
		-0.72	-0.63	5.53e-04	0.0	10.0	-12.39	-7.20	-6.28	-1.82	-0.63	-0.72
28	89	0.27	0.60	1.29e-04	0.0	0.0	-18.34	2.75	5.97	2.05	0.0	0.0
		0.0	0.0	-6.15e-04	0.0	10.0	-18.34	2.75	5.97	2.05	0.60	0.27
28	100	0.0	0.0	-2.68e-04	0.0	0.0	-9.78	-12.19	-2.61	-0.67	0.0	0.0
		-1.22	-0.26	1.62e-04	0.0	10.0	-9.78	-12.19	-2.61	-0.67	-0.26	-1.22
28	101	0.77	0.23	5.18e-04	0.0	0.0	-20.95	7.74	2.30	0.90	0.0	0.0
		0.0	0.0	-2.24e-04	0.0	10.0	-20.95	7.74	2.30	0.90	0.23	0.77
28	148	0.0	0.0	1.21e-04	0.0	0.0	-13.10	-6.09	-4.92	-1.42	0.0	0.0
		-0.61	-0.49	2.84e-04	0.0	10.0	-13.10	-6.09	-4.92	-1.42	-0.49	-0.61
28	149	0.16	0.46	1.29e-04	0.0	0.0	-17.63	1.64	4.61	1.65	0.0	0.0
		0.0	0.0	-3.47e-04	0.0	10.0	-17.63	1.64	4.61	1.65	0.46	0.16
28	164	0.0	0.0	-1.87e-04	0.0	0.0	-10.88	-10.24	-2.07	-0.51	0.0	0.0
		-1.02	-0.21	1.25e-04	0.0	10.0	-10.88	-10.24	-2.07	-0.51	-0.21	-1.02
28	165	0.58	0.18	4.36e-04	0.0	0.0	-19.85	5.79	1.75	0.74	0.0	0.0
		0.0	0.0	-1.87e-04	0.0	10.0	-19.85	5.79	1.75	0.74	0.18	0.58
29	1	0.10	1.92e-03	6.31e-05	0.0	0.0	-2.29	0.97	0.02	-0.02	0.0	0.0
		0.0	0.0	-6.44e-05	0.0	10.0	-2.29	0.97	0.02	-0.02	1.92e-03	0.10
29	2	0.87	0.01	4.22e-04	0.0	0.0	-19.66	8.68	0.13	-0.16	0.0	0.0
		0.0	0.0	-1.90e-04	0.0	10.0	-19.66	8.68	0.13	-0.16	0.01	0.87
29	3	0.07	1.47e-03	4.86e-05	0.0	0.0	-1.77	0.74	0.01	-0.02	0.0	0.0
		0.0	0.0	-4.95e-05	0.0	10.0	-1.77	0.74	0.01	-0.02	1.47e-03	0.07
29	5	0.07	1.47e-03	4.86e-05	0.0	0.0	-1.77	0.74	0.01	-0.02	0.0	0.0
		0.0	0.0	-4.95e-05	0.0	10.0	-1.77	0.74	0.01	-0.02	1.47e-03	0.07
29	6	0.59	9.16e-03	2.88e-04	0.0	0.0	-13.34	5.88	0.09	-0.11	0.0	0.0
		0.0	0.0	-1.33e-04	0.0	10.0	-13.34	5.88	0.09	-0.11	9.16e-03	0.59
29	7	0.07	1.47e-03	4.86e-05	0.0	0.0	-1.77	0.74	0.01	-0.02	0.0	0.0
		0.0	0.0	-4.95e-05	0.0	10.0	-1.77	0.74	0.01	-0.02	1.47e-03	0.07
29	8	0.43	6.86e-03	2.16e-04	0.0	0.0	-9.87	4.34	0.07	-0.08	0.0	0.0
		0.0	0.0	-1.08e-04	0.0	10.0	-9.87	4.34	0.07	-0.08	6.86e-03	0.43
29	9	0.07	1.47e-03	4.86e-05	0.0	0.0	-1.77	0.74	0.01	-0.02	0.0	0.0
		0.0	0.0	-4.95e-05	0.0	10.0	-1.77	0.74	0.01	-0.02	1.47e-03	0.07
29	10	0.38	6.09e-03	1.92e-04	0.0	0.0	-8.71	3.83	0.06	-0.07	0.0	0.0
		0.0	0.0	-9.96e-05	0.0	10.0	-8.71	3.83	0.06	-0.07	6.09e-03	0.38
29	35	1.07	0.0	1.75e-04	0.0	0.0	-8.79	10.66	-5.71	-0.60	0.0	0.0
		0.0	-0.57	7.49e-03	0.0	10.0	-8.79	10.66	-5.71	-0.60	-0.57	1.07
29	42	0.0	0.58	2.09e-04	0.0	0.0	-8.63	-3.00	5.83	0.46	0.0	0.0
		-0.30	0.0	-7.69e-03	0.0	10.0	-8.63	-3.00	5.83	0.46	0.58	-0.30
29	68	1.63	0.0	1.57e-04	0.0	0.0	-8.87	16.29	-2.85	0.09	0.0	0.0
		0.0	-0.29	4.03e-03	0.0	10.0	-8.87	16.29	-2.85	0.09	-0.29	1.63
29	73	0.0	0.30	2.27e-04	0.0	0.0	-8.55	-8.64	2.97	-0.24	0.0	0.0
		-0.86	0.0	-4.23e-03	0.0	10.0	-8.55	-8.64	2.97	-0.24	0.30	-0.86
29	87	0.80	0.0	1.82e-04	0.0	0.0	-9.32	7.97	-3.17	-0.49	0.0	0.0
		0.0	-0.32	4.17e-03	0.0	10.0	-9.32	7.97	-3.17	-0.49	-0.32	0.80
29	88	0.42	0.0	1.93e-04	0.0	0.0	-9.79	4.23	-2.61	-0.71	0.0	0.0
		0.0	-0.26	3.36e-03	0.0	10.0	-9.79	4.23	-2.61	-0.71	-0.26	0.42
29	89	0.34	0.27	1.91e-04	0.0	0.0	-7.63	3.43	2.74	0.57	0.0	0.0
		0.0	0.0	-3.56e-03	0.0	10.0	-7.63	3.43	2.74	0.57	0.27	0.34
29	90	0.0	0.33	2.02e-04	0.0	0.0	-8.10	-0.31	3.29	0.35	0.0	0.0
		-0.03	0.0	-4.37e-03	0.0	10.0	-8.10	-0.31	3.29	0.35	0.33	-0.03
29	103	1.07	0.0	1.72e-04	0.0	0.0	-8.18	10.74	-1.74	0.14	0.0	0.0
		0.0	-0.17	2.41e-03	0.0	10.0	-8.18	10.74	-1.74	0.14	-0.17	1.07
29	106	0.0	0.19	2.12e-04	0.0	0.0	-9.25	-3.09	1.87	-0.28	0.0	0.0
		-0.31	0.0	-2.61e-03	0.0	10.0	-9.25	-3.09	1.87	-0.28	0.19	-0.31
29	134	0.35	0.0	1.95e-04	0.0	0.0	-13.09	3.55	-0.33	-1.19	0.0	0.0
		0.0	-0.03	5.39e-04	0.0	10.0	-13.09	3.55	-0.33	-1.19	-0.03	0.35
29	135	0.41	0.05	1.89e-04	0.0	0.0	-4.34	4.11	0.46	1.05	0.0	0.0
		0.0	0.0	-7.38e-04	0.0	10.0	-4.34	4.11	0.46	1.05	0.05	0.41
29	151	0.71	0.0	1.84e-04	0.0	0.0	-9.18	7.09	-2.46	-0.40	0.0	0.0
		0.0	-0.25	3.24e-03	0.0	10.0	-9.18	7.09	-2.46	-0.40	-0.25	0.71
29	152	0.41	0.0	1.93e-04	0.0	0.0	-9.56	4.08	-2.01	-0.58	0.0	0.0
		0.0	-0.20	2.58e-03	0.0	10.0	-9.56	4.08	-2.01	-0.58	-0.20	0.41
29	153	0.36	0.21	1.91e-04	0.0	0.0	-7.86	3.57	2.13	0.43	0.0	0.0
		0.0	0.0	-2.78e-03	0.0	10.0	-7.86	3.57	2.13	0.43	0.21	0.36
29	154	0.06	0.26	2.00e-04	0.0	0.0	-8.25	0.56	2.58	0.25	0.0	0.0
		0.0	0.0	-3.44e-03	0.0	10.0	-8.25	0.56	2.58	0.25	0.26	0.06
29	167	0.94	0.0	1.76e-04	0.0	0.0	-8.27	9.38	-1.37	0.10	0.0	0.0

Pilas.	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		0.0	-0.14	1.89e-03	0.0	10.0	-8.27	9.38	-1.37	0.10	-0.14	0.94
29	170	0.0	0.15	2.08e-04	0.0	0.0	-9.15	-1.72	1.49	-0.25	0.0	0.0
		-0.17	0.0	-2.09e-03	0.0	10.0	-9.15	-1.72	1.49	-0.25	0.15	-0.17
30	1	0.0	2.53e-03	6.05e-05	0.0	0.0	-0.89	-0.73	0.03	-0.03	0.0	0.0
		-0.07	0.0	-4.26e-05	0.0	10.0	-0.89	-0.73	0.03	-0.03	2.53e-03	-0.07
30	2	0.0	0.02	3.94e-04	0.0	0.0	-5.33	-6.70	0.19	-0.22	0.0	0.0
		-0.67	0.0	-1.96e-04	0.0	10.0	-5.33	-6.70	0.19	-0.22	0.02	-0.67
30	3	0.0	1.94e-03	4.66e-05	0.0	0.0	-0.68	-0.56	0.02	-0.02	0.0	0.0
		-0.06	0.0	-3.27e-05	0.0	10.0	-0.68	-0.56	0.02	-0.02	1.94e-03	-0.06
30	5	0.0	1.94e-03	4.66e-05	0.0	0.0	-0.68	-0.56	0.02	-0.02	0.0	0.0
		-0.06	0.0	-3.27e-05	0.0	10.0	-0.68	-0.56	0.02	-0.02	1.94e-03	-0.06
30	6	0.0	0.01	2.69e-04	0.0	0.0	-3.64	-4.54	0.13	-0.15	0.0	0.0
		-0.45	0.0	-1.35e-04	0.0	10.0	-3.64	-4.54	0.13	-0.15	0.01	-0.45
30	7	0.0	1.94e-03	4.66e-05	0.0	0.0	-0.68	-0.56	0.02	-0.02	0.0	0.0
		-0.06	0.0	-3.27e-05	0.0	10.0	-0.68	-0.56	0.02	-0.02	1.94e-03	-0.06
30	8	0.0	9.49e-03	2.02e-04	0.0	0.0	-2.76	-3.35	0.09	-0.11	0.0	0.0
		-0.33	0.0	-1.05e-04	0.0	10.0	-2.76	-3.35	0.09	-0.11	9.49e-03	-0.33
30	9	0.0	1.94e-03	4.66e-05	0.0	0.0	-0.68	-0.56	0.02	-0.02	0.0	0.0
		-0.06	0.0	-3.27e-05	0.0	10.0	-0.68	-0.56	0.02	-0.02	1.94e-03	-0.06
30	10	0.0	8.41e-03	1.80e-04	0.0	0.0	-2.46	-2.95	0.08	-0.10	0.0	0.0
		-0.30	0.0	-9.43e-05	0.0	10.0	-2.46	-2.95	0.08	-0.10	8.41e-03	-0.30
30	37	0.0	0.0	1.84e-04	0.0	0.0	-0.94	-9.69	-2.54	1.58	0.0	0.0
		-0.97	-0.25	4.28e-03	0.0	10.0	-0.94	-9.69	-2.54	1.58	-0.25	-0.97
30	40	0.38	0.27	1.77e-04	0.0	0.0	-3.98	3.79	2.71	-1.78	0.0	0.0
		0.0	0.0	-4.46e-03	0.0	10.0	-3.98	3.79	2.71	-1.78	0.27	0.38
30	46	0.0	0.0	2.12e-04	0.0	0.0	-2.20	-14.37	-0.87	0.64	0.0	0.0
		-1.44	-0.09	1.06e-03	0.0	10.0	-2.20	-14.37	-0.87	0.64	-0.09	-1.44
30	47	0.85	0.10	1.48e-04	0.0	0.0	-2.72	8.47	1.04	-0.84	0.0	0.0
		0.0	0.0	-1.25e-03	0.0	10.0	-2.72	8.47	1.04	-0.84	0.10	0.85
30	88	0.0	0.0	1.82e-04	0.0	0.0	-1.92	-6.85	-1.41	0.86	0.0	0.0
		-0.68	-0.14	2.43e-03	0.0	10.0	-1.92	-6.85	-1.41	0.86	-0.14	-0.68
30	89	0.09	0.16	1.78e-04	0.0	0.0	-3.00	0.95	1.58	-1.05	0.0	0.0
		0.0	0.0	-2.62e-03	0.0	10.0	-3.00	0.95	1.58	-1.05	0.16	0.09
30	92	0.0	0.0	2.00e-04	0.0	0.0	-1.99	-9.45	-0.49	0.35	0.0	0.0
		-0.94	-0.05	5.71e-04	0.0	10.0	-1.99	-9.45	-0.49	0.35	-0.05	-0.94
30	93	0.35	0.07	1.61e-04	0.0	0.0	-2.93	3.55	0.66	-0.54	0.0	0.0
		0.0	0.0	-7.59e-04	0.0	10.0	-2.93	3.55	0.66	-0.54	0.07	0.35
30	100	0.0	0.0	2.01e-04	0.0	0.0	-1.84	-8.98	-0.53	0.33	0.0	0.0
		-0.90	-0.05	6.14e-04	0.0	10.0	-1.84	-8.98	-0.53	0.33	-0.05	-0.90
30	101	0.31	0.07	1.60e-04	0.0	0.0	-3.08	3.08	0.69	-0.53	0.0	0.0
		0.0	0.0	-8.03e-04	0.0	10.0	-3.08	3.08	0.69	-0.53	0.07	0.31
30	117	0.0	0.0	1.96e-04	0.0	0.0	-0.13	-6.36	-0.90	0.61	0.0	0.0
		-0.64	-0.09	1.27e-03	0.0	10.0	-0.13	-6.36	-0.90	0.61	-0.09	-0.64
30	120	0.05	0.11	1.64e-04	0.0	0.0	-4.79	0.46	1.07	-0.81	0.0	0.0
		0.0	0.0	-1.46e-03	0.0	10.0	-4.79	0.46	1.07	-0.81	0.11	0.05
30	152	0.0	0.0	1.82e-04	0.0	0.0	-2.04	-6.02	-1.08	0.64	0.0	0.0
		-0.60	-0.11	1.87e-03	0.0	10.0	-2.04	-6.02	-1.08	0.64	-0.11	-0.60
30	153	0.01	0.12	1.79e-04	0.0	0.0	-2.88	0.12	1.25	-0.84	0.0	0.0
		0.0	0.0	-2.06e-03	0.0	10.0	-2.88	0.12	1.25	-0.84	0.12	0.01
30	156	0.0	0.0	1.96e-04	0.0	0.0	-2.09	-8.17	-0.37	0.25	0.0	0.0
		-0.82	-0.04	4.18e-04	0.0	10.0	-2.09	-8.17	-0.37	0.25	-0.04	-0.82
30	157	0.23	0.05	1.64e-04	0.0	0.0	-2.84	2.27	0.54	-0.45	0.0	0.0
		0.0	0.0	-6.07e-04	0.0	10.0	-2.84	2.27	0.54	-0.45	0.05	0.23
30	164	0.0	0.0	1.97e-04	0.0	0.0	-1.97	-7.79	-0.39	0.24	0.0	0.0
		-0.78	-0.04	4.60e-04	0.0	10.0	-1.97	-7.79	-0.39	0.24	-0.04	-0.78
30	165	0.19	0.06	1.64e-04	0.0	0.0	-2.96	1.89	0.56	-0.44	0.0	0.0
		0.0	0.0	-6.48e-04	0.0	10.0	-2.96	1.89	0.56	-0.44	0.06	0.19
31	2	0.0	0.0	-5.76e-06	0.0	0.0	2.69	-21.64	-0.10	0.12	0.0	0.0
		-2.16	-0.01	-1.23e-04	0.0	10.0	2.69	-21.64	-0.10	0.12	-0.01	-2.16
31	3	0.0	0.0	0.0	0.0	0.0	0.20	-2.16	-8.68e-03	0.01	0.0	0.0
		-0.22	-8.68e-04	-4.86e-05	0.0	10.0	0.20	-2.16	-8.68e-03	0.01	-8.68e-04	-0.22
31	4	0.0	0.0	-5.65e-06	0.0	0.0	2.63	-20.99	-0.10	0.12	0.0	0.0
		-2.10	-9.92e-03	-1.09e-04	0.0	10.0	2.63	-20.99	-0.10	0.12	-9.92e-03	-2.10
31	5	0.0	0.0	0.0	0.0	0.0	0.20	-2.16	-8.68e-03	0.01	0.0	0.0
		-0.22	-8.68e-04	-4.86e-05	0.0	10.0	0.20	-2.16	-8.68e-03	0.01	-8.68e-04	-0.22
31	6	0.0	0.0	-3.89e-06	0.0	0.0	1.82	-14.72	-0.07	0.08	0.0	0.0
		-1.47	-6.90e-03	-8.87e-05	0.0	10.0	1.82	-14.72	-0.07	0.08	-6.90e-03	-1.47
31	7	0.0	0.0	0.0	0.0	0.0	0.20	-2.16	-8.68e-03	0.01	0.0	0.0
		-0.22	-8.68e-04	-4.86e-05	0.0	10.0	0.20	-2.16	-8.68e-03	0.01	-8.68e-04	-0.22
31	8	0.0	0.0	-2.84e-06	0.0	0.0	1.33	-10.95	-0.05	0.06	0.0	0.0
		-1.09	-5.09e-03	-7.67e-05	0.0	10.0	1.33	-10.95	-0.05	0.06	-5.09e-03	-1.09

Pilas.	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
31	9	0.0	0.0	0.0	0.0	0.0	0.20	-2.16	-8.68e-03	0.01	0.0	0.0
		-0.22	-8.68e-04	-4.86e-05	0.0	10.0	0.20	-2.16	-8.68e-03	0.01	-8.68e-04	-0.22
31	10	0.0	0.0	-2.49e-06	0.0	0.0	1.17	-9.69	-0.04	0.05	0.0	0.0
		-0.97	-4.49e-03	-7.26e-05	0.0	10.0	1.17	-9.69	-0.04	0.05	-4.49e-03	-0.97
31	59	0.0	0.0	-1.30e-05	0.0	0.0	2.41	-7.76	-2.22	1.14	0.0	0.0
		-0.78	-0.22	3.10e-03	0.0	10.0	2.41	-7.76	-2.22	1.14	-0.22	-0.78
31	61	0.0	0.16	6.49e-06	0.0	0.0	0.53	-12.84	1.64	-1.26	0.0	0.0
		-1.28	0.0	-2.26e-03	0.0	10.0	0.53	-12.84	1.64	-1.26	0.16	-1.28
31	66	0.0	0.21	7.99e-06	0.0	0.0	-0.07	-11.63	2.13	-1.03	0.0	0.0
		-1.16	0.0	-3.25e-03	0.0	10.0	-0.07	-11.63	2.13	-1.03	0.21	-1.16
31	68	0.0	0.0	-1.22e-05	0.0	0.0	1.91	-6.94	-2.51	1.22	0.0	0.0
		-0.69	-0.25	2.97e-03	0.0	10.0	1.91	-6.94	-2.51	1.22	-0.25	-0.69
31	73	0.0	0.24	7.22e-06	0.0	0.0	0.43	-12.45	2.42	-1.11	0.0	0.0
		-1.25	0.0	-3.11e-03	0.0	10.0	0.43	-12.45	2.42	-1.11	0.24	-1.25
31	99	0.0	0.0	-8.43e-06	0.0	0.0	1.75	-8.35	-1.37	0.72	0.0	0.0
		-0.83	-0.14	1.69e-03	0.0	10.0	1.75	-8.35	-1.37	0.72	-0.14	-0.83
31	100	0.0	0.09	2.88e-06	0.0	0.0	0.66	-11.30	0.87	-0.67	0.0	0.0
		-1.13	0.0	-1.43e-03	0.0	10.0	0.66	-11.30	0.87	-0.67	0.09	-1.13
31	102	0.0	0.13	3.46e-06	0.0	0.0	0.59	-11.04	1.28	-0.61	0.0	0.0
		-1.10	0.0	-1.84e-03	0.0	10.0	0.59	-11.04	1.28	-0.61	0.13	-1.10
31	103	0.0	0.0	-8.28e-06	0.0	0.0	1.74	-8.31	-1.42	0.70	0.0	0.0
		-0.83	-0.14	1.77e-03	0.0	10.0	1.74	-8.31	-1.42	0.70	-0.14	-0.83
31	106	0.0	0.13	3.30e-06	0.0	0.0	0.60	-11.08	1.33	-0.59	0.0	0.0
		-1.11	0.0	-1.92e-03	0.0	10.0	0.60	-11.08	1.33	-0.59	0.13	-1.11
31	163	0.0	0.0	-7.27e-06	0.0	0.0	1.64	-8.61	-1.11	0.59	0.0	0.0
		-0.86	-0.11	1.35e-03	0.0	10.0	1.64	-8.61	-1.11	0.59	-0.11	-0.86
31	164	0.0	0.07	1.85e-06	0.0	0.0	0.76	-10.99	0.70	-0.53	0.0	0.0
		-1.10	0.0	-1.18e-03	0.0	10.0	0.76	-10.99	0.70	-0.53	0.07	-1.10
31	166	0.0	0.10	2.30e-06	0.0	0.0	0.70	-10.78	1.02	-0.48	0.0	0.0
		-1.08	0.0	-1.50e-03	0.0	10.0	0.70	-10.78	1.02	-0.48	0.10	-1.08
31	167	0.0	0.0	-7.15e-06	0.0	0.0	1.63	-8.58	-1.14	0.57	0.0	0.0
		-0.86	-0.11	1.41e-03	0.0	10.0	1.63	-8.58	-1.14	0.57	-0.11	-0.86
31	170	0.0	0.11	2.18e-06	0.0	0.0	0.71	-10.81	1.05	-0.46	0.0	0.0
		-1.08	0.0	-1.56e-03	0.0	10.0	0.71	-10.81	1.05	-0.46	0.11	-1.08
32	1	0.30	8.36e-04	1.15e-05	0.0	0.0	-5.47	2.99	8.36e-03	4.29e-03	0.0	0.0
		0.0	0.0	-7.58e-05	0.0	10.0	-5.47	2.99	8.36e-03	4.29e-03	8.36e-04	0.30
32	2	2.34	8.18e-03	8.68e-05	0.0	0.0	-39.82	23.39	0.08	0.03	0.0	0.0
		0.0	0.0	-2.38e-04	0.0	10.0	-39.82	23.39	0.08	0.03	8.18e-03	2.34
32	3	0.23	6.43e-04	8.88e-06	0.0	0.0	-4.21	2.30	6.43e-03	3.30e-03	0.0	0.0
		0.0	0.0	-5.83e-05	0.0	10.0	-4.21	2.30	6.43e-03	3.30e-03	6.43e-04	0.23
32	5	0.23	6.43e-04	8.88e-06	0.0	0.0	-4.21	2.30	6.43e-03	3.30e-03	0.0	0.0
		0.0	0.0	-5.83e-05	0.0	10.0	-4.21	2.30	6.43e-03	3.30e-03	6.43e-04	0.23
32	6	1.59	5.54e-03	5.90e-05	0.0	0.0	-27.11	15.90	0.06	0.02	0.0	0.0
		0.0	0.0	-1.66e-04	0.0	10.0	-27.11	15.90	0.06	0.02	5.54e-03	1.59
32	7	0.23	6.43e-04	8.88e-06	0.0	0.0	-4.21	2.30	6.43e-03	3.30e-03	0.0	0.0
		0.0	0.0	-5.83e-05	0.0	10.0	-4.21	2.30	6.43e-03	3.30e-03	6.43e-04	0.23
32	8	1.18	4.07e-03	4.40e-05	0.0	0.0	-20.24	11.82	0.04	0.02	0.0	0.0
		0.0	0.0	-1.34e-04	0.0	10.0	-20.24	11.82	0.04	0.02	4.07e-03	1.18
32	9	0.23	6.43e-04	8.88e-06	0.0	0.0	-4.21	2.30	6.43e-03	3.30e-03	0.0	0.0
		0.0	0.0	-5.83e-05	0.0	10.0	-4.21	2.30	6.43e-03	3.30e-03	6.43e-04	0.23
32	10	1.05	3.58e-03	3.90e-05	0.0	0.0	-17.95	10.46	0.04	0.02	0.0	0.0
		0.0	0.0	-1.23e-04	0.0	10.0	-17.95	10.46	0.04	0.02	3.58e-03	1.05
32	13	0.99	0.0	3.84e-05	0.0	0.0	-16.08	9.90	-7.81	-1.33	0.0	0.0
		0.0	-0.78	-5.50e-04	0.0	10.0	-16.08	9.90	-7.81	-1.33	-0.78	0.99
32	16	1.10	0.79	3.95e-05	0.0	0.0	-19.82	11.02	7.88	1.36	0.0	0.0
		0.0	0.0	3.04e-04	0.0	10.0	-19.82	11.02	7.88	1.36	0.79	1.10
32	43	2.40	0.0	4.45e-05	0.0	0.0	-22.02	24.04	-1.02	0.96	0.0	0.0
		0.0	-0.10	9.63e-04	0.0	10.0	-22.02	24.04	-1.02	0.96	-0.10	2.40
32	44	2.23	0.0	4.49e-05	0.0	0.0	-24.84	22.31	-0.59	0.80	0.0	0.0
		0.0	-0.06	8.94e-04	0.0	10.0	-24.84	22.31	-0.59	0.80	-0.06	2.23
32	49	0.0	0.07	3.31e-05	0.0	0.0	-11.05	-1.39	0.66	-0.77	0.0	0.0
		-0.14	0.0	-1.14e-03	0.0	10.0	-11.05	-1.39	0.66	-0.77	0.07	-0.14
32	50	0.0	0.11	3.35e-05	0.0	0.0	-13.88	-3.12	1.09	-0.93	0.0	0.0
		-0.31	0.0	-1.21e-03	0.0	10.0	-13.88	-3.12	1.09	-0.93	0.11	-0.31
32	76	0.96	0.0	3.87e-05	0.0	0.0	-17.67	9.62	-4.34	-0.80	0.0	0.0
		0.0	-0.43	-3.96e-04	0.0	10.0	-17.67	9.62	-4.34	-0.80	-0.43	0.96
32	77	1.13	0.44	3.92e-05	0.0	0.0	-18.23	11.31	4.42	0.83	0.0	0.0
		0.0	0.0	1.50e-04	0.0	10.0	-18.23	11.31	4.42	0.83	0.44	1.13
32	91	1.79	0.0	4.23e-05	0.0	0.0	-21.13	17.85	-0.43	0.52	0.0	0.0
		0.0	-0.04	4.85e-04	0.0	10.0	-21.13	17.85	-0.43	0.52	-0.04	1.79
32	94	0.31	0.05	3.57e-05	0.0	0.0	-14.76	3.07	0.51	-0.49	0.0	0.0

Pilas.	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		0.0	0.0	-7.31e-04	0.0	10.0	-14.76	3.07	0.51	-0.49	0.05	0.31
32	140	0.98	0.0	3.88e-05	0.0	0.0	-17.71	9.77	-3.37	-0.63	0.0	0.0
		0.0	-0.34	-3.39e-04	0.0	10.0	-17.71	9.77	-3.37	-0.63	-0.34	0.98
32	141	1.12	0.34	3.92e-05	0.0	0.0	-18.19	11.16	3.45	0.66	0.0	0.0
		0.0	0.0	9.27e-05	0.0	10.0	-18.19	11.16	3.45	0.66	0.34	1.12
32	155	1.64	0.0	4.16e-05	0.0	0.0	-20.51	16.41	-0.31	0.43	0.0	0.0
		0.0	-0.03	3.63e-04	0.0	10.0	-20.51	16.41	-0.31	0.43	-0.03	1.64
32	158	0.45	0.04	3.63e-05	0.0	0.0	-15.39	4.51	0.38	-0.40	0.0	0.0
		0.0	0.0	-6.09e-04	0.0	10.0	-15.39	4.51	0.38	-0.40	0.04	0.45
33	1	0.0	2.77e-03	-1.56e-05	0.0	0.0	-4.96	-1.48e-03	0.03	-4.65e-04	0.0	0.0
		-1.48e-04	0.0	-5.78e-05	0.0	10.0	-4.96	-1.48e-03	0.03	-4.65e-04	2.77e-03	-1.48e-04
33	2	0.11	0.02	-1.47e-04	0.0	0.0	-32.74	1.13	0.18	3.36e-03	0.0	0.0
		0.0	0.0	4.13e-05	0.0	10.0	-32.74	1.13	0.18	3.36e-03	0.02	0.11
33	3	0.0	2.13e-03	-1.20e-05	0.0	0.0	-3.82	-1.14e-03	0.02	-3.58e-04	0.0	0.0
		-1.14e-04	0.0	-4.45e-05	0.0	10.0	-3.82	-1.14e-03	0.02	-3.58e-04	2.13e-03	-1.14e-04
33	4	0.11	0.02	-1.44e-04	0.0	0.0	-31.59	1.13	0.17	3.47e-03	0.0	0.0
		0.0	0.0	5.47e-05	0.0	10.0	-31.59	1.13	0.17	3.47e-03	0.02	0.11
33	5	0.0	2.13e-03	-1.20e-05	0.0	0.0	-3.82	-1.14e-03	0.02	-3.58e-04	0.0	0.0
		-1.14e-04	0.0	-4.45e-05	0.0	10.0	-3.82	-1.14e-03	0.02	-3.58e-04	2.13e-03	-1.14e-04
33	6	0.08	0.01	-9.99e-05	0.0	0.0	-22.33	0.75	0.12	2.20e-03	0.0	0.0
		0.0	0.0	2.16e-05	0.0	10.0	-22.33	0.75	0.12	2.20e-03	0.01	0.08
33	7	0.0	2.13e-03	-1.20e-05	0.0	0.0	-3.82	-1.14e-03	0.02	-3.58e-04	0.0	0.0
		-1.14e-04	0.0	-4.45e-05	0.0	10.0	-3.82	-1.14e-03	0.02	-3.58e-04	2.13e-03	-1.14e-04
33	8	0.05	9.30e-03	-7.35e-05	0.0	0.0	-16.78	0.53	0.09	1.43e-03	0.0	0.0
		0.0	0.0	1.80e-06	0.0	10.0	-16.78	0.53	0.09	1.43e-03	9.30e-03	0.05
33	9	0.0	2.13e-03	-1.20e-05	0.0	0.0	-3.82	-1.14e-03	0.02	-3.58e-04	0.0	0.0
		-1.14e-04	0.0	-4.45e-05	0.0	10.0	-3.82	-1.14e-03	0.02	-3.58e-04	2.13e-03	-1.14e-04
33	10	0.05	8.27e-03	-6.47e-05	0.0	0.0	-14.93	0.45	0.08	1.17e-03	0.0	0.0
		0.0	0.0	-4.81e-06	0.0	10.0	-14.93	0.45	0.08	1.17e-03	8.27e-03	0.05
33	20	0.0	0.0	-1.08e-04	0.0	0.0	-12.25	-1.18	-4.69	0.80	0.0	0.0
		-0.12	-0.47	2.35e-03	0.0	10.0	-12.25	-1.18	-4.69	0.80	-0.47	-0.12
33	25	0.21	0.49	-2.10e-05	0.0	0.0	-17.61	2.08	4.86	-0.80	0.0	0.0
		0.0	0.0	-2.36e-03	0.0	10.0	-17.61	2.08	4.86	-0.80	0.49	0.21
33	43	0.0	0.0	-1.78e-04	0.0	0.0	-4.19	-1.74	-1.50	0.41	0.0	0.0
		-0.17	-0.15	8.20e-04	0.0	10.0	-4.19	-1.74	-1.50	0.41	-0.15	-0.17
33	44	0.0	0.0	-1.74e-04	0.0	0.0	-6.35	-2.22	-1.86	0.64	0.0	0.0
		-0.22	-0.19	7.79e-04	0.0	10.0	-6.35	-2.22	-1.86	0.64	-0.19	-0.22
33	49	0.31	0.20	4.49e-05	0.0	0.0	-23.51	3.12	2.03	-0.64	0.0	0.0
		0.0	0.0	-7.89e-04	0.0	10.0	-23.51	3.12	2.03	-0.64	0.20	0.31
33	50	0.26	0.17	4.85e-05	0.0	0.0	-25.67	2.64	1.67	-0.41	0.0	0.0
		0.0	0.0	-8.30e-04	0.0	10.0	-25.67	2.64	1.67	-0.41	0.17	0.26
33	79	0.0	0.0	-9.11e-05	0.0	0.0	-12.76	-0.33	-2.44	0.38	0.0	0.0
		-0.03	-0.24	1.30e-03	0.0	10.0	-12.76	-0.33	-2.44	0.38	-0.24	-0.03
33	82	0.12	0.26	-3.84e-05	0.0	0.0	-17.10	1.23	2.61	-0.38	0.0	0.0
		0.0	0.0	-1.31e-03	0.0	10.0	-17.10	1.23	2.61	-0.38	0.26	0.12
33	91	0.0	0.0	-1.30e-04	0.0	0.0	-9.31	-0.95	-0.90	0.30	0.0	0.0
		-0.10	-0.09	4.39e-04	0.0	10.0	-9.31	-0.95	-0.90	0.30	-0.09	-0.10
33	94	0.19	0.11	0.0	0.0	0.0	-20.54	1.85	1.06	-0.30	0.0	0.0
		0.0	0.0	-4.49e-04	0.0	10.0	-20.54	1.85	1.06	-0.30	0.11	0.19
33	143	0.0	0.0	-8.57e-05	0.0	0.0	-13.19	-0.17	-1.88	0.30	0.0	0.0
		-0.02	-0.19	1.01e-03	0.0	10.0	-13.19	-0.17	-1.88	0.30	-0.19	-0.02
33	146	0.11	0.20	-4.37e-05	0.0	0.0	-16.66	1.07	2.04	-0.30	0.0	0.0
		0.0	0.0	-1.02e-03	0.0	10.0	-16.66	1.07	2.04	-0.30	0.20	0.11
33	155	0.0	0.0	-1.17e-04	0.0	0.0	-10.41	-0.68	-0.68	0.24	0.0	0.0
		-0.07	-0.07	3.41e-04	0.0	10.0	-10.41	-0.68	-0.68	0.24	-0.07	-0.07
33	158	0.16	0.08	-1.26e-05	0.0	0.0	-19.45	1.58	0.85	-0.24	0.0	0.0
		0.0	0.0	-3.51e-04	0.0	10.0	-19.45	1.58	0.85	-0.24	0.08	0.16
34	1	0.07	1.08e-03	-2.50e-05	0.0	0.0	-6.68	0.65	0.01	0.20	0.0	0.0
		0.0	0.0	-2.25e-04	0.0	10.0	-6.68	0.65	0.01	0.20	1.08e-03	0.07
34	2	0.62	4.75e-03	-2.87e-04	0.0	0.0	-45.78	6.15	0.05	1.37	0.0	0.0
		0.0	0.0	-1.07e-03	0.0	10.0	-45.78	6.15	0.05	1.37	4.75e-03	0.62
34	3	0.05	8.29e-04	-1.93e-05	0.0	0.0	-5.14	0.50	8.29e-03	0.16	0.0	0.0
		0.0	0.0	-1.73e-04	0.0	10.0	-5.14	0.50	8.29e-03	0.16	8.29e-04	0.05
34	4	0.60	4.50e-03	-2.81e-04	0.0	0.0	-44.24	6.00	0.05	1.32	0.0	0.0
		0.0	0.0	-1.01e-03	0.0	10.0	-44.24	6.00	0.05	1.32	4.50e-03	0.60
34	5	0.05	8.29e-04	-1.93e-05	0.0	0.0	-5.14	0.50	8.29e-03	0.16	0.0	0.0
		0.0	0.0	-1.73e-04	0.0	10.0	-5.14	0.50	8.29e-03	0.16	8.29e-04	0.05
34	6	0.42	3.28e-03	-1.94e-04	0.0	0.0	-31.21	4.17	0.03	0.93	0.0	0.0
		0.0	0.0	-7.34e-04	0.0	10.0	-31.21	4.17	0.03	0.93	3.28e-03	0.42
34	7	0.05	8.29e-04	-1.93e-05	0.0	0.0	-5.14	0.50	8.29e-03	0.16	0.0	0.0
		0.0	0.0	-1.73e-04	0.0	10.0	-5.14	0.50	8.29e-03	0.16	8.29e-04	0.05

Pilas.	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
34	8	0.31	2.54e-03	-1.41e-04	0.0	0.0	-23.39	3.07	0.03	0.70	0.0	0.0
		0.0	0.0	-5.66e-04	0.0	10.0	-23.39	3.07	0.03	0.70	2.54e-03	0.31
34	9	0.05	8.29e-04	-1.93e-05	0.0	0.0	-5.14	0.50	8.29e-03	0.16	0.0	0.0
		0.0	0.0	-1.73e-04	0.0	10.0	-5.14	0.50	8.29e-03	0.16	8.29e-04	0.05
34	10	0.27	2.30e-03	-1.24e-04	0.0	0.0	-20.78	2.70	0.02	0.62	0.0	0.0
		0.0	0.0	-5.10e-04	0.0	10.0	-20.78	2.70	0.02	0.62	2.30e-03	0.27
34	35	0.29	0.0	-3.25e-04	0.0	0.0	-15.65	2.87	-4.65	0.57	0.0	0.0
		0.0	-0.46	1.98e-03	0.0	10.0	-15.65	2.87	-4.65	0.57	-0.46	0.29
34	42	0.25	0.47	7.71e-05	0.0	0.0	-25.91	2.53	4.70	0.67	0.0	0.0
		0.0	0.0	-3.00e-03	0.0	10.0	-25.91	2.53	4.70	0.67	0.47	0.25
34	46	0.81	0.0	6.93e-05	0.0	0.0	-39.34	8.08	-0.69	1.94	0.0	0.0
		0.0	-0.07	-1.98e-04	0.0	10.0	-39.34	8.08	-0.69	1.94	-0.07	0.81
34	47	0.0	0.07	-3.17e-04	0.0	0.0	-2.22	-2.68	0.73	-0.69	0.0	0.0
		-0.27	0.0	-8.21e-04	0.0	10.0	-2.22	-2.68	0.73	-0.69	0.07	-0.27
34	62	0.81	0.0	8.38e-05	0.0	0.0	-40.05	8.05	-0.64	2.00	0.0	0.0
		0.0	-0.06	-2.36e-04	0.0	10.0	-40.05	8.05	-0.64	2.00	-0.06	0.81
34	63	0.0	0.07	-3.32e-04	0.0	0.0	-1.51	-2.65	0.69	-0.76	0.0	0.0
		-0.27	0.0	-7.84e-04	0.0	10.0	-1.51	-2.65	0.69	-0.76	0.07	-0.27
34	87	0.29	0.0	-2.48e-04	0.0	0.0	-19.18	2.88	-2.42	0.67	0.0	0.0
		0.0	-0.24	8.38e-04	0.0	10.0	-19.18	2.88	-2.42	0.67	-0.24	0.29
34	90	0.25	0.25	0.0	0.0	0.0	-22.38	2.52	2.47	0.57	0.0	0.0
		0.0	0.0	-1.86e-03	0.0	10.0	-22.38	2.52	2.47	0.57	0.25	0.25
34	92	0.57	0.0	0.0	0.0	0.0	-30.10	5.69	-0.48	1.30	0.0	0.0
		0.0	-0.05	-3.32e-04	0.0	10.0	-30.10	5.69	-0.48	1.30	-0.05	0.57
34	93	0.0	0.05	-2.48e-04	0.0	0.0	-11.46	-0.29	0.52	-0.05	0.0	0.0
		-0.03	0.0	-6.88e-04	0.0	10.0	-11.46	-0.29	0.52	-0.05	0.05	-0.03
34	100	0.57	0.0	8.51e-06	0.0	0.0	-30.51	5.68	-0.45	1.34	0.0	0.0
		0.0	-0.05	-3.54e-04	0.0	10.0	-30.51	5.68	-0.45	1.34	-0.05	0.57
34	101	0.0	0.05	-2.56e-04	0.0	0.0	-11.05	-0.28	0.50	-0.09	0.0	0.0
		-0.03	0.0	-6.66e-04	0.0	10.0	-11.05	-0.28	0.50	-0.09	0.05	-0.03
34	151	0.28	0.0	-2.21e-04	0.0	0.0	-19.46	2.82	-1.88	0.66	0.0	0.0
		0.0	-0.19	5.38e-04	0.0	10.0	-19.46	2.82	-1.88	0.66	-0.19	0.28
34	154	0.26	0.19	-2.65e-05	0.0	0.0	-22.10	2.59	1.92	0.59	0.0	0.0
		0.0	0.0	-1.56e-03	0.0	10.0	-22.10	2.59	1.92	0.59	0.19	0.26
34	156	0.51	0.0	-2.33e-05	0.0	0.0	-28.28	5.10	-0.36	1.17	0.0	0.0
		0.0	-0.04	-3.80e-04	0.0	10.0	-28.28	5.10	-0.36	1.17	-0.04	0.51
34	164	0.51	0.0	-1.66e-05	0.0	0.0	-28.62	5.09	-0.34	1.20	0.0	0.0
		0.0	-0.03	-3.97e-04	0.0	10.0	-28.62	5.09	-0.34	1.20	-0.03	0.51
34	165	0.03	0.04	-2.31e-04	0.0	0.0	-12.95	0.31	0.39	0.05	0.0	0.0
		0.0	0.0	-6.22e-04	0.0	10.0	-12.95	0.31	0.39	0.05	0.04	0.03
35	2	1.46	6.89	1.75e-03	0.0	0.0	-14.98	1.04	3.58	2.74e-03	-2.87	-1.36
		-1.36	-2.87	-3.21e-03	0.0	272.5	-13.90	1.04	3.58	2.74e-03	6.89	1.46
35	3	0.18	0.78	2.29e-04	0.0	0.0	-3.06	0.12	0.43	3.00e-04	-0.39	-0.14
		-0.14	-0.39	-5.53e-04	0.0	272.5	-2.23	0.12	0.43	3.00e-04	0.78	0.18
35	5	0.18	0.78	2.29e-04	0.0	0.0	-3.06	0.12	0.43	3.00e-04	-0.39	-0.14
		-0.14	-0.39	-5.53e-04	0.0	272.5	-2.23	0.12	0.43	3.00e-04	0.78	0.18
35	6	1.00	4.70	1.20e-03	0.0	0.0	-10.39	0.71	2.45	1.87e-03	-1.96	-0.93
		-0.93	-1.96	-2.21e-03	0.0	272.5	-9.56	0.71	2.45	1.87e-03	4.70	1.00
35	7	0.18	0.78	2.29e-04	0.0	0.0	-3.06	0.12	0.43	3.00e-04	-0.39	-0.14
		-0.14	-0.39	-5.53e-04	0.0	272.5	-2.23	0.12	0.43	3.00e-04	0.78	0.18
35	8	0.75	3.52	9.08e-04	0.0	0.0	-8.19	0.53	1.84	1.40e-03	-1.49	-0.69
		-0.69	-1.49	-1.71e-03	0.0	272.5	-7.36	0.53	1.84	1.40e-03	3.52	0.75
35	9	0.18	0.78	2.29e-04	0.0	0.0	-3.06	0.12	0.43	3.00e-04	-0.39	-0.14
		-0.14	-0.39	-5.53e-04	0.0	272.5	-2.23	0.12	0.43	3.00e-04	0.78	0.18
35	10	0.67	3.13	8.11e-04	0.0	0.0	-7.46	0.47	1.64	1.24e-03	-1.34	-0.61
		-0.61	-1.34	-1.54e-03	0.0	272.5	-6.63	0.47	1.64	1.24e-03	3.13	0.67
35	42	5.03	15.53	4.27e-03	0.0	0.0	-11.16	-2.93	11.25	-6.08e-03	-15.14	5.03
		-3.52	-15.14	-0.02	0.0	272.5	-10.33	-2.93	11.25	-6.08e-03	15.53	-3.52
35	61	28.86	2.25	0.02	0.0	0.0	17.09	-19.65	0.98	2.31e-04	-0.42	28.86
		-24.11	-0.42	-6.30e-04	0.0	272.5	17.92	-19.65	0.98	2.31e-04	2.25	-24.11
35	62	29.43	3.01	0.02	0.0	0.0	15.17	-19.26	1.36	7.84e-04	-0.72	29.43
		-23.63	-0.72	-8.91e-04	0.0	272.5	16.00	-19.26	1.36	7.84e-04	3.01	-23.63
35	63	24.97	3.25	-0.02	0.0	0.0	-30.09	20.20	1.92	1.70e-03	-1.95	-30.66
		-30.66	-1.95	-2.39e-03	0.0	272.5	-29.26	20.20	1.92	1.70e-03	3.25	24.97
35	64	25.45	4.01	-0.02	0.0	0.0	-32.01	20.59	2.30	2.25e-03	-2.25	-30.08
		-30.08	-2.25	-2.61e-03	0.0	272.5	-31.18	20.59	2.30	2.25e-03	4.01	25.45
35	90	2.51	10.09	2.73e-03	0.0	0.0	-9.03	-1.62	7.10	-3.16e-03	-9.25	2.51
		-1.91	-9.25	-0.01	0.0	272.5	-8.20	-1.62	7.10	-3.16e-03	10.09	-1.91
35	100	16.67	2.86	0.01	0.0	0.0	6.23	-11.10	1.39	7.95e-04	-0.92	16.67
		-13.58	-0.92	-1.07e-03	0.0	272.5	7.06	-11.10	1.39	7.95e-04	2.86	-13.58
35	101	14.93	3.40	-8.95e-03	0.0	0.0	-21.15	12.05	1.89	1.69e-03	-1.75	-17.90

Pilas.	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		-17.90	-1.75	-2.03e-03	0.0	272.5	-20.32	12.05	1.89	1.69e-03	3.40	14.93
35	154	1.95	8.56	2.38e-03	0.0	0.0	-8.58	-1.25	5.89	-2.20e-03	-7.50	1.95
		-1.45	-7.50	-8.54e-03	0.0	272.5	-7.75	-1.25	5.89	-2.20e-03	8.56	-1.45
35	164	13.29	2.97	8.66e-03	0.0	0.0	3.51	-8.84	1.48	8.39e-04	-1.06	13.29
		-10.79	-1.06	-1.21e-03	0.0	272.5	4.34	-8.84	1.48	8.39e-04	2.97	-10.79
35	165	12.13	3.29	-7.04e-03	0.0	0.0	-18.43	9.78	1.80	1.64e-03	-1.61	-14.51
		-14.51	-1.61	-1.87e-03	0.0	272.5	-17.60	9.78	1.80	1.64e-03	3.29	12.13
42	2	-5.23e-03	-0.87	-1.07e-03	0.0	0.0	-34.29	1.89	-0.09	-2.98e-03	-0.87	-2.36
		-2.36	-0.98	-3.27e-03	0.0	125.0	-33.80	1.89	-0.09	-2.98e-03	-0.98	-5.23e-03
42	3	-1.49e-04	-0.21	-5.45e-05	0.0	0.0	-4.66	0.09	-0.02	-1.42e-03	-0.21	-0.11
		-0.11	-0.23	-8.23e-04	0.0	125.0	-4.28	0.09	-0.02	-1.42e-03	-0.23	-1.49e-04
42	5	-1.49e-04	-0.21	-5.45e-05	0.0	0.0	-4.66	0.09	-0.02	-1.42e-03	-0.21	-0.11
		-0.11	-0.23	-8.23e-04	0.0	125.0	-4.28	0.09	-0.02	-1.42e-03	-0.23	-1.49e-04
42	6	-3.51e-03	-0.60	-7.20e-04	0.0	0.0	-23.48	1.27	-0.06	-2.18e-03	-0.60	-1.59
		-1.59	-0.68	-2.29e-03	0.0	125.0	-23.10	1.27	-0.06	-2.18e-03	-0.68	-3.51e-03
42	7	-1.49e-04	-0.21	-5.45e-05	0.0	0.0	-4.66	0.09	-0.02	-1.42e-03	-0.21	-0.11
		-0.11	-0.23	-8.23e-04	0.0	125.0	-4.28	0.09	-0.02	-1.42e-03	-0.23	-1.49e-04
42	8	-2.50e-03	-0.49	-5.20e-04	0.0	0.0	-17.84	0.91	-0.05	-1.95e-03	-0.49	-1.14
		-1.14	-0.55	-1.85e-03	0.0	125.0	-17.46	0.91	-0.05	-1.95e-03	-0.55	-2.50e-03
42	9	-1.49e-04	-0.21	-5.45e-05	0.0	0.0	-4.66	0.09	-0.02	-1.42e-03	-0.21	-0.11
		-0.11	-0.23	-8.23e-04	0.0	125.0	-4.28	0.09	-0.02	-1.42e-03	-0.23	-1.49e-04
42	10	-2.16e-03	-0.45	-4.54e-04	0.0	0.0	-15.96	0.80	-0.05	-1.88e-03	-0.45	-1.00
		-1.00	-0.50	-1.70e-03	0.0	125.0	-15.58	0.80	-0.05	-1.88e-03	-0.50	-2.16e-03
42	20	0.50	-7.30	-8.99e-04	0.0	0.0	-27.89	-0.41	-4.66	-0.06	-7.30	0.50
		-0.02	-13.08	6.49e-03	0.0	125.0	-27.51	-0.41	-4.66	-0.06	-13.08	-0.02
42	25	0.01	12.07	6.71e-05	0.0	0.0	-4.02	2.00	4.57	0.06	6.41	-2.50
		-2.50	6.41	-9.90e-03	0.0	125.0	-3.64	2.00	4.57	0.06	12.07	0.01
42	30	-8.89e-03	-7.13	2.68e-04	0.0	0.0	-33.17	1.11	-4.57	-0.07	-7.13	-1.39
		-1.39	-12.79	6.39e-03	0.0	125.0	-32.79	1.11	-4.57	-0.07	-12.79	-8.89e-03
42	31	4.56e-03	11.78	-1.18e-03	0.0	0.0	1.26	0.48	4.48	0.06	6.24	-0.60
		-0.60	6.24	-9.80e-03	0.0	125.0	1.64	0.48	4.48	0.06	11.78	4.56e-03
42	44	2.50	-2.81	-2.08e-03	0.0	0.0	-11.58	-2.01	-1.59	-0.01	-2.81	2.50
		-0.02	-4.75	1.17e-03	0.0	125.0	-11.20	-2.01	-1.59	-0.01	-4.75	-0.02
42	49	0.01	3.74	1.17e-03	0.0	0.0	-20.33	3.60	1.50	8.86e-03	1.92	-4.50
		-4.50	1.92	-4.38e-03	0.0	125.0	-19.95	3.60	1.50	8.86e-03	3.74	0.01
42	79	-8.86e-03	-4.14	-9.12e-04	0.0	0.0	-21.83	0.20	-2.55	-0.03	-4.14	-0.25
		-0.25	-7.33	2.81e-03	0.0	125.0	-21.45	0.20	-2.55	-0.03	-7.33	-8.86e-03
42	82	4.54e-03	6.32	5.08e-05	0.0	0.0	-10.09	1.39	2.46	0.03	3.24	-1.74
		-1.74	3.24	-6.15e-03	0.0	125.0	-9.70	1.39	2.46	0.03	6.32	4.54e-03
42	84	-5.14e-03	-4.04	-2.35e-04	0.0	0.0	-24.88	1.08	-2.50	-0.04	-4.04	-1.35
		-1.35	-7.16	2.75e-03	0.0	125.0	-24.50	1.08	-2.50	-0.04	-7.16	-5.14e-03
42	85	8.16e-04	6.15	-6.72e-04	0.0	0.0	-7.03	0.51	2.41	0.03	3.15	-0.64
		-0.64	3.15	-6.10e-03	0.0	125.0	-6.65	0.51	2.41	0.03	6.15	8.16e-04
42	91	0.91	-1.67	-1.60e-03	0.0	0.0	-12.64	-0.74	-0.87	-6.44e-03	-1.67	0.91
		-8.90e-03	-2.76	-2.84e-04	0.0	125.0	-12.26	-0.74	-0.87	-6.44e-03	-2.76	-8.90e-03
42	94	4.57e-03	1.75	6.90e-04	0.0	0.0	-19.27	2.33	0.78	2.69e-03	0.78	-2.91
		-2.91	0.78	-3.12e-03	0.0	125.0	-18.89	2.33	0.78	2.69e-03	1.75	4.57e-03
42	143	-7.42e-03	-3.31	-8.20e-04	0.0	0.0	-20.47	0.32	-1.99	-0.03	-3.31	-0.40
		-0.40	-5.80	1.85e-03	0.0	125.0	-20.09	0.32	-1.99	-0.03	-5.80	-7.42e-03
42	146	3.09e-03	4.79	-8.82e-05	0.0	0.0	-11.44	1.27	1.90	0.02	2.42	-1.59
		-1.59	2.42	-5.15e-03	0.0	125.0	-11.06	1.27	1.90	0.02	4.79	3.09e-03
42	148	-4.43e-03	-3.23	-2.75e-04	0.0	0.0	-22.93	1.03	-1.95	-0.03	-3.23	-1.29
		-1.29	-5.67	1.81e-03	0.0	125.0	-22.55	1.03	-1.95	-0.03	-5.67	-4.43e-03
42	149	1.02e-04	4.66	-6.32e-04	0.0	0.0	-8.98	0.56	1.86	0.02	2.34	-0.70
		-0.70	2.34	-5.11e-03	0.0	125.0	-8.60	0.56	1.86	0.02	4.66	1.02e-04
42	155	0.54	-1.40	-1.37e-03	0.0	0.0	-13.22	-0.44	-0.68	-5.26e-03	-1.40	0.54
		-7.55e-03	-2.26	-6.04e-04	0.0	125.0	-12.84	-0.44	-0.68	-5.26e-03	-2.26	-7.55e-03
42	158	3.22e-03	1.25	4.67e-04	0.0	0.0	-18.69	2.03	0.59	1.51e-03	0.51	-2.54
		-2.54	0.51	-2.80e-03	0.0	125.0	-18.31	2.03	0.59	1.51e-03	1.25	3.22e-03
Pilas.		M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3		N	V 2	V 3	T		
		-30.68	-22.62	-0.05	0.0		-63.41	-21.65	-16.36	-2.98		
		29.43	22.07	0.04	0.0		18.17	38.12	15.65	3.21		

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		kN m	kN m	m	kN	cm	kN	kN	kN	kN m	kN m	kN m
7	2	18.13	0.86	-4.77e-03	-0.73	0.0	-2.48	13.97	1.01	-2.26e-03	-1.00	-6.87
		-6.87	-1.00	-1.89e-03	0.0	183.8	-2.48	13.24	1.01	-2.26e-03	0.86	18.13
7	3	2.15	0.08	-2.99e-04	-0.56	0.0	-0.33	1.87	0.10	-2.65e-04	-0.10	-0.78
		-0.78	-0.10	-2.00e-04	0.0	183.8	-0.33	1.31	0.10	-2.65e-04	0.08	2.15



Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
7	5	2.15	0.08	-2.99e-04	-0.56	0.0	-0.33	1.87	0.10	-2.65e-04	-0.10	-0.78
		-0.78	-0.10	-2.00e-04	0.0	183.8	-0.33	1.31	0.10	-2.65e-04	0.08	2.15
7	6	12.37	0.58	-3.22e-03	-0.56	0.0	-1.70	9.56	0.69	-1.54e-03	-0.68	-4.69
		-4.69	-0.68	-1.29e-03	0.0	183.8	-1.70	9.00	0.69	-1.54e-03	0.58	12.37
7	7	2.15	0.08	-2.99e-04	-0.56	0.0	-0.33	1.87	0.10	-2.65e-04	-0.10	-0.78
		-0.78	-0.10	-2.00e-04	0.0	183.8	-0.33	1.31	0.10	-2.65e-04	0.08	2.15
7	8	9.31	0.43	-2.33e-03	-0.56	0.0	-1.29	7.25	0.51	-1.16e-03	-0.51	-3.51
		-3.51	-0.51	-9.62e-04	0.0	183.8	-1.29	6.69	0.51	-1.16e-03	0.43	9.31
7	9	2.15	0.08	-2.99e-04	-0.56	0.0	-0.33	1.87	0.10	-2.65e-04	-0.10	-0.78
		-0.78	-0.10	-2.00e-04	0.0	183.8	-0.33	1.31	0.10	-2.65e-04	0.08	2.15
7	10	8.28	0.38	-2.04e-03	-0.56	0.0	-1.15	6.49	0.45	-1.03e-03	-0.45	-3.12
		-3.12	-0.45	-8.54e-04	0.0	183.8	-1.15	5.93	0.45	-1.03e-03	0.38	8.28
7	42	9.02	-0.67	-1.11e-03	-0.56	0.0	-8.91	13.55	-0.96	-1.70e-03	-0.67	-15.52
		-15.52	-2.23	1.91e-03	0.0	183.8	-8.91	12.99	-0.96	-1.70e-03	-2.23	9.02
7	45	8.40	9.60	-2.50e-03	-0.56	0.0	-10.36	5.02	-11.26	-5.24e-03	9.60	-0.95
		-0.95	-11.13	3.71e-03	0.0	183.8	-10.36	4.46	-11.26	-5.24e-03	-11.13	8.40
7	48	8.17	11.90	-1.58e-03	-0.56	0.0	8.07	7.95	12.17	3.18e-03	-10.49	-5.30
		-5.30	-10.49	-5.35e-03	0.0	183.8	8.07	7.39	12.17	3.18e-03	11.90	8.17
7	67	5.78	10.66	-1.91e-03	-0.56	0.0	11.21	2.32	10.07	4.25e-03	-7.78	3.29
		3.29	-7.78	-4.33e-03	0.0	183.8	11.21	1.76	10.07	4.25e-03	10.66	5.78
7	74	10.79	6.89	-2.19e-03	-0.56	0.0	-13.50	10.65	-9.16	-6.31e-03	6.89	-9.53
		-9.53	-9.89	2.77e-03	0.0	183.8	-13.50	10.09	-9.16	-6.31e-03	-9.89	10.79
7	90	8.06	-0.43	-1.31e-03	-0.56	0.0	-5.47	10.10	-0.55	-1.38e-03	-0.43	-10.08
		-10.08	-1.31	8.31e-04	0.0	183.8	-5.47	9.54	-0.55	-1.38e-03	-1.31	8.06
7	92	9.01	5.24	-2.49e-03	-0.56	0.0	-6.69	6.13	-6.18	-3.52e-03	5.24	-2.10
		-2.10	-6.14	1.77e-03	0.0	183.8	-6.69	5.57	-6.18	-3.52e-03	-6.14	9.01
7	93	7.55	6.90	-1.58e-03	-0.56	0.0	4.40	6.84	7.08	1.45e-03	-6.14	-4.14
		-4.14	-6.14	-3.43e-03	0.0	183.8	4.40	6.28	7.08	1.45e-03	6.90	7.55
7	103	7.49	6.53	-2.15e-03	-0.56	0.0	5.85	4.55	6.21	2.00e-03	-4.86	0.38
		0.38	-4.86	-2.91e-03	0.0	183.8	5.85	3.99	6.21	2.00e-03	6.53	7.49
7	104	9.39	4.82	-2.40e-03	-0.56	0.0	-6.68	6.42	-5.79	-4.43e-03	4.82	-2.72
		-2.72	-5.86	7.40e-04	0.0	183.8	-6.68	5.86	-5.79	-4.43e-03	-5.86	9.39
7	106	9.08	3.96	-1.94e-03	-0.56	0.0	-8.15	8.42	-5.31	-4.06e-03	3.96	-6.62
		-6.62	-5.77	1.35e-03	0.0	183.8	-8.15	7.86	-5.31	-4.06e-03	-5.77	9.08
7	134	12.86	1.96	-3.60e-03	-0.56	0.0	-4.14	8.00	-2.07	-3.24e-03	1.96	-1.82
		-1.82	-1.90	-8.29e-04	0.0	183.8	-4.14	7.44	-2.07	-3.24e-03	-1.90	12.86
7	154	8.11	-0.39	-1.48e-03	-0.56	0.0	-4.57	9.30	-0.38	-1.33e-03	-0.39	-8.55
		-8.55	-0.99	5.11e-04	0.0	183.8	-4.57	8.74	-0.38	-1.33e-03	-0.99	8.11
7	157	7.70	5.63	-1.68e-03	-0.56	0.0	3.34	6.75	5.79	9.62e-04	-5.01	-3.89
		-3.89	-5.01	-2.94e-03	0.0	183.8	3.34	6.19	5.79	9.62e-04	5.63	7.70
7	167	7.64	5.34	-2.12e-03	-0.56	0.0	4.48	4.95	5.10	1.41e-03	-4.01	-0.36
		-0.36	-4.01	-2.49e-03	0.0	183.8	4.48	4.40	5.10	1.41e-03	5.34	7.64
7	168	9.17	3.78	-2.32e-03	-0.56	0.0	-5.63	6.46	-4.57	-3.76e-03	3.78	-2.86
		-2.86	-4.65	4.70e-04	0.0	183.8	-5.63	5.90	-4.57	-3.76e-03	-4.65	9.17
7	170	8.93	3.12	-1.96e-03	-0.56	0.0	-6.78	8.02	-4.20	-3.48e-03	3.12	-5.89
		-5.89	-4.57	9.42e-04	0.0	183.8	-6.78	7.46	-4.20	-3.48e-03	-4.57	8.93
9	2	34.87	1.05	-9.43e-03	-0.73	0.0	-7.09	25.71	1.09	-2.25e-03	-0.96	-11.72
		-11.72	-0.96	-1.74e-03	0.0	183.8	-7.09	24.98	1.09	-2.25e-03	1.05	34.87
9	3	4.16	0.09	-8.41e-04	-0.56	0.0	-0.83	3.28	0.10	-2.63e-04	-0.09	-1.36
		-1.36	-0.09	-1.85e-04	0.0	183.8	-0.83	2.72	0.10	-2.63e-04	0.09	4.16
9	5	4.16	0.09	-8.41e-04	-0.56	0.0	-0.83	3.28	0.10	-2.63e-04	-0.09	-1.36
		-1.36	-0.09	-1.85e-04	0.0	183.8	-0.83	2.72	0.10	-2.63e-04	0.09	4.16
9	6	23.80	0.71	-6.40e-03	-0.56	0.0	-4.84	17.58	0.74	-1.53e-03	-0.65	-7.99
		-7.99	-0.65	-1.18e-03	0.0	183.8	-4.84	17.02	0.74	-1.53e-03	0.71	23.80
9	7	4.16	0.09	-8.41e-04	-0.56	0.0	-0.83	3.28	0.10	-2.63e-04	-0.09	-1.36
		-1.36	-0.09	-1.85e-04	0.0	183.8	-0.83	2.72	0.10	-2.63e-04	0.09	4.16
9	8	17.91	0.53	-4.73e-03	-0.56	0.0	-3.64	13.29	0.55	-1.15e-03	-0.48	-6.00
		-6.00	-0.48	-8.84e-04	0.0	183.8	-3.64	12.73	0.55	-1.15e-03	0.53	17.91
9	9	4.16	0.09	-8.41e-04	-0.56	0.0	-0.83	3.28	0.10	-2.63e-04	-0.09	-1.36
		-1.36	-0.09	-1.85e-04	0.0	183.8	-0.83	2.72	0.10	-2.63e-04	0.09	4.16
9	10	15.95	0.46	-4.17e-03	-0.56	0.0	-3.24	11.86	0.48	-1.03e-03	-0.43	-5.34
		-5.34	-0.43	-7.84e-04	0.0	183.8	-3.24	11.30	0.48	-1.03e-03	0.46	15.95
9	24	19.97	4.54	-5.22e-03	-0.56	0.0	-13.65	22.14	6.14	2.62e-03	-7.29	-22.07
		-22.07	-7.29	5.67e-04	0.0	183.8	-13.65	21.58	6.14	2.62e-03	4.54	19.97
9	45	11.06	9.82	-2.10e-03	-0.56	0.0	10.20	5.73	-10.75	-5.24e-03	9.82	1.64
		1.64	-10.43	3.73e-03	0.0	183.8	10.20	5.17	-10.75	-5.24e-03	-10.43	11.06
9	46	14.13	9.34	-2.92e-03	-0.56	0.0	9.14	7.95	-11.30	-5.38e-03	9.34	0.61
		0.61	-10.98	3.62e-03	0.0	183.8	9.14	7.39	-11.30	-5.38e-03	-10.98	14.13
9	47	17.76	11.91	-5.56e-03	-0.56	0.0	-15.62	15.77	12.27	3.33e-03	-10.19	-11.29
		-11.29	-10.19	-5.12e-03	0.0	183.8	-15.62	15.21	12.27	3.33e-03	11.91	17.76
9	48	20.83	11.36	-6.42e-03	-0.56	0.0	-16.67	17.99	11.71	3.19e-03	-10.67	-12.32



Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		-12.32	-10.67	-5.28e-03	0.0	183.8	-16.67	17.43	11.71	3.19e-03	11.36	20.83
9	81	17.36	2.99	-4.52e-03	-0.56	0.0	-8.93	17.12	3.91	1.12e-03	-4.24	-14.65
		-14.65	-4.24	-3.58e-04	0.0	183.8	-8.93	16.56	3.91	1.12e-03	2.99	17.36
9	92	14.01	5.38	-3.16e-03	-0.56	0.0	4.25	8.96	-6.20	-3.51e-03	5.38	-1.62
		-1.62	-6.03	1.83e-03	0.0	183.8	4.25	8.40	-6.20	-3.51e-03	-6.03	14.01
9	93	17.89	6.96	-5.23e-03	-0.56	0.0	-10.73	14.76	7.17	1.46e-03	-6.23	-9.06
		-9.06	-6.23	-3.36e-03	0.0	183.8	-10.73	14.20	7.17	1.46e-03	6.96	17.89
9	101	18.53	6.81	-5.54e-03	-0.56	0.0	-10.63	15.27	6.93	2.55e-03	-5.95	-9.54
		-9.54	-5.95	-2.23e-03	0.0	183.8	-10.63	14.71	6.93	2.55e-03	6.81	18.53
9	120	22.66	3.08	-6.30e-03	-0.56	0.0	-10.23	19.04	3.49	1.02e-03	-4.95	-12.48
		-12.48	-4.95	-1.43e-03	0.0	183.8	-10.23	18.48	3.49	1.02e-03	3.08	22.66
9	145	17.07	2.48	-4.46e-03	-0.56	0.0	-7.71	15.96	3.20	6.70e-04	-3.43	-12.58
		-12.58	-3.43	-4.69e-04	0.0	183.8	-7.71	15.41	3.20	6.70e-04	2.48	17.07
9	156	14.39	4.23	-3.35e-03	-0.56	0.0	2.77	9.57	-4.89	-3.02e-03	4.23	-2.42
		-2.42	-4.76	1.34e-03	0.0	183.8	2.77	9.01	-4.89	-3.02e-03	-4.76	14.39
9	157	17.50	5.69	-5.02e-03	-0.56	0.0	-9.24	14.16	5.86	9.69e-04	-5.08	-8.26
		-8.26	-5.08	-2.87e-03	0.0	183.8	-9.24	13.60	5.86	9.69e-04	5.69	17.50
9	165	18.02	5.57	-5.27e-03	-0.56	0.0	-9.16	14.55	5.67	1.84e-03	-4.85	-8.63
		-8.63	-4.85	-1.96e-03	0.0	183.8	-9.16	14.00	5.67	1.84e-03	5.57	18.02
10	2	18.92	1.41	2.59e-05	-0.04	0.0	-2.30	7.91	7.71	-2.26e-03	0.64	18.13
		18.13	0.64	-8.27e-05	0.0	10.0	-2.30	7.87	7.71	-2.26e-03	1.41	18.92
10	3	2.21	0.13	2.13e-05	-0.03	0.0	-0.31	0.63	0.66	-2.65e-04	0.06	2.15
		2.15	0.06	-8.94e-06	0.0	10.0	-0.31	0.60	0.66	-2.65e-04	0.13	2.21
10	5	2.21	0.13	2.13e-05	-0.03	0.0	-0.31	0.63	0.66	-2.65e-04	0.06	2.15
		2.15	0.06	-8.94e-06	0.0	10.0	-0.31	0.60	0.66	-2.65e-04	0.13	2.21
10	6	12.91	0.96	2.01e-05	-0.03	0.0	-1.57	5.36	5.23	-1.54e-03	0.43	12.37
		12.37	0.43	-5.64e-05	0.0	10.0	-1.57	5.33	5.23	-1.54e-03	0.96	12.91
10	7	2.21	0.13	2.13e-05	-0.03	0.0	-0.31	0.63	0.66	-2.65e-04	0.06	2.15
		2.15	0.06	-8.94e-06	0.0	10.0	-0.31	0.60	0.66	-2.65e-04	0.13	2.21
10	8	9.70	0.71	2.04e-05	-0.03	0.0	-1.19	3.94	3.86	-1.16e-03	0.32	9.31
		9.31	0.32	-4.21e-05	0.0	10.0	-1.19	3.91	3.86	-1.16e-03	0.71	9.70
10	9	2.21	0.13	2.13e-05	-0.03	0.0	-0.31	0.63	0.66	-2.65e-04	0.06	2.15
		2.15	0.06	-8.94e-06	0.0	10.0	-0.31	0.60	0.66	-2.65e-04	0.13	2.21
10	10	8.63	0.62	2.06e-05	-0.03	0.0	-1.06	3.47	3.40	-1.03e-03	0.28	8.28
		8.28	0.28	-3.74e-05	0.0	10.0	-1.06	3.43	3.40	-1.03e-03	0.62	8.63
10	51	6.64	11.45	2.86e-05	-0.03	0.0	10.53	0.65	5.37	2.38e-03	11.15	6.64
		6.64	11.15	3.63e-05	0.0	10.0	10.53	0.62	5.37	2.38e-03	11.45	6.64
10	52	8.99	12.07	2.79e-05	-0.03	0.0	9.89	1.30	5.80	2.24e-03	11.73	8.68
		8.68	11.73	3.99e-05	0.0	10.0	9.89	1.27	5.80	2.24e-03	12.07	8.99
10	57	8.27	-10.82	1.32e-05	-0.03	0.0	-12.02	5.63	1.00	-4.31e-03	-11.16	7.88
		7.88	-11.16	-1.15e-04	0.0	10.0	-12.02	5.60	1.00	-4.31e-03	-10.82	8.27
10	58	10.62	-10.20	1.26e-05	-0.03	0.0	-12.66	6.28	1.44	-4.45e-03	-10.58	10.17
		10.17	-10.58	-1.11e-04	0.0	10.0	-12.66	6.25	1.44	-4.45e-03	-10.20	10.62
10	95	8.15	7.10	2.50e-05	-0.03	0.0	5.49	2.02	4.64	9.15e-04	6.77	7.85
		7.85	6.77	6.55e-06	0.0	10.0	5.49	1.99	4.64	9.15e-04	7.10	8.15
10	98	9.11	-5.85	1.61e-05	-0.03	0.0	-7.62	4.91	2.17	-2.98e-03	-6.20	8.72
		8.72	-6.20	-8.13e-05	0.0	10.0	-7.62	4.88	2.17	-2.98e-03	-5.85	9.11
10	104	9.69	-5.38	-1.64e-05	-0.03	0.0	-7.01	3.30	3.48	-4.43e-03	-5.62	9.39
		9.39	-5.62	-1.43e-04	0.0	10.0	-7.01	3.27	3.48	-4.43e-03	-5.38	9.69
10	105	7.57	6.63	5.75e-05	-0.03	0.0	4.88	3.63	3.32	2.37e-03	6.19	7.18
		7.18	6.19	6.80e-05	0.0	10.0	4.88	3.60	3.32	2.37e-03	6.63	7.57
10	134	13.24	-1.17	-1.55e-05	-0.03	0.0	-4.87	3.27	5.16	-3.24e-03	-1.46	12.86
		12.86	-1.46	-8.56e-05	0.0	10.0	-4.87	3.24	5.16	-3.24e-03	-1.17	13.24
10	135	4.02	2.42	5.65e-05	-0.03	0.0	2.74	3.66	1.64	1.18e-03	2.03	3.70
		3.70	2.03	1.09e-05	0.0	10.0	2.74	3.63	1.64	1.18e-03	2.42	4.02
10	159	8.24	5.84	2.45e-05	-0.03	0.0	4.21	2.33	4.37	5.43e-04	5.50	7.93
		7.93	5.50	-6.51e-06	0.0	10.0	4.21	2.30	4.37	5.43e-04	5.84	8.24
10	162	9.02	-4.59	1.66e-05	-0.03	0.0	-6.34	4.60	2.43	-2.60e-03	-4.94	8.64
		8.64	-4.94	-7.28e-05	0.0	10.0	-6.34	4.57	2.43	-2.60e-03	-4.59	9.02
10	168	9.48	-4.22	-9.25e-06	-0.03	0.0	-5.87	3.36	3.45	-3.76e-03	-4.48	9.17
		9.17	-4.48	-1.22e-04	0.0	10.0	-5.87	3.33	3.45	-3.76e-03	-4.22	9.48
10	169	7.78	5.47	5.00e-05	-0.03	0.0	3.74	3.57	3.36	1.70e-03	5.05	7.40
		7.40	5.05	4.75e-05	0.0	10.0	3.74	3.54	3.36	1.70e-03	5.47	7.78
11	2	0.29	1.37	5.77e-03	-0.72	0.0	-0.27	-0.34	-0.76	5.23e-03	1.37	0.29
		-0.98	-6.35e-03	3.22e-03	0.0	181.0	-0.27	-1.06	-0.76	5.23e-03	-6.35e-03	-0.98
11	3	0.12	0.16	1.41e-03	-0.55	0.0	-0.04	0.09	-0.09	1.49e-04	0.16	0.11
		-0.23	-1.07e-03	1.41e-04	0.0	181.0	-0.04	-0.46	-0.09	1.49e-04	-1.07e-03	-0.23
11	5	0.12	0.16	1.41e-03	-0.55	0.0	-0.04	0.09	-0.09	1.49e-04	0.16	0.11
		-0.23	-1.07e-03	1.41e-04	0.0	181.0	-0.04	-0.46	-0.09	1.49e-04	-1.07e-03	-0.23
11	6	0.21	0.93	4.03e-03	-0.55	0.0	-0.19	-0.22	-0.52	3.51e-03	0.93	0.21
		-0.68	-4.37e-03	2.17e-03	0.0	181.0	-0.19	-0.77	-0.52	3.51e-03	-4.37e-03	-0.68

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
11	7	0.12	0.16	1.41e-03	-0.55	0.0	-0.04	0.09	-0.09	1.49e-04	0.16	0.11
		-0.23	-1.07e-03	1.41e-04	0.0	181.0	-0.04	-0.46	-0.09	1.49e-04	-1.07e-03	-0.23
11	8	0.18	0.70	3.25e-03	-0.55	0.0	-0.14	-0.13	-0.39	2.50e-03	0.70	0.18
		-0.55	-3.38e-03	1.56e-03	0.0	181.0	-0.14	-0.68	-0.39	2.50e-03	-3.38e-03	-0.55
11	9	0.12	0.16	1.41e-03	-0.55	0.0	-0.04	0.09	-0.09	1.49e-04	0.16	0.11
		-0.23	-1.07e-03	1.41e-04	0.0	181.0	-0.04	-0.46	-0.09	1.49e-04	-1.07e-03	-0.23
11	10	0.17	0.62	2.98e-03	-0.55	0.0	-0.13	-0.10	-0.35	2.16e-03	0.62	0.17
		-0.50	-3.05e-03	1.36e-03	0.0	181.0	-0.13	-0.65	-0.35	2.16e-03	-3.05e-03	-0.50
11	20	12.61	1.11	2.50e-03	-0.55	0.0	-0.35	-13.91	-0.93	0.02	1.11	12.61
		-13.08	-0.85	7.17e-03	0.0	181.0	-0.35	-14.46	-0.93	0.02	-0.85	-13.08
11	62	3.48	2.03	3.76e-03	-0.55	0.0	0.35	-3.76	-1.51	-5.21e-03	2.03	3.48
		-3.82	0.16	-8.93e-03	0.0	181.0	0.35	-4.31	-1.51	-5.21e-03	0.16	-3.82
11	79	6.95	0.80	2.51e-03	-0.55	0.0	-0.35	-7.61	-0.59	8.86e-03	0.80	6.95
		-7.33	-0.41	4.35e-03	0.0	181.0	-0.35	-8.16	-0.59	8.86e-03	-0.41	-7.33
11	100	1.94	1.35	3.23e-03	-0.55	0.0	0.05	-2.04	-0.93	-2.91e-03	1.35	1.94
		-2.24	0.16	-4.96e-03	0.0	181.0	0.05	-2.59	-0.93	-2.91e-03	0.16	-2.24
11	103	2.42	0.08	2.52e-03	-0.55	0.0	-0.40	-2.61	0.05	0.01	0.08	2.42
		-2.81	-0.34	8.38e-03	0.0	181.0	-0.40	-3.16	0.05	0.01	-0.34	-2.81
11	106	1.80	1.17	3.45e-03	-0.55	0.0	0.15	2.42	-0.74	-5.71e-03	1.17	-2.08
		-2.08	0.33	-5.67e-03	0.0	181.0	0.15	1.87	-0.74	-5.71e-03	0.33	1.80
11	131	3.73	0.13	1.38e-03	-0.55	0.0	-0.89	-3.94	0.23	3.81e-03	-0.05	3.73
		-3.86	-0.05	3.69e-03	0.0	181.0	-0.89	-4.49	0.23	3.81e-03	0.13	-3.86
11	138	2.85	1.30	4.59e-03	-0.55	0.0	0.63	3.74	-0.92	5.21e-04	1.30	-3.39
		-3.39	-0.13	-9.76e-04	0.0	181.0	0.63	3.19	-0.92	5.21e-04	-0.13	2.85
11	143	5.43	0.76	2.62e-03	-0.55	0.0	-0.30	-5.93	-0.53	7.42e-03	0.76	5.43
		-5.80	-0.32	3.73e-03	0.0	181.0	-0.30	-6.48	-0.53	7.42e-03	-0.32	-5.80
11	164	1.54	1.21	3.18e-03	-0.55	0.0	0.02	-1.60	-0.82	-1.96e-03	1.21	1.54
		-1.85	0.13	-3.74e-03	0.0	181.0	0.02	-2.15	-0.82	-1.96e-03	0.13	-1.85
11	167	1.92	0.18	2.61e-03	-0.55	0.0	-0.35	-2.05	-0.03	8.46e-03	0.18	1.92
		-2.30	-0.27	7.00e-03	0.0	181.0	-0.35	-2.60	-0.03	8.46e-03	-0.27	-2.30
11	170	1.29	1.06	3.36e-03	-0.55	0.0	0.09	1.86	-0.66	-4.13e-03	1.06	-1.58
		-1.58	0.27	-4.29e-03	0.0	181.0	0.09	1.31	-0.66	-4.13e-03	0.27	1.29
12	2	11.85	0.15	-1.69e-03	11.25	0.0	18.63	-13.29	0.17	-0.02	-0.14	11.85
		-1.86	-0.14	1.18e-03	0.0	178.8	18.63	-2.04	0.17	-0.02	0.15	-1.86
12	3	1.15	0.01	-2.02e-04	1.35	0.0	1.64	-1.41	0.02	-1.57e-03	-0.01	1.15
		-0.16	-0.01	1.31e-04	0.0	178.8	1.64	-0.06	0.02	-1.57e-03	0.01	-0.16
12	5	1.15	0.01	-2.02e-04	1.35	0.0	1.64	-1.41	0.02	-1.57e-03	-0.01	1.15
		-0.16	-0.01	1.31e-04	0.0	178.8	1.64	-0.06	0.02	-1.57e-03	0.01	-0.16
12	6	8.05	0.10	-1.16e-03	7.68	0.0	12.64	-9.05	0.11	-0.01	-0.10	8.05
		-1.26	-0.10	8.05e-04	0.0	178.8	12.64	-1.37	0.11	-0.01	0.10	-1.26
12	7	1.15	0.01	-2.02e-04	1.35	0.0	1.64	-1.41	0.02	-1.57e-03	-0.01	1.15
		-0.16	-0.01	1.31e-04	0.0	178.8	1.64	-0.06	0.02	-1.57e-03	0.01	-0.16
12	8	5.98	0.08	-8.69e-04	5.78	0.0	9.34	-6.76	0.08	-8.34e-03	-0.07	5.98
		-0.93	-0.07	6.03e-04	0.0	178.8	9.34	-0.98	0.08	-8.34e-03	0.08	-0.93
12	9	1.15	0.01	-2.02e-04	1.35	0.0	1.64	-1.41	0.02	-1.57e-03	-0.01	1.15
		-0.16	-0.01	1.31e-04	0.0	178.8	1.64	-0.06	0.02	-1.57e-03	0.01	-0.16
12	10	5.29	0.07	-7.74e-04	5.15	0.0	8.24	-6.00	0.07	-7.37e-03	-0.06	5.29
		-0.82	-0.06	5.36e-04	0.0	178.8	8.24	-0.85	0.07	-7.37e-03	0.07	-0.82
12	52	11.39	1.51	1.51e-03	5.15	0.0	20.16	-10.01	1.71	-0.13	-1.46	11.39
		-1.90	-1.46	3.51e-03	0.0	178.8	20.16	-4.86	1.71	-0.13	1.51	-1.90
12	62	0.47	1.24	-3.66e-03	5.15	0.0	-6.32	-1.00	-1.28	0.15	1.24	-2.36
		-2.53	-1.23	1.95e-03	0.0	178.8	-6.32	4.15	-1.28	0.15	-1.23	0.47
12	63	12.95	1.36	2.11e-03	5.15	0.0	22.80	-10.99	1.43	-0.17	1.36	12.95
		-2.12	-1.37	-8.92e-04	0.0	178.8	22.80	-5.84	1.43	-0.17	-1.37	-2.12
12	67	12.61	1.40	1.98e-03	5.15	0.0	22.04	-10.76	1.60	-0.10	-1.55	12.61
		-2.04	-1.55	1.49e-03	0.0	178.8	22.04	-5.61	1.60	-0.10	1.40	-2.04
12	70	0.48	1.12	-3.60e-03	5.15	0.0	-6.36	-1.00	-1.18	0.16	1.12	-2.35
		-2.52	-1.08	1.45e-03	0.0	178.8	-6.36	4.15	-1.18	0.16	-1.08	0.48
12	71	12.93	1.22	2.05e-03	5.15	0.0	22.84	-10.99	1.33	-0.18	-1.25	12.93
		-2.12	-1.25	-4.29e-04	0.0	178.8	22.84	-5.84	1.33	-0.18	1.22	-2.12
12	95	8.97	0.88	5.77e-04	5.15	0.0	15.43	-8.42	0.99	-0.07	-0.90	8.97
		-1.48	-0.90	2.24e-03	0.0	178.8	15.43	-3.27	0.99	-0.07	0.88	-1.48
12	101	9.61	0.85	8.78e-04	5.15	0.0	16.44	-8.81	0.89	-0.11	-0.80	9.61
		-1.54	-0.80	-2.90e-04	0.0	178.8	16.44	-3.66	0.89	-0.11	0.85	-1.54
12	103	9.42	0.87	8.03e-04	5.15	0.0	16.01	-8.68	0.99	-0.06	-0.90	9.42
		-1.50	-0.90	1.12e-03	0.0	178.8	16.01	-3.53	0.99	-0.06	0.87	-1.50
12	104	0.98	0.60	-2.39e-03	5.15	0.0	5.71e-03	-3.18	-0.69	0.09	0.60	0.98
		-0.77	-0.63	1.03e-03	0.0	178.8	5.71e-03	1.97	-0.69	0.09	-0.63	-0.77
12	105	9.60	0.77	8.44e-04	5.15	0.0	16.47	-8.81	0.83	-0.11	-0.73	9.60
		-1.55	-0.73	7.10e-05	0.0	178.8	16.47	-3.66	0.83	-0.11	0.77	-1.55
12	159	8.26	0.72	3.15e-04	5.15	0.0	14.04	-7.95	0.81	-0.06	-0.74	8.26

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		-1.35	-0.74	1.89e-03	0.0	178.8	14.04	-2.80	0.81	-0.06	0.72	-1.35
12	165	8.77	0.70	5.55e-04	5.15	0.0	14.85	-8.26	0.74	-0.09	-0.66	8.77
		-1.40	-0.66	-1.14e-04	0.0	178.8	14.85	-3.11	0.74	-0.09	0.70	-1.40
12	167	8.62	0.72	4.97e-04	5.15	0.0	14.51	-8.16	0.81	-0.05	-0.74	8.62
		-1.37	-0.74	1.01e-03	0.0	178.8	14.51	-3.01	0.81	-0.05	0.72	-1.37
12	168	1.82	0.47	-2.08e-03	5.15	0.0	1.61	-3.73	-0.54	0.07	0.47	1.82
		-0.59	-0.50	9.01e-04	0.0	178.8	1.61	1.42	-0.54	0.07	-0.50	-0.24
12	169	8.77	0.63	5.29e-04	5.15	0.0	14.87	-8.26	0.69	-0.09	-0.60	8.77
		-1.41	-0.60	1.70e-04	0.0	178.8	14.87	-3.11	0.69	-0.09	0.63	-1.41
15	2	1.42	0.82	1.69e-03	-0.71	0.0	-18.65	-1.26	-0.93	-0.02	0.82	1.42
		-1.47	-0.85	-9.96e-04	0.0	178.8	-18.65	-1.97	-0.93	-0.02	-0.85	-1.47
15	3	0.12	0.08	2.02e-04	-0.54	0.0	-1.66	0.12	-0.09	-2.08e-03	0.08	0.09
		-0.18	-0.08	-1.14e-04	0.0	178.8	-1.66	-0.42	-0.09	-2.08e-03	-0.08	-0.18
15	5	0.12	0.08	2.02e-04	-0.54	0.0	-1.66	0.12	-0.09	-2.08e-03	0.08	0.09
		-0.18	-0.08	-1.14e-04	0.0	178.8	-1.66	-0.42	-0.09	-2.08e-03	-0.08	-0.18
15	6	0.96	0.56	1.16e-03	-0.54	0.0	-12.66	-0.82	-0.63	-0.01	0.56	0.96
		-1.00	-0.58	-6.79e-04	0.0	178.8	-12.66	-1.37	-0.63	-0.01	-0.58	-1.00
15	7	0.12	0.08	2.02e-04	-0.54	0.0	-1.66	0.12	-0.09	-2.08e-03	0.08	0.09
		-0.18	-0.08	-1.14e-04	0.0	178.8	-1.66	-0.42	-0.09	-2.08e-03	-0.08	-0.18
15	8	0.70	0.41	8.69e-04	-0.54	0.0	-9.36	-0.54	-0.47	-8.93e-03	0.41	0.70
		-0.75	-0.43	-5.09e-04	0.0	178.8	-9.36	-1.09	-0.47	-8.93e-03	-0.43	-0.75
15	9	0.12	0.08	2.02e-04	-0.54	0.0	-1.66	0.12	-0.09	-2.08e-03	0.08	0.09
		-0.18	-0.08	-1.14e-04	0.0	178.8	-1.66	-0.42	-0.09	-2.08e-03	-0.08	-0.18
15	10	0.61	0.37	7.74e-04	-0.54	0.0	-8.26	-0.45	-0.42	-7.95e-03	0.37	0.61
		-0.67	-0.38	-4.53e-04	0.0	178.8	-8.26	-0.99	-0.42	-7.95e-03	-0.38	-0.67
15	48	22.30	8.90	-1.64e-03	-0.54	0.0	-25.18	-24.69	-10.05	-0.01	8.90	22.30
		-22.33	-9.07	7.04e-04	0.0	178.8	-25.18	-25.23	-10.05	-0.01	-9.07	-22.33
15	62	23.62	7.43	3.66e-03	-0.54	0.0	12.87	26.74	8.24	-5.42e-03	-7.30	-23.71
		-23.71	-7.30	-7.64e-03	0.0	178.8	12.87	26.20	8.24	-5.42e-03	7.43	23.62
15	63	24.94	8.04	-2.11e-03	-0.54	0.0	-29.38	-27.64	-9.07	-0.01	8.04	24.94
		-24.97	-8.18	6.74e-03	0.0	178.8	-29.38	-28.18	-9.07	-0.01	-8.18	-24.97
15	64	25.41	8.48	-2.03e-03	-0.54	0.0	-28.24	-28.17	-9.57	-0.01	8.48	25.41
		-25.44	-8.63	6.71e-03	0.0	178.8	-28.24	-28.71	-9.57	-0.01	-8.63	-25.44
15	93	13.07	5.20	-6.51e-04	-0.54	0.0	-18.43	-14.37	-5.87	-9.84e-03	5.20	13.07
		-13.12	-5.30	2.49e-04	0.0	178.8	-18.43	-14.92	-5.87	-9.84e-03	-5.30	-13.12
15	100	13.58	4.28	2.43e-03	-0.54	0.0	3.69	15.50	4.75	-6.15e-03	-4.21	-13.65
		-13.65	-4.21	-4.60e-03	0.0	178.8	3.69	14.96	4.75	-6.15e-03	4.28	13.58
15	101	14.88	4.95	-8.78e-04	-0.54	0.0	-20.20	-16.40	-5.58	-9.74e-03	4.95	14.88
		-14.92	-5.04	3.70e-03	0.0	178.8	-20.20	-16.94	-5.58	-9.74e-03	-5.04	-14.92
15	157	10.63	4.24	-3.73e-04	-0.54	0.0	-16.45	-11.65	-4.79	-9.50e-03	4.24	10.63
		-10.68	-4.32	-1.78e-04	0.0	178.8	-16.45	-12.19	-4.79	-9.50e-03	-4.32	-10.68
15	164	10.79	3.36	2.10e-03	-0.54	0.0	1.36	12.38	3.73	-6.48e-03	-3.31	-10.86
		-10.86	-3.31	-3.73e-03	0.0	178.8	1.36	11.84	3.73	-6.48e-03	3.36	10.79
15	165	12.09	4.04	-5.55e-04	-0.54	0.0	-17.88	-13.27	-4.56	-9.42e-03	4.04	12.09
		-12.13	-4.11	2.83e-03	0.0	178.8	-17.88	-13.82	-4.56	-9.42e-03	-4.11	-12.13
16	2	2.08	0.60	1.70e-04	-0.71	0.0	-22.31	-2.00	0.57	0.02	-0.43	2.08
		-2.14	-0.43	-9.71e-04	0.0	178.8	-22.31	-2.71	0.57	0.02	0.60	-2.14
16	3	0.14	0.05	1.82e-05	-0.54	0.0	-2.24	0.07	0.05	2.16e-03	-0.04	0.13
		-0.22	-0.04	-1.11e-04	0.0	178.8	-2.24	-0.47	0.05	2.16e-03	0.05	-0.22
16	5	0.14	0.05	1.82e-05	-0.54	0.0	-2.24	0.07	0.05	2.16e-03	-0.04	0.13
		-0.22	-0.04	-1.11e-04	0.0	178.8	-2.24	-0.47	0.05	2.16e-03	0.05	-0.22
16	6	1.40	0.40	1.16e-04	-0.54	0.0	-15.17	-1.33	0.39	0.01	-0.29	1.40
		-1.45	-0.29	-6.62e-04	0.0	178.8	-15.17	-1.87	0.39	0.01	0.40	-1.45
16	7	0.14	0.05	1.82e-05	-0.54	0.0	-2.24	0.07	0.05	2.16e-03	-0.04	0.13
		-0.22	-0.04	-1.11e-04	0.0	178.8	-2.24	-0.47	0.05	2.16e-03	0.05	-0.22
16	8	1.02	0.30	8.62e-05	-0.54	0.0	-11.29	-0.91	0.29	9.26e-03	-0.22	1.02
		-1.08	-0.22	-4.97e-04	0.0	178.8	-11.29	-1.45	0.29	9.26e-03	0.30	-1.08
16	9	0.14	0.05	1.82e-05	-0.54	0.0	-2.24	0.07	0.05	2.16e-03	-0.04	0.13
		-0.22	-0.04	-1.11e-04	0.0	178.8	-2.24	-0.47	0.05	2.16e-03	0.05	-0.22
16	10	0.90	0.26	7.63e-05	-0.54	0.0	-10.00	-0.77	0.25	8.25e-03	-0.19	0.90
		-0.96	-0.19	-4.42e-04	0.0	178.8	-10.00	-1.31	0.25	8.25e-03	0.26	-0.96
16	43	21.30	9.04	-3.22e-04	-0.54	0.0	-16.78	-23.58	10.15	8.16e-03	-9.11	-21.30
		-21.34	-9.11	-3.14e-03	0.0	178.8	-16.78	-24.12	10.15	8.16e-03	9.04	-21.34
16	50	19.42	8.73	3.22e-04	-0.54	0.0	-3.22	22.05	-9.65	8.33e-03	8.73	-19.51
		-19.51	-8.51	2.29e-03	0.0	178.8	-3.22	21.50	-9.65	8.33e-03	-8.51	-19.42
16	60	16.99	9.89	-2.55e-04	-0.54	0.0	-14.57	-18.77	11.14	0.01	-10.02	16.99
		-17.05	-10.02	3.19e-03	0.0	178.8	-14.57	-19.31	11.14	0.01	9.89	-17.05
16	91	12.55	5.54	-1.85e-04	-0.54	0.0	-13.76	-13.80	6.21	8.54e-03	-5.56	12.55
		-12.61	-5.56	-2.01e-03	0.0	178.8	-13.76	-14.34	6.21	8.54e-03	5.54	-12.61
16	94	10.69	5.18	1.84e-04	-0.54	0.0	-6.23	12.27	-5.70	7.95e-03	5.18	-10.76
		-10.76	-5.01	1.15e-03	0.0	178.8	-6.23	11.72	-5.70	7.95e-03	-5.01	-10.69

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
16	99	10.45	5.68	1.60e-04	-0.54	0.0	-12.83	-11.45	6.37	9.21e-03	-5.71	10.45
		-10.51	-5.71	1.68e-03	0.0	178.8	-12.83	-11.99	6.37	9.21e-03	5.68	-10.51
16	155	10.28	4.50	1.59e-04	-0.54	0.0	-13.03	-11.26	5.03	8.51e-03	-4.50	10.28
		-10.34	-4.50	-1.68e-03	0.0	178.8	-13.03	-11.80	5.03	8.51e-03	4.50	-10.34
16	158	8.42	4.12	1.48e-04	-0.54	0.0	-6.96	9.73	-4.53	7.98e-03	4.12	-8.49
		-8.49	-3.97	8.23e-04	0.0	178.8	-6.96	9.18	-4.53	7.98e-03	-3.97	8.42
16	163	8.59	4.61	1.43e-04	-0.54	0.0	-12.28	-9.37	5.16	9.05e-03	-4.62	8.59
		-8.65	-4.62	1.26e-03	0.0	178.8	-12.28	-9.91	5.16	9.05e-03	4.61	-8.65
17	2	2.16	0.12	2.71e-04	-12.33	0.0	21.64	15.01	0.10	0.01	-0.06	-13.66
		-13.66	-0.06	-8.57e-04	0.0	178.8	21.64	2.69	0.10	0.01	0.12	2.16
17	3	0.22	0.01	2.75e-05	-1.43	0.0	2.16	1.63	8.68e-03	8.68e-04	-4.88e-03	-1.43
		-1.43	-4.88e-03	-1.01e-04	0.0	178.8	2.16	0.20	8.68e-03	8.68e-04	0.01	0.22
17	5	0.22	0.01	2.75e-05	-1.43	0.0	2.16	1.63	8.68e-03	8.68e-04	-4.88e-03	-1.43
		-1.43	-4.88e-03	-1.01e-04	0.0	178.8	2.16	0.20	8.68e-03	8.68e-04	0.01	0.22
17	6	1.47	0.08	1.84e-04	-8.41	0.0	14.72	10.23	0.07	6.90e-03	-0.04	-9.30
		-9.30	-0.04	-5.84e-04	0.0	178.8	14.72	1.82	0.07	6.90e-03	0.08	1.47
17	7	0.22	0.01	2.75e-05	-1.43	0.0	2.16	1.63	8.68e-03	8.68e-04	-4.88e-03	-1.43
		-1.43	-4.88e-03	-1.01e-04	0.0	178.8	2.16	0.20	8.68e-03	8.68e-04	0.01	0.22
17	8	1.09	0.06	1.37e-04	-6.32	0.0	10.95	7.65	0.05	5.09e-03	-0.03	-6.94
		-6.94	-0.03	-4.39e-04	0.0	178.8	10.95	1.33	0.05	5.09e-03	0.06	1.09
17	9	0.22	0.01	2.75e-05	-1.43	0.0	2.16	1.63	8.68e-03	8.68e-04	-4.88e-03	-1.43
		-1.43	-4.88e-03	-1.01e-04	0.0	178.8	2.16	0.20	8.68e-03	8.68e-04	0.01	0.22
17	10	0.97	0.05	1.21e-04	-5.62	0.0	9.69	6.79	0.04	4.49e-03	-0.03	-6.15
		-6.15	-0.03	-3.91e-04	0.0	178.8	9.69	1.17	0.04	4.49e-03	0.05	0.97
17	43	0.85	1.20	1.23e-04	-5.62	0.0	12.62	7.85	1.48	0.21	-1.34	-7.89
		-7.89	-1.34	1.54e-03	0.0	178.8	12.62	2.23	1.48	0.21	1.20	0.85
17	44	0.78	1.31	1.23e-04	-5.62	0.0	11.98	7.72	1.61	0.23	-1.45	-7.73
		-7.73	-1.45	1.32e-03	0.0	178.8	11.98	2.10	1.61	0.23	1.31	0.78
17	56	0.74	1.46	1.22e-04	-5.62	0.0	11.56	7.62	1.61	0.15	-1.42	-7.58
		-7.58	-1.42	3.58e-03	0.0	178.8	11.56	2.00	1.61	0.15	1.46	0.74
17	59	0.78	1.14	1.30e-04	-5.62	0.0	13.13	7.86	1.42	0.22	-1.29	-7.80
		-7.80	-1.29	6.56e-03	0.0	178.8	13.13	2.24	1.42	0.22	1.14	0.78
17	61	1.28	1.17	1.66e-04	-5.62	0.0	7.38	5.97	-1.30	-0.16	1.17	-4.85
		-4.85	-1.26	-9.89e-03	0.0	178.8	7.38	0.35	-1.30	-0.16	-1.26	1.28
17	66	1.16	1.24	1.80e-04	-5.62	0.0	6.26	5.72	-1.33	-0.21	1.24	-4.50
		-4.50	-1.03	-7.34e-03	0.0	178.8	6.26	0.10	-1.33	-0.21	-1.03	1.16
17	91	0.88	0.75	1.22e-04	-5.62	0.0	11.21	7.37	0.92	0.13	-0.82	-7.11
		-7.11	-0.82	6.79e-04	0.0	178.8	11.21	1.75	0.92	0.13	0.75	0.88
17	97	0.86	0.84	1.21e-04	-5.62	0.0	10.97	7.31	0.92	0.08	-0.80	-7.03
		-7.03	-0.80	1.98e-03	0.0	178.8	10.97	1.69	0.92	0.08	0.84	0.86
17	99	0.83	0.72	1.26e-04	-5.62	0.0	11.50	7.37	0.88	0.14	-0.79	-7.06
		-7.06	-0.79	3.59e-03	0.0	178.8	11.50	1.76	0.88	0.14	0.72	0.83
17	100	1.13	0.64	1.30e-04	-5.62	0.0	8.16	6.27	-0.70	-0.09	0.64	-5.34
		-5.34	-0.67	-5.96e-03	0.0	178.8	8.16	0.66	-0.70	-0.09	-0.67	1.13
17	102	1.10	0.74	1.34e-04	-5.62	0.0	7.89	6.21	-0.79	-0.13	0.74	-5.24
		-5.24	-0.61	-4.37e-03	0.0	178.8	7.89	0.59	-0.79	-0.13	-0.61	1.10
17	155	0.90	0.62	1.21e-04	-5.62	0.0	10.91	7.26	0.75	0.10	-0.67	-6.93
		-6.93	-0.67	4.97e-04	0.0	178.8	10.91	1.64	0.75	0.10	0.62	0.90
17	161	0.88	0.69	1.21e-04	-5.62	0.0	10.73	7.21	0.75	0.07	-0.65	-6.86
		-6.86	-0.65	1.51e-03	0.0	178.8	10.73	1.59	0.75	0.07	0.69	0.88
17	163	0.86	0.59	1.25e-04	-5.62	0.0	11.15	7.26	0.72	0.11	-0.64	-6.88
		-6.88	-0.64	2.82e-03	0.0	178.8	11.15	1.64	0.72	0.11	0.59	0.86
17	164	1.10	0.51	1.21e-04	-5.62	0.0	8.45	6.37	-0.56	-0.07	0.51	-5.50
		-5.50	-0.53	-4.84e-03	0.0	178.8	8.45	0.76	-0.56	-0.07	-0.53	1.10
17	166	1.08	0.59	1.23e-04	-5.62	0.0	8.24	6.32	-0.63	-0.10	0.59	-5.42
		-5.42	-0.48	-3.61e-03	0.0	178.8	8.24	0.70	-0.63	-0.10	-0.48	1.08
18	2	0.87	0.16	-6.34e-03	34.62	0.0	-8.68	-14.96	0.13	-0.01	-0.08	-3.34
		-9.11	-0.08	1.14e-03	0.0	178.8	-8.68	19.66	0.13	-0.01	0.16	0.87
18	3	0.07	0.02	-7.58e-04	3.05	0.0	-0.74	-1.28	0.01	-1.47e-03	-0.01	-0.36
		-0.84	-0.01	1.29e-04	0.0	178.8	-0.74	1.77	0.01	-1.47e-03	0.02	0.07
18	5	0.07	0.02	-7.58e-04	3.05	0.0	-0.74	-1.28	0.01	-1.47e-03	-0.01	-0.36
		-0.84	-0.01	1.29e-04	0.0	178.8	-0.74	1.77	0.01	-1.47e-03	0.02	0.07
18	6	0.59	0.11	-4.33e-03	23.48	0.0	-5.88	-10.14	0.09	-9.16e-03	-0.05	-2.27
		-6.19	-0.05	7.74e-04	0.0	178.8	-5.88	13.34	0.09	-9.16e-03	0.11	0.59
18	7	0.07	0.02	-7.58e-04	3.05	0.0	-0.74	-1.28	0.01	-1.47e-03	-0.01	-0.36
		-0.84	-0.01	1.29e-04	0.0	178.8	-0.74	1.77	0.01	-1.47e-03	0.02	0.07
18	8	0.43	0.08	-3.26e-03	17.35	0.0	-4.34	-7.48	0.07	-6.86e-03	-0.04	-1.70
		-4.58	-0.04	5.81e-04	0.0	178.8	-4.34	9.87	0.07	-6.86e-03	0.08	0.43
18	9	0.07	0.02	-7.58e-04	3.05	0.0	-0.74	-1.28	0.01	-1.47e-03	-0.01	-0.36
		-0.84	-0.01	1.29e-04	0.0	178.8	-0.74	1.77	0.01	-1.47e-03	0.02	0.07
18	10	0.38	0.07	-2.90e-03	15.31	0.0	-3.83	-6.60	0.06	-6.09e-03	-0.04	-1.51

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		-4.05	-0.04	5.16e-04	0.0	178.8	-3.83	8.71	0.06	-6.09e-03	0.07	0.38
18	30	0.54	1.44	-1.89e-03	15.31	0.0	-6.87	-4.41	1.48	0.45	-1.21	-5.26
		-6.39	-1.21	3.99e-04	0.0	178.8	-6.87	10.90	1.48	0.45	1.44	0.54
18	31	2.25	1.14	-3.91e-03	15.31	0.0	-0.78	-8.78	-1.36	-0.46	1.14	2.25
		-2.26	-1.29	6.81e-04	0.0	178.8	-0.78	6.53	-1.36	-0.46	-1.29	0.23
18	68	1.63	0.15	-2.61e-03	15.31	0.0	-11.17	-6.31	-0.13	0.29	0.15	-1.57
		-3.58	-0.09	-7.48e-03	0.0	178.8	-11.17	9.00	-0.13	0.29	-0.09	1.63
18	73	-0.86	0.24	-3.19e-03	15.31	0.0	3.51	-6.89	0.25	-0.30	-0.22	-1.44
		-4.57	-0.22	8.51e-03	0.0	178.8	3.51	8.42	0.25	-0.30	0.24	-0.86
18	84	0.43	0.75	-2.24e-03	15.31	0.0	-5.22	-5.65	0.76	0.27	-0.61	-3.14
		-5.01	-0.61	3.28e-04	0.0	178.8	-5.22	9.66	0.76	0.27	0.75	0.43
18	96	-0.14	0.72	-2.75e-03	15.31	0.0	-1.63	-6.00	0.75	0.01	-0.62	-2.98
		-5.12	-0.62	1.89e-03	0.0	178.8	-1.63	9.30	0.75	0.01	0.72	-0.14
18	103	1.07	0.18	-2.65e-03	15.31	0.0	-7.81	-6.72	-0.18	0.17	0.18	-1.05
		-3.49	-0.14	-4.25e-03	0.0	178.8	-7.81	8.59	-0.18	0.17	-0.14	1.07
18	106	-0.31	0.28	-3.15e-03	15.31	0.0	0.15	-6.48	0.30	-0.19	-0.25	-1.97
		-4.61	-0.25	5.28e-03	0.0	178.8	0.15	8.83	0.30	-0.19	0.28	-0.31
18	126	0.37	1.25	-3.06e-03	15.31	0.0	-5.00	-4.39	1.34	0.04	-1.14	-5.50
		-6.61	-1.14	1.69e-03	0.0	178.8	-5.00	10.92	1.34	0.04	1.25	0.37
18	127	2.48	1.07	-2.74e-03	15.31	0.0	-2.65	-8.81	-1.22	-0.06	1.07	2.48
		-2.06	-1.11	-6.58e-04	0.0	178.8	-2.65	6.50	-1.22	-0.06	-1.11	0.40
18	148	0.42	0.60	-2.39e-03	15.31	0.0	-4.88	-5.86	0.61	0.21	-0.48	-2.78
		-4.79	-0.48	3.84e-04	0.0	178.8	-4.88	9.45	0.61	0.21	0.60	0.42
18	160	-0.04	0.59	-2.79e-03	15.31	0.0	-2.03	-6.13	0.61	5.13e-03	-0.51	-2.68
		-4.90	-0.51	1.64e-03	0.0	178.8	-2.03	9.18	0.61	5.13e-03	0.59	-0.04
18	167	0.94	0.14	-2.70e-03	15.31	0.0	-7.01	-6.70	-0.14	0.14	0.14	-1.13
		-3.59	-0.10	-3.29e-03	0.0	178.8	-7.01	8.61	-0.14	0.14	-0.10	0.94
18	170	-0.17	0.25	-3.09e-03	15.31	0.0	-0.64	-6.49	0.26	-0.15	-0.22	-1.89
		-4.51	-0.22	4.32e-03	0.0	178.8	-0.64	8.82	0.26	-0.15	0.25	-0.17
19	2	5.22e-03	0.09	-1.22e-03	-9.91	0.0	-2.88	-3.46	-0.16	0.04	0.09	5.22e-03
		-10.52	-0.11	2.69e-03	0.0	125.0	-2.88	-13.37	-0.16	0.04	-0.11	-10.52
19	3	-7.00e-05	0.01	-7.05e-05	-1.09	0.0	-0.13	-0.52	-0.02	4.20e-03	0.01	-7.00e-05
		-1.33	-0.01	1.49e-04	0.0	125.0	-0.13	-1.61	-0.02	4.20e-03	-0.01	-1.33
19	4	5.24e-03	0.09	-1.20e-03	-9.58	0.0	-2.84	-3.31	-0.16	0.04	0.09	5.24e-03
		-10.12	-0.11	2.64e-03	0.0	125.0	-2.84	-12.89	-0.16	0.04	-0.11	-10.12
19	5	-7.00e-05	0.01	-7.05e-05	-1.09	0.0	-0.13	-0.52	-0.02	4.20e-03	0.01	-7.00e-05
		-1.33	-0.01	1.49e-04	0.0	125.0	-0.13	-1.61	-0.02	4.20e-03	-0.01	-1.33
19	6	3.47e-03	0.06	-8.26e-04	-6.75	0.0	-1.94	-2.38	-0.11	0.03	0.06	3.47e-03
		-7.19	-0.08	1.81e-03	0.0	125.0	-1.94	-9.13	-0.11	0.03	-0.08	-7.19
19	7	-7.00e-05	0.01	-7.05e-05	-1.09	0.0	-0.13	-0.52	-0.02	4.20e-03	0.01	-7.00e-05
		-1.33	-0.01	1.49e-04	0.0	125.0	-0.13	-1.61	-0.02	4.20e-03	-0.01	-1.33
19	8	2.41e-03	0.05	-5.99e-04	-5.05	0.0	-1.40	-1.82	-0.08	0.02	0.05	2.41e-03
		-5.43	-0.06	1.31e-03	0.0	125.0	-1.40	-6.87	-0.08	0.02	-0.06	-5.43
19	9	-7.00e-05	0.01	-7.05e-05	-1.09	0.0	-0.13	-0.52	-0.02	4.20e-03	0.01	-7.00e-05
		-1.33	-0.01	1.49e-04	0.0	125.0	-0.13	-1.61	-0.02	4.20e-03	-0.01	-1.33
19	10	2.05e-03	0.04	-5.24e-04	-4.49	0.0	-1.22	-1.63	-0.07	0.02	0.04	2.05e-03
		-4.85	-0.05	1.15e-03	0.0	125.0	-1.22	-6.12	-0.07	0.02	-0.05	-4.85
19	22	0.01	0.94	2.45e-04	-4.49	0.0	-1.48	-2.13	0.86	0.32	-0.51	0.01
		-5.48	-0.51	-3.52e-04	0.0	125.0	-1.48	-6.62	0.86	0.32	0.94	-5.48
19	23	-6.63e-03	0.60	-1.29e-03	-4.49	0.0	-0.96	-1.13	-1.01	-0.29	0.60	-6.63e-03
		-4.21	-1.04	2.62e-03	0.0	125.0	-0.96	-5.62	-1.01	-0.29	-1.04	-4.21
19	43	1.93	0.55	-2.26e-03	-4.49	0.0	2.39	3.71	0.74	0.18	-0.38	0.02
		0.02	-0.38	9.35e-03	0.0	125.0	2.39	-0.78	0.74	0.18	0.55	1.85
19	44	1.55	0.80	-2.11e-03	-4.49	0.0	2.83	3.31	1.09	0.19	-0.57	0.02
		0.02	-0.57	9.92e-03	0.0	125.0	2.83	-1.17	1.09	0.19	0.80	1.35
19	49	-0.02	0.66	1.06e-03	-4.49	0.0	-5.26	-6.58	-1.24	-0.16	0.66	-0.02
		-11.04	-0.90	-7.63e-03	0.0	125.0	-5.26	-11.07	-1.24	-0.16	-0.90	-11.04
19	50	-0.02	0.46	1.21e-03	-4.49	0.0	-4.82	-6.98	-0.89	-0.14	0.46	-0.02
		-11.54	-0.65	-7.05e-03	0.0	125.0	-4.82	-11.47	-0.89	-0.14	-0.65	-11.54
19	81	-1.64e-03	0.29	-9.26e-04	-4.49	0.0	-0.93	-1.45	-0.48	-0.15	0.29	-1.64e-03
		-4.61	-0.53	2.19e-03	0.0	125.0	-0.93	-5.94	-0.48	-0.15	-0.53	-4.61
19	82	-8.45e-03	0.44	-4.32e-04	-4.49	0.0	-2.08	-2.83	-0.77	-0.18	0.44	-8.45e-03
		-6.34	-0.32	-1.19e-03	0.0	125.0	-2.08	-7.32	-0.77	-0.18	-0.32	-6.34
19	91	0.27	0.36	-1.49e-03	-4.49	0.0	1.01	1.36	0.49	0.11	-0.25	0.01
		-1.10	-0.25	6.02e-03	0.0	125.0	1.01	-3.13	0.49	0.11	0.36	-1.10
19	94	-9.34e-03	0.34	4.45e-04	-4.49	0.0	-3.44	-4.62	-0.64	-0.08	0.34	-9.34e-03
		-8.59	-0.46	-3.72e-03	0.0	125.0	-3.44	-9.11	-0.64	-0.08	-0.46	-8.59
19	146	-6.20e-03	0.35	-4.47e-04	-4.49	0.0	-1.91	-2.59	-0.62	-0.14	0.35	-6.20e-03
		-6.04	-0.25	-7.10e-04	0.0	125.0	-1.91	-7.08	-0.62	-0.14	-0.25	-6.04
19	155	0.09	0.28	-1.30e-03	-4.49	0.0	0.57	0.77	0.38	0.09	-0.19	0.01
		-1.83	-0.19	5.04e-03	0.0	125.0	0.57	-3.71	0.38	0.09	0.28	-1.83

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
19	158	-7.06e-03	0.28	2.74e-04	-4.49	0.0	-3.01	-4.04	-0.53	-0.06	0.28	-7.06e-03
		-7.86	-0.38	-2.74e-03	0.0	125.0	-3.01	-8.53	-0.53	-0.06	-0.38	-7.86
19	165	9.54e-03	-0.08	-1.22e-03	-4.49	0.0	0.26	0.10	0.19	0.01	-0.08	9.54e-03
		-2.67	-0.43	5.51e-03	0.0	125.0	0.26	-4.39	0.19	0.01	-0.43	-2.67
20	1	2.99	0.04	1.22e-04	1.42	0.0	-1.08	1.68	-0.02	-0.02	0.04	-9.10e-05
		-9.10e-05	6.69e-03	-2.65e-05	0.0	125.0	-1.08	3.10	-0.02	-0.02	6.69e-03	2.99
20	2	20.18	0.26	2.30e-03	9.91	0.0	-9.76	11.19	-0.16	-0.10	0.26	5.22e-03
		5.22e-03	0.06	-1.58e-03	0.0	125.0	-9.76	21.09	-0.16	-0.10	0.06	20.18
20	3	2.30	0.03	9.40e-05	1.09	0.0	-0.83	1.29	-0.02	-0.01	0.03	-7.00e-05
		-7.00e-05	5.14e-03	-2.04e-05	0.0	125.0	-0.83	2.39	-0.02	-0.01	5.14e-03	2.30
20	5	2.30	0.03	9.40e-05	1.09	0.0	-0.83	1.29	-0.02	-0.01	0.03	-7.00e-05
		-7.00e-05	5.14e-03	-2.04e-05	0.0	125.0	-0.83	2.39	-0.02	-0.01	5.14e-03	2.30
20	6	13.76	0.18	1.55e-03	6.75	0.0	-6.62	7.63	-0.11	-0.07	0.18	3.47e-03
		3.47e-03	0.04	-1.06e-03	0.0	125.0	-6.62	14.38	-0.11	-0.07	0.04	13.76
20	7	2.30	0.03	9.40e-05	1.09	0.0	-0.83	1.29	-0.02	-0.01	0.03	-7.00e-05
		-7.00e-05	5.14e-03	-2.04e-05	0.0	125.0	-0.83	2.39	-0.02	-0.01	5.14e-03	2.30
20	8	10.32	0.13	1.11e-03	5.05	0.0	-4.88	5.73	-0.08	-0.05	0.13	2.41e-03
		2.41e-03	0.03	-7.46e-04	0.0	125.0	-4.88	10.78	-0.08	-0.05	0.03	10.32
20	9	2.30	0.03	9.40e-05	1.09	0.0	-0.83	1.29	-0.02	-0.01	0.03	-7.00e-05
		-7.00e-05	5.14e-03	-2.04e-05	0.0	125.0	-0.83	2.39	-0.02	-0.01	5.14e-03	2.30
20	10	9.18	0.12	9.65e-04	4.49	0.0	-4.30	5.10	-0.07	-0.05	0.12	2.05e-03
		2.05e-03	0.03	-6.42e-04	0.0	125.0	-4.30	9.58	-0.07	-0.05	0.03	9.18
20	21	13.25	0.76	1.58e-03	4.49	0.0	-6.13	8.35	-1.57	0.25	0.76	7.04e-03
		7.04e-03	-0.99	1.49e-03	0.0	125.0	-6.13	12.84	-1.57	0.25	-0.99	13.25
20	24	5.10	1.04	3.55e-04	4.49	0.0	-2.48	1.84	1.42	-0.34	-0.52	-2.93e-03
		-2.93e-03	-0.52	-2.77e-03	0.0	125.0	-2.48	6.33	1.42	-0.34	1.04	5.10
20	54	19.63	0.82	-2.57e-03	4.49	0.0	-10.13	13.47	-0.86	-0.09	0.82	-8.41e-03
		-8.41e-03	-0.48	6.97e-03	0.0	125.0	-10.13	17.96	-0.86	-0.09	-0.48	19.63
20	55	0.01	0.53	4.50e-03	4.49	0.0	1.53	-3.28	0.71	-9.12e-04	-0.59	0.01
		-1.48	-0.59	-8.26e-03	0.0	125.0	1.53	1.21	0.71	-9.12e-04	0.53	-1.28
20	96	15.00	0.46	-9.85e-04	4.49	0.0	-7.24	9.76	-0.64	-0.07	0.46	-5.19e-03
		-5.19e-03	-0.35	3.91e-03	0.0	125.0	-7.24	14.25	-0.64	-0.07	-0.35	15.00
20	97	3.35	0.40	2.92e-03	4.49	0.0	-1.36	0.43	0.50	-0.02	-0.22	9.30e-03
		9.30e-03	-0.22	-5.19e-03	0.0	125.0	-1.36	4.92	0.50	-0.02	0.40	3.35
20	100	14.83	0.54	-1.08e-03	4.49	0.0	-6.93	9.63	-0.80	-0.08	0.54	-7.16e-03
		-7.16e-03	-0.46	4.95e-03	0.0	125.0	-6.93	14.11	-0.80	-0.08	-0.46	14.83
20	102	14.26	0.35	-1.61e-03	4.49	0.0	-6.48	9.17	-0.47	-0.19	0.35	-0.01
		-0.01	-0.24	5.33e-03	0.0	125.0	-6.48	13.66	-0.47	-0.19	-0.24	14.26
20	160	13.86	0.39	-6.30e-04	4.49	0.0	-6.67	8.85	-0.53	-0.07	0.39	-3.85e-03
		-3.85e-03	-0.28	3.01e-03	0.0	125.0	-6.67	13.34	-0.53	-0.07	-0.28	13.86
20	161	4.49	0.33	2.55e-03	4.49	0.0	-1.94	1.34	0.38	-0.03	-0.15	7.96e-03
		7.96e-03	-0.15	-4.29e-03	0.0	125.0	-1.94	5.83	0.38	-0.03	0.33	4.49
20	164	13.73	0.46	-6.95e-04	4.49	0.0	-6.41	8.74	-0.65	-0.07	0.46	-5.43e-03
		-5.43e-03	-0.36	3.84e-03	0.0	125.0	-6.41	13.23	-0.65	-0.07	-0.36	13.73
20	166	13.28	0.31	-1.10e-03	4.49	0.0	-6.06	8.39	-0.40	-0.16	0.31	-8.73e-03
		-8.73e-03	-0.19	4.13e-03	0.0	125.0	-6.06	12.87	-0.40	-0.16	-0.19	13.28
21	2	35.95	0.64	0.01	-0.81	0.0	-7.66	-23.70	-0.54	-2.25e-03	0.64	35.95
		-13.18	-0.46	-8.31e-04	0.0	203.8	-7.66	-24.51	-0.54	-2.25e-03	-0.46	-13.18
21	3	4.23	0.06	2.01e-03	-0.62	0.0	-0.90	-2.59	-0.05	-2.63e-04	0.06	4.23
		-1.67	-0.04	-1.06e-04	0.0	203.8	-0.90	-3.21	-0.05	-2.63e-04	-0.04	-1.67
21	5	4.23	0.06	2.01e-03	-0.62	0.0	-0.90	-2.59	-0.05	-2.63e-04	0.06	4.23
		-1.67	-0.04	-1.06e-04	0.0	203.8	-0.90	-3.21	-0.05	-2.63e-04	-0.04	-1.67
21	6	24.53	0.44	9.34e-03	-0.62	0.0	-5.22	-16.15	-0.37	-1.53e-03	0.44	24.53
		-9.01	-0.31	-5.68e-04	0.0	203.8	-5.22	-16.77	-0.37	-1.53e-03	-0.31	-9.01
21	7	4.23	0.06	2.01e-03	-0.62	0.0	-0.90	-2.59	-0.05	-2.63e-04	0.06	4.23
		-1.67	-0.04	-1.06e-04	0.0	203.8	-0.90	-3.21	-0.05	-2.63e-04	-0.04	-1.67
21	8	18.44	0.32	7.14e-03	-0.62	0.0	-3.93	-12.08	-0.27	-1.15e-03	0.32	18.44
		-6.81	-0.23	-4.29e-04	0.0	203.8	-3.93	-12.70	-0.27	-1.15e-03	-0.23	-6.81
21	9	4.23	0.06	2.01e-03	-0.62	0.0	-0.90	-2.59	-0.05	-2.63e-04	0.06	4.23
		-1.67	-0.04	-1.06e-04	0.0	203.8	-0.90	-3.21	-0.05	-2.63e-04	-0.04	-1.67
21	10	16.41	0.29	6.41e-03	-0.62	0.0	-3.49	-10.72	-0.24	-1.03e-03	0.29	16.41
		-6.08	-0.20	-3.83e-04	0.0	203.8	-3.49	-11.34	-0.24	-1.03e-03	-0.20	-6.08
21	20	18.04	3.24	6.56e-03	-0.62	0.0	-15.84	-20.13	-5.21	-1.49e-03	3.24	18.04
		-22.62	-6.16	8.08e-04	0.0	203.8	-15.84	-20.75	-5.21	-1.49e-03	-6.16	-22.62
21	45	10.87	8.53	5.05e-03	-0.62	0.0	4.85	-9.78	9.57	-5.24e-03	-11.35	10.87
		-9.20	-11.35	-0.01	0.0	203.8	4.85	-10.41	9.57	-5.24e-03	8.53	-9.20
21	48	21.95	11.92	7.77e-03	-0.62	0.0	-11.83	-11.66	-10.05	3.19e-03	11.92	21.95
		-2.95	-8.94	9.45e-03	0.0	203.8	-11.83	-12.28	-10.05	3.19e-03	-8.94	-2.95
21	60	22.23	11.33	7.65e-03	-0.62	0.0	-17.24	-17.00	-11.01	3.83e-03	11.33	22.23
		-13.33	-10.75	9.69e-03	0.0	203.8	-17.24	-17.62	-11.01	3.83e-03	-10.75	-13.33
21	65	10.59	10.34	5.17e-03	-0.62	0.0	10.25	-4.45	10.53	-5.88e-03	-10.76	10.59



Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		1.17	-10.76	-0.01	0.0	203.8	10.25	-5.07	10.53	-5.88e-03	10.34	1.17
21	79	16.47	1.76	6.20e-03	-0.62	0.0	-10.32	-15.51	-2.91	-1.24e-03	1.76	16.47
		-15.23	-3.46	3.32e-04	0.0	203.8	-10.32	-16.13	-2.91	-1.24e-03	-3.46	-15.23
21	92	14.13	4.69	5.94e-03	-0.62	0.0	1.08	-10.78	5.25	-3.51e-03	-6.23	14.13
		-8.20	-6.23	-6.04e-03	0.0	203.8	1.08	-11.40	5.25	-3.51e-03	4.69	-8.20
21	93	18.70	6.80	6.88e-03	-0.62	0.0	-8.07	-10.67	-5.73	1.46e-03	6.80	18.70
		-3.95	-5.10	5.28e-03	0.0	203.8	-8.07	-11.29	-5.73	1.46e-03	-5.10	-3.95
21	99	18.88	6.46	6.82e-03	-0.62	0.0	-11.18	-13.73	-6.29	1.84e-03	6.46	18.88
		-9.91	-6.14	5.42e-03	0.0	203.8	-11.18	-14.35	-6.29	1.84e-03	-6.14	-9.91
21	101	19.33	6.71	7.04e-03	-0.62	0.0	-8.20	-11.17	-5.72	2.55e-03	6.71	19.33
		-4.63	-5.17	6.39e-03	0.0	203.8	-8.20	-11.79	-5.72	2.55e-03	-5.17	-4.63
21	102	13.94	5.73	6.00e-03	-0.62	0.0	4.19	-7.71	5.81	-3.89e-03	-5.89	13.94
		-2.25	-5.89	-6.19e-03	0.0	203.8	4.19	-8.34	5.81	-3.89e-03	5.73	-2.25
21	120	23.51	5.18	8.68e-03	-0.62	0.0	-5.77	-12.96	-3.95	1.02e-03	5.18	23.51
		-4.08	-3.25	4.00e-03	0.0	203.8	-5.77	-13.58	-3.95	1.02e-03	-3.25	-4.08
21	143	16.48	1.47	6.25e-03	-0.62	0.0	-8.86	-14.46	-2.37	-1.17e-03	1.47	16.48
		-13.20	-2.79	2.28e-04	0.0	203.8	-8.86	-15.08	-2.37	-1.17e-03	-2.79	-13.20
21	157	18.25	5.53	6.78e-03	-0.62	0.0	-7.23	-10.71	-4.67	9.69e-04	5.53	18.25
		-4.44	-4.16	4.17e-03	0.0	203.8	-7.23	-11.33	-4.67	9.69e-04	-4.16	-4.44
21	163	18.41	5.26	6.74e-03	-0.62	0.0	-9.65	-13.12	-5.11	1.29e-03	5.26	18.41
		-9.07	-4.98	4.30e-03	0.0	203.8	-9.65	-13.74	-5.11	1.29e-03	-4.98	-9.07
21	165	18.76	5.46	6.91e-03	-0.62	0.0	-7.33	-11.13	-4.67	1.84e-03	5.46	18.76
		-4.97	-4.22	5.07e-03	0.0	203.8	-7.33	-11.75	-4.67	1.84e-03	-4.22	-4.97
21	166	14.41	4.57	6.08e-03	-0.62	0.0	2.66	-8.33	4.63	-3.35e-03	-4.69	14.41
		-3.08	-4.69	-5.07e-03	0.0	203.8	2.66	-8.95	4.63	-3.35e-03	4.57	-3.08
22	2	13.71	0.15	6.05e-03	34.68	0.0	-9.16	-14.50	-0.03	-3.56e-03	0.15	-0.79
		-16.22	-0.01	1.39e-03	0.0	510.2	12.75	20.18	-0.03	-3.56e-03	-0.01	13.71
22	6	9.32	0.10	4.13e-03	23.63	0.0	-6.25	-9.89	-0.02	-2.51e-03	0.10	-0.51
		-11.05	-8.03e-03	9.84e-04	0.0	510.2	8.68	13.74	-0.02	-2.51e-03	-8.03e-03	9.32
22	8	6.92	0.08	3.11e-03	17.68	0.0	-4.69	-7.42	-0.02	-2.06e-03	0.08	-0.33
		-8.26	-6.44e-03	8.18e-04	0.0	510.2	6.48	10.26	-0.02	-2.06e-03	-6.44e-03	6.92
22	10	6.12	0.07	2.77e-03	15.70	0.0	-4.17	-6.60	-0.02	-1.91e-03	0.07	-0.28
		-7.34	-5.91e-03	7.63e-04	0.0	510.2	5.75	9.10	-0.02	-1.91e-03	-5.91e-03	6.12
22	22	2.45	-0.15	3.24e-03	15.70	0.0	-2.76	-7.83	-0.31	0.06	-0.15	2.45
		-7.79	-1.74	-0.02	0.0	510.2	7.16	7.87	-0.31	0.06	-1.74	2.01
22	23	10.23	1.73	2.37e-03	15.70	0.0	-5.58	-5.37	0.28	-0.07	0.30	-3.00
		-7.47	0.30	0.02	0.0	510.2	4.34	10.33	0.28	-0.07	1.73	10.23
22	59	16.23	-0.05	1.46e-03	15.70	0.0	-10.65	-3.35	-0.05	0.03	-0.05	-7.24
		-8.94	-0.26	-3.76e-03	0.0	510.2	-0.73	12.35	-0.05	0.03	-0.26	16.23
22	63	16.72	0.72	1.54e-03	15.70	0.0	-10.08	-3.16	0.11	-0.01	0.10	-7.72
		-9.24	0.10	9.98e-03	0.0	510.2	-0.16	12.54	0.11	-0.01	0.72	16.72
22	64	16.15	0.64	1.76e-03	15.70	0.0	-8.68	-2.94	0.09	-0.01	0.13	-8.41
		-9.91	0.13	0.01	0.0	510.2	1.24	12.76	0.09	-0.01	0.64	16.15
22	66	6.69	0.25	4.90e-03	15.70	0.0	2.31	-9.85	0.02	-0.03	0.20	6.69
		-9.38	0.20	5.29e-03	0.0	510.2	12.23	5.85	0.02	-0.03	0.25	-4.00
22	80	3.90	-0.07	2.96e-03	15.70	0.0	-3.75	-7.37	-0.18	0.04	-0.07	1.49
		-7.32	-0.98	-0.01	0.0	510.2	6.17	8.33	-0.18	0.04	-0.98	3.90
22	81	8.33	0.97	2.59e-03	15.70	0.0	-4.59	-5.82	0.15	-0.04	0.21	-2.04
		-7.54	0.21	0.01	0.0	510.2	5.33	9.88	0.15	-0.04	0.97	8.33
22	99	11.84	0.01	1.96e-03	15.70	0.0	-7.52	-4.64	-0.04	0.02	0.01	-4.53
		-8.02	-0.17	-1.77e-03	0.0	510.2	2.40	11.06	-0.04	0.02	-0.17	11.84
22	101	12.11	0.39	2.02e-03	15.70	0.0	-7.20	-4.54	0.05	-7.86e-03	0.10	-4.80
		-8.12	0.10	6.11e-03	0.0	510.2	2.72	11.16	0.05	-7.86e-03	0.39	12.11
22	102	3.98	0.16	3.87e-03	15.70	0.0	-0.81	-8.55	0.01	-0.02	0.14	3.98
		-7.89	0.14	3.30e-03	0.0	510.2	9.11	7.15	0.01	-0.02	0.16	0.40
22	144	4.34	-0.03	2.92e-03	15.70	0.0	-3.82	-7.22	-0.14	0.03	-0.03	1.14
		-7.32	-0.76	-9.78e-03	0.0	510.2	6.10	8.48	-0.14	0.03	-0.76	4.34
22	145	7.90	0.75	2.62e-03	15.70	0.0	-4.52	-5.98	0.11	-0.03	0.18	-1.69
		-7.48	0.18	0.01	0.0	510.2	5.40	9.72	0.11	-0.03	0.75	7.90
22	163	10.73	0.02	2.09e-03	15.70	0.0	-6.87	-5.02	-0.04	0.01	0.02	-3.71
		-7.80	-0.14	-1.20e-03	0.0	510.2	3.05	10.68	-0.04	0.01	-0.14	10.73
22	165	10.95	0.30	2.13e-03	15.70	0.0	-6.61	-4.94	0.04	-6.42e-03	0.09	-3.92
		-7.88	0.09	4.93e-03	0.0	510.2	3.31	10.76	0.04	-6.42e-03	0.30	10.95
22	166	3.16	0.12	3.64e-03	15.70	0.0	-1.47	-8.18	5.69e-03	-0.02	0.12	3.16
		-7.68	0.12	2.73e-03	0.0	510.2	8.45	7.53	5.69e-03	-0.02	0.12	1.50
23	2	6.84	0.11	6.36e-03	-3.75	0.0	6.70	-1.57	-0.19	-0.02	0.11	6.84
		0.67	-0.22	-1.20e-03	0.0	178.8	6.70	-5.33	-0.19	-0.02	-0.22	0.67
23	3	0.57	0.01	7.60e-04	-0.81	0.0	0.56	0.13	-0.02	-1.94e-03	0.01	0.56
		0.06	-0.02	-1.34e-04	0.0	178.8	0.56	-0.68	-0.02	-1.94e-03	-0.02	0.06
23	5	0.57	0.01	7.60e-04	-0.81	0.0	0.56	0.13	-0.02	-1.94e-03	0.01	0.56
		0.06	-0.02	-1.34e-04	0.0	178.8	0.56	-0.68	-0.02	-1.94e-03	-0.02	0.06

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
23	6	4.64	0.08	4.34e-03	-2.61	0.0	4.54	-1.03	-0.13	-0.01	0.08	4.64
		0.45	-0.15	-8.15e-04	0.0	178.8	4.54	-3.64	-0.13	-0.01	-0.15	0.45
23	7	0.57	0.01	7.60e-04	-0.81	0.0	0.56	0.13	-0.02	-1.94e-03	0.01	0.56
		0.06	-0.02	-1.34e-04	0.0	178.8	0.56	-0.68	-0.02	-1.94e-03	-0.02	0.06
23	8	3.41	0.06	3.27e-03	-2.07	0.0	3.35	-0.69	-0.09	-9.49e-03	0.06	3.41
		0.33	-0.11	-6.11e-04	0.0	178.8	3.35	-2.76	-0.09	-9.49e-03	-0.11	0.33
23	9	0.57	0.01	7.60e-04	-0.81	0.0	0.56	0.13	-0.02	-1.94e-03	0.01	0.56
		0.06	-0.02	-1.34e-04	0.0	178.8	0.56	-0.68	-0.02	-1.94e-03	-0.02	0.06
23	10	3.00	0.05	2.91e-03	-1.89	0.0	2.95	-0.57	-0.08	-8.41e-03	0.05	3.00
		0.30	-0.10	-5.43e-04	0.0	178.8	2.95	-2.46	-0.08	-8.41e-03	-0.10	0.30
23	16	4.46	2.05	4.03e-03	-1.89	0.0	-3.91	-1.95	-2.29	-0.27	2.05	4.46
		-0.41	-2.04	2.49e-03	0.0	178.8	-3.91	-3.84	-2.29	-0.27	-2.04	-0.41
23	46	4.79	0.64	2.89e-03	-1.89	0.0	13.71	-0.31	0.76	0.09	-0.72	4.79
		1.44	-0.72	-9.92e-04	0.0	178.8	13.71	-2.20	0.76	0.09	0.64	1.44
23	47	1.22	0.83	2.92e-03	-1.89	0.0	-7.81	-0.83	-0.93	-0.10	0.83	1.22
		-0.85	-0.84	-1.00e-04	0.0	178.8	-7.81	-2.72	-0.93	-0.10	-0.84	-0.85
23	77	3.30	1.18	3.46e-03	-1.89	0.0	-1.01	-1.06	-1.33	-0.15	1.18	3.30
		-0.11	-1.19	1.19e-03	0.0	178.8	-1.01	-2.95	-1.33	-0.15	-1.19	-0.11
23	92	3.53	0.35	2.82e-03	-1.89	0.0	9.07	-0.13	0.43	0.05	-0.42	3.53
		0.94	-0.42	-7.96e-04	0.0	178.8	9.07	-2.02	0.43	0.05	0.35	0.94
23	93	2.48	0.52	3.00e-03	-1.89	0.0	-3.17	-1.01	-0.59	-0.07	0.52	2.48
		-0.35	-0.54	-2.89e-04	0.0	178.8	-3.17	-2.90	-0.59	-0.07	-0.54	-0.35
23	106	3.95	0.21	3.16e-03	-1.89	0.0	7.22	-0.23	-0.26	-0.03	0.21	3.95
		0.76	-0.26	-3.58e-03	0.0	178.8	7.22	-2.12	-0.26	-0.03	-0.26	0.76
23	138	6.69	0.61	3.74e-03	-1.89	0.0	4.82	-2.22	-0.68	-0.09	0.61	6.69
		0.51	-0.61	-1.74e-03	0.0	178.8	4.82	-4.11	-0.68	-0.09	-0.61	0.51
23	141	3.23	0.93	3.34e-03	-1.89	0.0	-0.17	-0.95	-1.05	-0.12	0.93	3.23
		-0.03	-0.95	8.04e-04	0.0	178.8	-0.17	-2.84	-1.05	-0.12	-0.95	-0.03
23	156	3.43	0.25	2.84e-03	-1.89	0.0	7.86	-0.22	0.32	0.04	-0.32	3.43
		0.82	-0.32	-7.28e-04	0.0	178.8	7.86	-2.11	0.32	0.04	0.25	0.82
23	157	2.58	0.42	2.97e-03	-1.89	0.0	-1.96	-0.92	-0.48	-0.05	0.42	2.58
		-0.23	-0.45	-3.57e-04	0.0	178.8	-1.96	-2.81	-0.48	-0.05	-0.45	-0.23
23	170	3.77	0.18	3.11e-03	-1.89	0.0	6.41	-0.30	-0.22	-0.03	0.18	3.77
		0.67	-0.22	-2.96e-03	0.0	178.8	6.41	-2.19	-0.22	-0.03	-0.22	0.67
24	2	11.65	-0.02	-3.38e-03	-37.79	0.0	8.53	17.48	0.02	-0.01	-0.13	-10.40
		-16.00	-0.13	5.84e-03	0.0	526.1	-14.35	-20.31	0.02	-0.01	-0.02	-16.00
24	3	1.20	-1.47e-03	-3.32e-04	-4.09	0.0	1.03	1.96	2.24e-03	-6.26e-04	-0.01	-1.33
		-1.66	-0.01	1.48e-03	0.0	526.1	-1.45	-2.13	2.24e-03	-6.26e-04	-1.47e-03	-1.66
24	5	1.20	-1.47e-03	-3.32e-04	-4.09	0.0	1.03	1.96	2.24e-03	-6.26e-04	-0.01	-1.33
		-1.66	-0.01	1.48e-03	0.0	526.1	-1.45	-2.13	2.24e-03	-6.26e-04	-1.47e-03	-1.66
24	6	7.92	-0.02	-2.30e-03	-25.74	0.0	5.83	11.91	0.01	-7.59e-03	-0.09	-7.11
		-10.89	-0.09	4.09e-03	0.0	526.1	-9.76	-13.83	0.01	-7.59e-03	-0.02	-10.89
24	7	1.20	-1.47e-03	-3.32e-04	-4.09	0.0	1.03	1.96	2.24e-03	-6.26e-04	-0.01	-1.33
		-1.66	-0.01	1.48e-03	0.0	526.1	-1.45	-2.13	2.24e-03	-6.26e-04	-1.47e-03	-1.66
24	8	5.91	-0.01	-1.71e-03	-19.24	0.0	4.39	8.93	0.01	-5.50e-03	-0.06	-5.38
		-8.12	-0.06	3.31e-03	0.0	526.1	-7.27	-10.32	0.01	-5.50e-03	-0.01	-8.12
24	9	1.20	-1.47e-03	-3.32e-04	-4.09	0.0	1.03	1.96	2.24e-03	-6.26e-04	-0.01	-1.33
		-1.66	-0.01	1.48e-03	0.0	526.1	-1.45	-2.13	2.24e-03	-6.26e-04	-1.47e-03	-1.66
24	10	5.23	-9.69e-03	-1.51e-03	-17.08	0.0	3.91	7.93	9.07e-03	-4.81e-03	-0.06	-4.80
		-7.19	-0.06	3.04e-03	0.0	526.1	-6.44	-9.15	9.07e-03	-4.81e-03	-9.69e-03	-7.19
24	20	6.01	0.28	-1.78e-03	-17.08	0.0	1.93	7.30	-0.33	-0.04	0.28	-2.53
		-8.22	-1.73	-0.03	0.0	526.1	-8.41	-9.77	-0.33	-0.04	-1.73	-8.22
24	25	4.61	1.71	-1.26e-03	-17.08	0.0	5.88	8.56	0.35	0.03	-0.40	-7.07
		-7.07	-0.40	0.04	0.0	526.1	-4.46	-8.52	0.35	0.03	1.71	-6.17
24	43	7.73	-0.12	-2.37e-03	-17.08	0.0	-3.74	6.13	-0.08	-0.02	-0.12	1.69
		-10.16	-0.62	-8.37e-03	0.0	526.1	-14.08	-10.95	-0.08	-0.02	-0.62	-10.16
24	50	3.76	0.60	-7.52e-04	-17.08	0.0	11.55	9.73	0.10	0.01	1.15e-03	-11.29
		-11.29	1.15e-03	0.01	0.0	526.1	1.21	-7.35	0.10	0.01	0.60	-4.23
24	79	5.72	0.15	-1.68e-03	-17.08	0.0	2.14	7.53	-0.19	-0.02	0.15	-3.34
		-7.85	-0.97	-0.02	0.0	526.1	-8.20	-9.55	-0.19	-0.02	-0.97	-7.85
24	82	4.83	0.95	-1.34e-03	-17.08	0.0	5.67	8.33	0.21	0.01	-0.26	-6.26
		-6.54	-0.26	0.02	0.0	526.1	-4.67	-8.75	0.21	0.01	0.95	-6.54
24	91	6.49	-0.11	-1.98e-03	-17.08	0.0	0.11	6.93	-0.03	-0.01	-0.11	-1.18
		-8.86	-0.39	-3.04e-03	0.0	526.1	-10.23	-10.15	-0.03	-0.01	-0.39	-8.86
24	94	4.28	0.38	-1.06e-03	-17.08	0.0	7.70	8.93	0.05	5.19e-03	-4.56e-03	-8.42
		-8.42	-4.56e-03	9.13e-03	0.0	526.1	-2.64	-8.14	0.05	5.19e-03	0.38	-5.53
24	143	5.61	0.10	-1.65e-03	-17.08	0.0	2.50	7.61	-0.15	-0.02	0.10	-3.63
		-7.72	-0.76	-0.01	0.0	526.1	-7.85	-9.47	-0.15	-0.02	-0.76	-7.72
24	146	4.91	0.74	-1.37e-03	-17.08	0.0	5.32	8.25	0.17	0.01	-0.22	-5.97
		-6.67	-0.22	0.02	0.0	526.1	-5.03	-8.83	0.17	0.01	0.74	-6.67
24	155	6.24	-0.10	-1.89e-03	-17.08	0.0	0.85	7.12	-0.02	-0.01	-0.10	-1.88



Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		-8.53	-0.31	-1.66e-03	0.0	526.1	-9.49	-9.96	-0.02	-0.01	-0.31	-8.53
24	158	4.45	0.29	-1.15e-03	-17.08	0.0	6.96	8.74	0.04	3.09e-03	-0.01	-7.72
		-7.72	-0.01	7.75e-03	0.0	526.1	-3.38	-8.34	0.04	3.09e-03	0.29	-5.86
25	2	19.54	0.37	-9.16e-03	37.80	0.0	-13.16	-14.81	-0.39	0.02	0.37	-3.84
		-18.51	-1.69	-6.93e-03	0.0	526.6	9.70	22.99	-0.39	0.02	-1.69	19.54
25	6	13.33	0.25	-6.20e-03	25.75	0.0	-8.95	-10.09	-0.27	0.02	0.25	-2.61
		-12.60	-1.15	-4.84e-03	0.0	526.6	6.62	15.66	-0.27	0.02	-1.15	13.33
25	8	10.01	0.19	-4.55e-03	19.25	0.0	-6.66	-7.53	-0.20	0.01	0.19	-1.95
		-9.40	-0.86	-3.87e-03	0.0	526.6	4.98	11.72	-0.20	0.01	-0.86	10.01
25	10	8.90	0.17	-4.00e-03	17.09	0.0	-5.90	-6.68	-0.18	0.01	0.17	-1.73
		-8.33	-0.77	-3.55e-03	0.0	526.6	4.43	10.41	-0.18	0.01	-0.77	8.90
25	35	7.40	0.10	-4.66e-03	17.09	0.0	-10.53	-6.77	0.56	0.07	-2.92	-2.94
		-9.65	-2.92	0.03	0.0	526.6	-0.20	10.31	0.56	0.07	0.10	7.40
25	42	10.39	3.26	-3.33e-03	17.09	0.0	-1.27	-6.59	-0.92	-0.05	3.26	-0.52
		-7.02	-1.63	-0.04	0.0	526.6	9.06	10.50	-0.92	-0.05	-1.63	10.39
25	54	18.84	-0.03	-3.42e-03	17.09	0.0	6.71	-3.90	-0.22	0.06	-0.03	-6.60
		-8.76	-1.27	7.81e-03	0.0	526.6	17.04	13.19	-0.22	0.06	-1.27	18.84
25	62	18.55	0.15	-2.98e-03	17.09	0.0	9.00	-4.07	-0.25	0.06	0.15	-6.01
		-8.38	-1.25	5.20e-03	0.0	526.6	19.33	13.01	-0.25	0.06	-1.25	18.55
25	63	2.55	0.19	-5.05e-03	17.09	0.0	-20.80	-9.28	-0.10	-0.03	0.19	2.55
		-10.35	-0.28	-9.31e-03	0.0	526.6	-10.47	7.80	-0.10	-0.03	-0.28	-0.75
25	68	1.01	-0.05	-6.12e-03	17.09	0.0	-16.71	-8.40	0.21	-4.07e-03	-1.20	-0.57
		-11.03	-1.20	0.01	0.0	526.6	-6.37	8.69	0.21	-4.07e-03	-0.05	1.01
25	87	8.23	-0.31	-4.61e-03	17.09	0.0	-7.63	-6.63	0.23	0.04	-1.56	-2.78
		-9.24	-1.56	0.02	0.0	526.6	2.70	10.45	0.23	0.04	-0.31	8.23
25	90	9.56	1.90	-3.39e-03	17.09	0.0	-4.18	-6.72	-0.59	-0.02	1.90	-0.68
		-7.43	-1.23	-0.02	0.0	526.6	6.16	10.36	-0.59	-0.02	-1.23	9.56
25	96	14.42	-7.67e-03	-3.43e-03	17.09	0.0	0.45	-5.19	-0.19	0.04	-7.67e-03	-4.10
		-8.04	-1.02	4.19e-03	0.0	526.6	10.78	11.89	-0.19	0.04	-1.02	14.42
25	100	14.25	0.10	-3.15e-03	17.09	0.0	1.77	-5.30	-0.21	0.04	0.10	-3.76
		-7.86	-1.01	2.80e-03	0.0	526.6	12.10	11.79	-0.21	0.04	-1.01	14.25
25	101	3.54	0.24	-4.84e-03	17.09	0.0	-13.57	-8.06	-0.15	-0.02	0.24	0.30
		-9.38	-0.52	-6.49e-03	0.0	526.6	-3.24	9.02	-0.15	-0.02	-0.52	3.54
25	103	4.06	-0.31	-5.00e-03	17.09	0.0	-13.17	-7.81	0.06	4.39e-03	-0.69	-0.60
		-9.66	-0.69	5.78e-03	0.0	526.6	-2.83	9.28	0.06	4.39e-03	-0.31	4.06
25	151	8.34	-0.40	-4.48e-03	17.09	0.0	-7.30	-6.66	0.14	0.04	-1.18	-2.53
		-9.04	-1.18	0.01	0.0	526.6	3.03	10.43	0.14	0.04	-0.40	8.34
25	154	9.46	1.52	-3.52e-03	17.09	0.0	-4.50	-6.70	-0.50	-0.01	1.52	-0.93
		-7.62	-1.13	-0.02	0.0	526.6	5.83	10.38	-0.50	-0.01	-1.13	9.46
25	160	13.34	0.04	-3.54e-03	17.09	0.0	-0.79	-5.49	-0.19	0.04	0.04	-3.63
		-8.05	-0.98	3.25e-03	0.0	526.6	9.55	11.60	-0.19	0.04	-0.98	13.34
25	164	13.21	0.13	-3.31e-03	17.09	0.0	0.27	-5.57	-0.20	0.03	0.13	-3.35
		-7.91	-0.97	2.18e-03	0.0	526.6	10.61	11.52	-0.20	0.03	-0.97	13.21
25	165	4.59	0.21	-4.68e-03	17.09	0.0	-12.08	-7.79	-0.15	-0.01	0.21	-0.11
		-9.15	-0.57	-5.80e-03	0.0	526.6	-1.74	9.30	-0.15	-0.01	-0.57	4.59
25	167	4.99	-0.40	-4.80e-03	17.09	0.0	-11.76	-7.59	0.02	5.40e-03	-0.51	-0.80
		-9.37	-0.51	4.47e-03	0.0	526.6	-1.43	9.49	0.02	5.40e-03	-0.40	4.99
36	2	18.92	1.24	7.44e-03	-0.81	0.0	-2.16	-11.79	-0.96	-2.26e-03	1.24	18.92
		-5.92	-0.72	-6.48e-04	0.0	203.8	-2.16	-12.59	-0.96	-2.26e-03	-0.72	-5.92
36	3	2.21	0.11	1.27e-03	-0.62	0.0	-0.29	-1.17	-0.08	-2.65e-04	0.11	2.21
		-0.81	-0.06	-8.87e-05	0.0	203.8	-0.29	-1.79	-0.08	-2.65e-04	-0.06	-0.81
36	5	2.21	0.11	1.27e-03	-0.62	0.0	-0.29	-1.17	-0.08	-2.65e-04	0.11	2.21
		-0.81	-0.06	-8.87e-05	0.0	203.8	-0.29	-1.79	-0.08	-2.65e-04	-0.06	-0.81
36	6	12.91	0.84	5.13e-03	-0.62	0.0	-1.48	-8.01	-0.65	-1.54e-03	0.84	12.91
		-4.06	-0.49	-4.44e-04	0.0	203.8	-1.48	-8.64	-0.65	-1.54e-03	-0.49	-4.06
36	7	2.21	0.11	1.27e-03	-0.62	0.0	-0.29	-1.17	-0.08	-2.65e-04	0.11	2.21
		-0.81	-0.06	-8.87e-05	0.0	203.8	-0.29	-1.79	-0.08	-2.65e-04	-0.06	-0.81
36	8	9.70	0.62	3.97e-03	-0.62	0.0	-1.12	-5.96	-0.48	-1.16e-03	0.62	9.70
		-3.08	-0.36	-3.37e-04	0.0	203.8	-1.12	-6.58	-0.48	-1.16e-03	-0.36	-3.08
36	9	2.21	0.11	1.27e-03	-0.62	0.0	-0.29	-1.17	-0.08	-2.65e-04	0.11	2.21
		-0.81	-0.06	-8.87e-05	0.0	203.8	-0.29	-1.79	-0.08	-2.65e-04	-0.06	-0.81
36	10	8.63	0.55	3.58e-03	-0.62	0.0	-1.00	-5.28	-0.43	-1.03e-03	0.55	8.63
		-2.76	-0.32	-3.02e-04	0.0	203.8	-1.00	-5.90	-0.43	-1.03e-03	-0.32	-2.76
36	36	10.03	4.75	4.74e-03	-0.62	0.0	-2.28	-12.36	-5.41	-5.03e-04	4.75	10.03
		-15.57	-6.36	2.67e-03	0.0	203.8	-2.28	-12.98	-5.41	-5.03e-04	-6.36	-15.57
36	44	8.96	12.26	4.41e-03	-0.62	0.0	7.66	-6.70	-11.41	1.94e-03	12.26	8.96
		-7.88	-11.02	7.82e-03	0.0	203.8	7.66	-7.32	-11.41	1.94e-03	-11.02	-7.88
36	54	11.04	7.77	3.54e-03	-0.62	0.0	-12.61	-8.76	8.63	-5.08e-03	-9.80	11.04
		-5.21	-9.80	-9.21e-03	0.0	203.8	-12.61	-9.38	8.63	-5.08e-03	7.77	-5.21
36	55	6.21	10.90	3.63e-03	-0.62	0.0	10.60	-1.79	-9.48	3.02e-03	10.90	6.21
		-0.30	-8.40	8.61e-03	0.0	203.8	10.60	-2.41	-9.48	3.02e-03	-8.40	-0.30

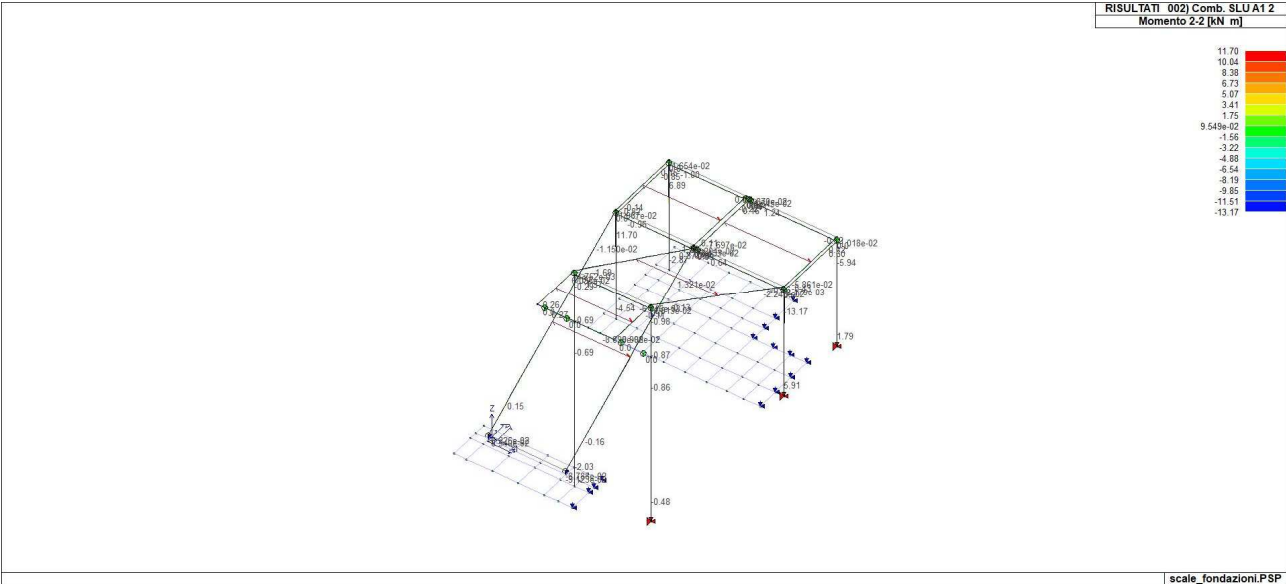
Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
36	60	8.37	12.16	4.69e-03	-0.62	0.0	7.06	-9.61	-11.45	3.81e-03	12.16	8.37
		-9.42	-11.20	9.75e-03	0.0	203.8	7.06	-10.23	-11.45	3.81e-03	-11.20	-9.42
36	87	8.74	2.75	4.02e-03	-0.62	0.0	-1.48	-8.92	-3.11	-6.81e-04	2.75	8.74
		-9.92	-3.63	1.39e-03	0.0	203.8	-1.48	-9.54	-3.11	-6.81e-04	-3.63	-9.92
36	91	8.13	7.12	3.83e-03	-0.62	0.0	4.30	-5.63	-6.60	7.45e-04	7.12	8.13
		-5.45	-6.34	4.37e-03	0.0	203.8	4.30	-6.25	-6.60	7.45e-04	-6.34	-5.45
36	96	9.34	4.58	3.32e-03	-0.62	0.0	-7.49	-6.84	5.05	-3.34e-03	-5.70	9.34
		-3.92	-5.70	-5.53e-03	0.0	203.8	-7.49	-7.46	5.05	-3.34e-03	4.58	-3.92
36	97	7.91	6.81	3.85e-03	-0.62	0.0	5.48	-3.71	-5.90	1.28e-03	6.81	7.91
		-1.60	-5.21	4.93e-03	0.0	203.8	5.48	-4.33	-5.90	1.28e-03	-5.21	-1.60
36	99	7.79	7.06	4.00e-03	-0.62	0.0	3.95	-7.32	-6.62	1.83e-03	7.06	7.79
		-6.35	-6.44	5.49e-03	0.0	203.8	3.95	-7.94	-6.62	1.83e-03	-6.44	-6.35
36	104	9.69	4.68	3.16e-03	-0.62	0.0	-7.14	-5.15	5.07	-4.43e-03	-5.64	9.69
		-3.02	-5.64	-6.65e-03	0.0	203.8	-7.14	-5.77	5.07	-4.43e-03	4.68	-3.02
36	134	13.24	0.55	4.81e-03	-0.62	0.0	-6.42	-9.05	0.86	-3.24e-03	-1.17	13.24
		-6.79	-1.17	-3.37e-03	0.0	203.8	-6.42	-9.67	0.86	-3.24e-03	0.55	-6.79
36	151	8.71	2.32	3.93e-03	-0.62	0.0	-1.33	-8.12	-2.56	-7.32e-04	2.32	8.71
		-8.35	-2.94	1.07e-03	0.0	203.8	-1.33	-8.74	-2.56	-7.32e-04	-2.94	-8.35
36	155	8.23	5.84	3.79e-03	-0.62	0.0	3.29	-5.53	-5.39	4.10e-04	5.84	8.23
		-4.88	-5.16	3.47e-03	0.0	203.8	3.29	-6.16	-5.39	4.10e-04	-5.16	-4.88
36	160	9.20	3.64	3.37e-03	-0.62	0.0	-6.21	-6.51	4.00	-2.89e-03	-4.49	9.20
		-3.64	-4.49	-4.52e-03	0.0	203.8	-6.21	-7.13	4.00	-2.89e-03	3.64	-3.64
36	161	8.05	5.59	3.80e-03	-0.62	0.0	4.21	-4.04	-4.85	8.29e-04	5.59	8.05
		-1.88	-4.28	3.91e-03	0.0	203.8	4.21	-4.67	-4.85	8.29e-04	-4.28	-1.88
36	163	7.95	5.79	3.92e-03	-0.62	0.0	3.00	-6.90	-5.41	1.28e-03	5.79	7.95
		-5.60	-5.24	4.37e-03	0.0	203.8	3.00	-7.52	-5.41	1.28e-03	-5.24	-5.60
36	168	9.48	3.73	3.24e-03	-0.62	0.0	-5.93	-5.14	4.02	-3.76e-03	-4.44	9.48
		-2.91	-4.44	-5.42e-03	0.0	203.8	-5.93	-5.76	4.02	-3.76e-03	3.73	-2.91
37	2	35.95	0.95	4.57e-05	-0.04	0.0	-7.31	10.78	-5.61	-2.25e-03	0.95	34.87
		34.87	0.39	-6.46e-05	0.0	10.0	-7.31	10.74	-5.61	-2.25e-03	0.39	35.95
37	3	4.23	0.08	2.38e-05	-0.03	0.0	-0.86	0.75	-0.46	-2.63e-04	0.08	4.16
		4.16	0.04	-7.56e-06	0.0	10.0	-0.86	0.72	-0.46	-2.63e-04	0.04	4.23
37	5	4.23	0.08	2.38e-05	-0.03	0.0	-0.86	0.75	-0.46	-2.63e-04	0.08	4.16
		4.16	0.04	-7.56e-06	0.0	10.0	-0.86	0.72	-0.46	-2.63e-04	0.04	4.23
37	6	24.53	0.64	3.36e-05	-0.03	0.0	-4.99	7.28	-3.80	-1.53e-03	0.64	23.80
		23.80	0.26	-4.40e-05	0.0	10.0	-4.99	7.25	-3.80	-1.53e-03	0.26	24.53
37	7	4.23	0.08	2.38e-05	-0.03	0.0	-0.86	0.75	-0.46	-2.63e-04	0.08	4.16
		4.16	0.04	-7.56e-06	0.0	10.0	-0.86	0.72	-0.46	-2.63e-04	0.04	4.23
37	8	18.44	0.47	3.07e-05	-0.03	0.0	-3.75	5.33	-2.80	-1.15e-03	0.47	17.91
		17.91	0.19	-3.31e-05	0.0	10.0	-3.75	5.30	-2.80	-1.15e-03	0.19	18.44
37	9	4.23	0.08	2.38e-05	-0.03	0.0	-0.86	0.75	-0.46	-2.63e-04	0.08	4.16
		4.16	0.04	-7.56e-06	0.0	10.0	-0.86	0.72	-0.46	-2.63e-04	0.04	4.23
37	10	16.41	0.42	2.97e-05	-0.03	0.0	-3.34	4.67	-2.47	-1.03e-03	0.42	15.95
		15.95	0.17	-2.95e-05	0.0	10.0	-3.34	4.64	-2.47	-1.03e-03	0.17	16.41
37	53	11.10	-9.11	7.73e-05	-0.03	0.0	9.05	-4.60	-8.35	-4.94e-03	-9.11	11.10
		10.91	-9.91	-1.05e-04	0.0	10.0	9.05	-4.63	-8.35	-4.94e-03	-9.91	10.91
37	56	21.91	10.25	-1.92e-05	-0.03	0.0	-15.72	13.95	3.42	2.89e-03	9.95	20.80
		20.80	9.95	4.61e-05	0.0	10.0	-15.72	13.92	3.42	2.89e-03	10.25	21.91
37	67	19.09	12.42	3.39e-05	-0.03	0.0	-13.00	7.77	3.53	4.27e-03	12.04	18.14
		18.14	12.04	1.47e-04	0.0	10.0	-13.00	7.74	3.53	4.27e-03	12.42	19.09
37	74	13.75	-11.20	2.55e-05	-0.03	0.0	6.33	1.58	-8.46	-6.32e-03	-11.20	13.75
		13.73	-12.08	-2.05e-04	0.0	10.0	6.33	1.55	-8.46	-6.32e-03	-12.08	13.73
37	96	14.15	-5.28	5.74e-05	-0.03	0.0	3.49	-0.35	-6.40	-3.34e-03	-5.28	14.02
		14.02	-5.86	-7.23e-05	0.0	10.0	3.49	-0.38	-6.40	-3.34e-03	-5.86	14.15
37	97	18.67	6.21	-5.52e-06	-0.03	0.0	-10.16	9.69	1.47	1.29e-03	6.12	17.87
		17.87	6.12	1.34e-05	0.0	10.0	-10.16	9.66	1.47	1.29e-03	6.21	18.67
37	100	13.49	-5.38	6.02e-05	-0.03	0.0	3.30	-0.35	-6.81	-4.60e-03	-5.38	13.37
		13.37	-5.99	-1.40e-04	0.0	10.0	3.30	-0.38	-6.81	-4.60e-03	-5.99	13.49
37	101	19.33	6.34	-7.15e-06	-0.03	0.0	-9.97	9.69	1.87	2.55e-03	6.21	18.53
		18.53	6.21	8.08e-05	0.0	10.0	-9.97	9.66	1.87	2.55e-03	6.34	19.33
37	103	18.90	7.12	3.21e-05	-0.03	0.0	-9.33	6.84	0.51	2.01e-03	7.02	18.12
		18.12	7.02	7.39e-05	0.0	10.0	-9.33	6.81	0.51	2.01e-03	7.12	18.90
37	106	13.92	-6.18	2.72e-05	-0.03	0.0	2.65	2.50	-5.44	-4.07e-03	-6.18	13.77
		13.77	-6.78	-1.33e-04	0.0	10.0	2.65	2.47	-5.44	-4.07e-03	-6.78	13.92
37	117	9.31	-1.25	6.60e-05	-0.03	0.0	2.58	-1.76	-2.48	-3.07e-03	-1.25	9.24
		9.24	-1.62	-9.96e-05	0.0	10.0	2.58	-1.79	-2.48	-3.07e-03	-1.62	9.31
37	120	23.51	2.09	-1.18e-05	-0.03	0.0	-9.25	11.11	-2.45	1.02e-03	2.09	22.66
		22.66	1.97	4.07e-05	0.0	10.0	-9.25	11.08	-2.45	1.02e-03	1.97	23.51
37	160	14.59	-4.19	5.15e-05	-0.03	0.0	2.16	0.67	-5.62	-2.89e-03	-4.19	14.40
		14.40	-4.70	-6.39e-05	0.0	10.0	2.16	0.64	-5.62	-2.89e-03	-4.70	14.59
37	161	18.23	5.05	7.87e-06	-0.03	0.0	-8.83	8.68	0.68	8.36e-04	5.03	17.49

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		17.49	5.03	5.00e-06	0.0	10.0	-8.83	8.65	0.68	8.36e-04	5.05	18.23
37	164	14.06	-4.26	5.37e-05	-0.03	0.0	2.00	0.68	-5.94	-3.90e-03	-4.26	13.87
		13.87	-4.81	-1.18e-04	0.0	10.0	2.00	0.65	-5.94	-3.90e-03	-4.81	14.06
37	165	18.76	5.15	5.67e-06	-0.03	0.0	-8.68	8.67	1.01	1.84e-03	5.10	18.02
		18.02	5.10	5.90e-05	0.0	10.0	-8.68	8.64	1.01	1.84e-03	5.15	18.76
37	167	18.43	5.76	3.13e-05	-0.03	0.0	-8.17	6.45	-0.05	1.43e-03	5.73	17.70
		17.70	5.73	5.39e-05	0.0	10.0	-8.17	6.42	-0.05	1.43e-03	5.76	18.43
37	170	14.40	-4.89	2.81e-05	-0.03	0.0	1.50	2.89	-4.88	-3.48e-03	-4.89	14.19
		14.19	-5.42	-1.13e-04	0.0	10.0	1.50	2.86	-4.88	-3.48e-03	-5.42	14.40
38	2	19.26	0.01	-0.01	-34.68	0.0	-13.48	21.34	0.03	-4.38e-03	-0.16	-14.23
		-14.23	-0.16	-1.43e-03	0.0	510.2	8.43	-13.34	0.03	-4.38e-03	0.01	6.17
38	6	13.12	9.19e-03	-8.17e-03	-23.63	0.0	-9.18	14.53	0.02	-3.07e-03	-0.11	-9.66
		-9.66	-0.11	-1.01e-03	0.0	510.2	5.75	-9.10	0.02	-3.07e-03	9.19e-03	4.18
38	8	9.82	7.31e-03	-6.06e-03	-17.68	0.0	-6.85	10.84	0.02	-2.47e-03	-0.09	-7.14
		-7.14	-0.09	-8.39e-04	0.0	510.2	4.32	-6.84	0.02	-2.47e-03	7.31e-03	3.08
38	10	8.72	6.68e-03	-5.36e-03	-15.70	0.0	-6.08	9.62	0.02	-2.27e-03	-0.08	-6.30
		-6.30	-0.08	-7.81e-04	0.0	510.2	3.84	-6.09	0.02	-2.27e-03	6.68e-03	2.71
38	20	8.27	1.39	-4.89e-03	-15.70	0.0	-8.24	9.44	0.23	0.04	0.20	-6.19
		-6.19	0.20	0.02	0.0	510.2	1.68	-6.26	0.23	0.04	1.39	1.92
38	25	9.17	-0.35	-5.84e-03	-15.70	0.0	-3.91	9.79	-0.19	-0.05	-0.35	-6.42
		-6.42	-1.37	-0.02	0.0	510.2	6.01	-5.91	-0.19	-0.05	-1.37	3.50
38	45	8.35	0.46	-4.15e-03	-15.70	0.0	2.85	9.90	0.09	7.19e-03	0.01	-7.60
		-7.60	0.01	6.71e-03	0.0	510.2	12.77	-5.80	0.09	7.19e-03	0.46	2.90
38	48	9.09	-0.17	-6.60e-03	-15.70	0.0	-15.00	9.33	-0.06	-0.01	-0.17	-5.00
		-5.00	-0.45	-8.27e-03	0.0	510.2	-5.08	-6.37	-0.06	-0.01	-0.45	2.52
38	79	8.29	0.78	-4.90e-03	-15.70	0.0	-6.89	9.33	0.13	0.03	0.09	-5.80
		-5.80	0.09	0.01	0.0	510.2	3.03	-6.37	0.13	0.03	0.78	1.73
38	82	9.14	-0.24	-5.83e-03	-15.70	0.0	-5.26	9.90	-0.10	-0.03	-0.24	-6.80
		-6.80	-0.77	-0.01	0.0	510.2	4.66	-5.80	-0.10	-0.03	-0.77	3.69
38	92	8.70	0.29	-4.85e-03	-15.70	0.0	-1.34	9.98	0.06	2.39e-03	-0.03	-7.50
		-7.50	-0.03	3.47e-03	0.0	510.2	8.58	-5.72	0.06	2.39e-03	0.29	3.39
38	93	8.77	-0.12	-5.88e-03	-15.70	0.0	-10.81	9.26	-0.03	-6.94e-03	-0.12	-5.10
		-5.10	-0.27	-5.03e-03	0.0	510.2	-0.89	-6.45	-0.03	-6.94e-03	-0.27	2.02
38	94	8.91	-0.14	-5.21e-03	-15.70	0.0	-1.50	10.08	-5.43e-03	-0.02	-0.14	-7.62
		-7.62	-0.16	-4.23e-03	0.0	510.2	8.42	-5.62	-5.43e-03	-0.02	-0.16	3.81
38	114	10.26	-0.23	-6.68e-03	-15.70	0.0	-6.41	11.04	-0.01	-0.02	-0.23	-9.60
		-9.60	-0.25	-7.59e-03	0.0	510.2	3.51	-4.67	-0.01	-0.02	-0.25	6.77
38	122	10.31	-0.21	-6.60e-03	-15.70	0.0	-6.94	11.01	-0.03	-0.02	-0.21	-9.47
		-9.47	-0.33	-7.08e-03	0.0	510.2	2.98	-4.69	-0.03	-0.02	-0.33	6.79
38	143	8.39	0.61	-5.00e-03	-15.70	0.0	-6.74	9.39	0.11	0.02	0.05	-5.90
		-5.90	0.05	8.87e-03	0.0	510.2	3.18	-6.31	0.11	0.02	0.61	1.94
38	146	9.05	-0.21	-5.73e-03	-15.70	0.0	-5.41	9.84	-0.07	-0.02	-0.21	-6.70
		-6.70	-0.60	-0.01	0.0	510.2	4.51	-5.86	-0.07	-0.02	-0.60	3.48
38	156	8.70	0.23	-4.95e-03	-15.70	0.0	-2.26	9.91	0.05	1.23e-03	-0.04	-7.27
		-7.27	-0.04	2.53e-03	0.0	510.2	7.66	-5.79	0.05	1.23e-03	0.23	3.27
38	157	8.74	-0.11	-5.78e-03	-15.70	0.0	-9.89	9.32	-0.02	-5.78e-03	-0.11	-5.33
		-5.33	-0.21	-4.09e-03	0.0	510.2	0.03	-6.38	-0.02	-5.78e-03	-0.21	2.15
38	158	8.87	-0.12	-5.24e-03	-15.70	0.0	-2.39	9.99	-2.24e-04	-0.01	-0.12	-7.36
		-7.36	-0.12	-3.46e-03	0.0	510.2	7.53	-5.71	-2.24e-04	-0.01	-0.12	3.59
39	1	0.02	-0.02	-1.80e-03	0.78	0.0	0.02	-0.40	0.01	-9.10e-05	-0.04	0.02
		-0.17	-0.04	-1.94e-04	0.0	181.0	0.02	0.39	0.01	-9.10e-05	-0.02	7.37e-03
39	2	0.11	-0.09	-4.69e-03	0.78	0.0	0.16	-0.43	0.10	5.22e-03	-0.27	0.11
		-0.11	-0.27	-3.37e-03	0.0	181.0	0.16	0.35	0.10	5.22e-03	-0.09	0.04
39	3	0.01	-0.01	-1.38e-03	0.60	0.0	0.02	-0.30	8.22e-03	-7.00e-05	-0.03	0.01
		-0.13	-0.03	-1.49e-04	0.0	181.0	0.02	0.30	8.22e-03	-7.00e-05	-0.01	5.67e-03
39	5	0.01	-0.01	-1.38e-03	0.60	0.0	0.02	-0.30	8.22e-03	-7.00e-05	-0.03	0.01
		-0.13	-0.03	-1.49e-04	0.0	181.0	0.02	0.30	8.22e-03	-7.00e-05	-0.01	5.67e-03
39	6	0.07	-0.06	-3.31e-03	0.60	0.0	0.11	-0.33	0.07	3.47e-03	-0.18	0.07
		-0.09	-0.18	-2.27e-03	0.0	181.0	0.11	0.27	0.07	3.47e-03	-0.06	0.03
39	7	0.01	-0.01	-1.38e-03	0.60	0.0	0.02	-0.30	8.22e-03	-7.00e-05	-0.03	0.01
		-0.13	-0.03	-1.49e-04	0.0	181.0	0.02	0.30	8.22e-03	-7.00e-05	-0.01	5.67e-03
39	8	0.06	-0.05	-2.73e-03	0.60	0.0	0.08	-0.32	0.05	2.41e-03	-0.14	0.06
		-0.10	-0.14	-1.63e-03	0.0	181.0	0.08	0.28	0.05	2.41e-03	-0.05	0.02
39	9	0.01	-0.01	-1.38e-03	0.60	0.0	0.02	-0.30	8.22e-03	-7.00e-05	-0.03	0.01
		-0.13	-0.03	-1.49e-04	0.0	181.0	0.02	0.30	8.22e-03	-7.00e-05	-0.01	5.67e-03
39	10	0.05	-0.04	-2.54e-03	0.60	0.0	0.07	-0.32	0.04	2.05e-03	-0.12	0.05
		-0.10	-0.12	-1.42e-03	0.0	181.0	0.07	0.28	0.04	2.05e-03	-0.04	0.02
39	25	0.47	0.34	-5.53e-03	0.60	0.0	-0.01	-0.78	-0.78	-0.02	0.34	0.47
		-0.39	-0.77	4.58e-03	0.0	181.0	-0.01	-0.18	-0.78	-0.02	-0.77	-0.39
39	29	0.38	0.05	-3.74e-04	0.60	0.0	0.31	0.08	0.09	7.46e-03	-0.42	-0.31
		-0.31	-0.42	-6.02e-04	0.0	181.0	0.31	0.68	0.09	7.46e-03	0.05	0.38

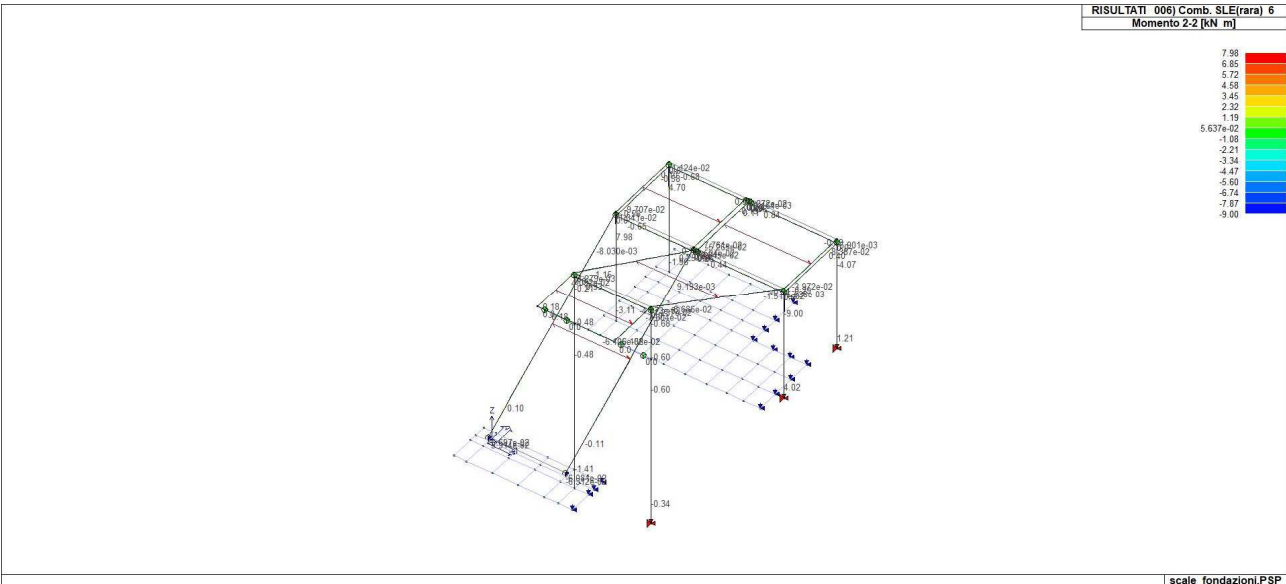
Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
39	32	0.41	0.17	-4.71e-03	0.60	0.0	-0.16	-0.71	-7.08e-03	-3.35e-03	0.17	0.41
		-0.34	-0.13	-2.24e-03	0.0	181.0	-0.16	-0.11	-7.08e-03	-3.35e-03	-0.13	-0.34
39	42	0.48	-0.13	-6.41e-03	0.60	0.0	-0.10	-0.77	-0.29	-0.01	-0.13	0.48
		-0.38	-0.35	4.06e-03	0.0	181.0	-0.10	-0.17	-0.29	-0.01	-0.35	-0.38
39	62	0.08	-0.19	-5.44e-03	0.60	0.0	0.18	-0.29	-0.19	-0.01	-0.92	0.06
		-0.06	-0.92	8.99e-03	0.0	181.0	0.18	0.31	-0.19	-0.01	-0.19	0.08
39	63	0.03	0.68	3.54e-04	0.60	0.0	-0.03	-0.35	0.28	0.02	0.68	0.03
		-0.15	0.11	-0.01	0.0	181.0	-0.03	0.25	0.28	0.02	0.11	-0.05
39	79	0.24	0.31	-5.84e-04	0.60	0.0	0.14	-0.06	0.44	0.01	-0.31	-0.19
		-0.20	-0.31	-4.51e-03	0.0	181.0	0.14	0.54	0.44	0.01	0.31	0.24
39	82	0.29	0.06	-4.50e-03	0.60	0.0	0.01	-0.57	-0.35	-8.45e-03	0.06	0.29
		-0.21	-0.39	1.67e-03	0.0	181.0	0.01	0.03	-0.35	-8.45e-03	-0.39	-0.20
39	84	0.22	0.06	-1.63e-03	0.60	0.0	0.20	-0.10	0.13	5.99e-03	-0.35	-0.15
		-0.16	-0.35	-1.19e-03	0.0	181.0	0.20	0.50	0.13	5.99e-03	0.06	0.22
39	85	0.25	0.11	-3.45e-03	0.60	0.0	-0.05	-0.54	-0.04	-1.88e-03	0.11	0.25
		-0.19	-0.14	-1.65e-03	0.0	181.0	-0.05	0.06	-0.04	-1.88e-03	-0.14	-0.19
39	90	0.29	-0.07	-4.44e-03	0.60	0.0	-0.01	-0.57	-0.21	-8.06e-03	-0.07	0.29
		-0.20	-0.27	2.01e-03	0.0	181.0	-0.01	0.03	-0.21	-8.06e-03	-0.27	-0.20
39	100	0.06	-0.19	-3.96e-03	0.60	0.0	0.15	-0.31	-0.16	-7.16e-03	-0.52	0.06
		-0.08	-0.52	4.98e-03	0.0	181.0	0.15	0.30	-0.16	-7.16e-03	-0.19	0.05
39	143	0.19	0.23	-1.00e-03	0.60	0.0	0.12	-0.12	0.35	0.01	-0.26	-0.14
		-0.16	-0.26	-3.87e-03	0.0	181.0	0.12	0.48	0.35	0.01	0.23	0.19
39	146	0.23	0.02	-4.08e-03	0.60	0.0	0.02	-0.52	-0.27	-6.20e-03	0.02	0.23
		-0.17	-0.32	1.03e-03	0.0	181.0	0.02	0.09	-0.27	-6.20e-03	-0.32	-0.16
39	148	0.18	0.03	-1.85e-03	0.60	0.0	0.17	-0.15	0.11	5.03e-03	-0.30	-0.10
		-0.14	-0.30	-1.19e-03	0.0	181.0	0.17	0.45	0.11	5.03e-03	0.03	0.18
39	149	0.20	0.06	-3.23e-03	0.60	0.0	-0.02	-0.49	-0.02	-9.15e-04	0.06	0.20
		-0.16	-0.12	-1.65e-03	0.0	181.0	-0.02	0.11	-0.02	-9.15e-04	-0.12	-0.14
39	154	0.24	-0.08	-4.03e-03	0.60	0.0	6.21e-03	-0.52	-0.15	-5.89e-03	-0.08	0.24
		-0.17	-0.22	1.30e-03	0.0	181.0	6.21e-03	0.09	-0.15	-5.89e-03	-0.22	-0.15
39	164	0.06	-0.16	-3.69e-03	0.60	0.0	0.13	-0.31	-0.13	-5.43e-03	-0.44	0.06
		-0.09	-0.44	3.75e-03	0.0	181.0	0.13	0.29	-0.13	-5.43e-03	-0.16	0.04
40	1	0.03	0.0	-1.51e-04	-0.15	0.0	1.69	0.07	0.0	1.26e-03	0.0	0.0
		0.0	0.0	1.39e-03	0.0	184.0	1.53	-0.07	0.0	1.26e-03	0.0	0.0
40	2	0.03	0.0	-3.16e-03	-0.15	0.0	14.59	0.07	0.0	-8.87e-03	0.0	0.0
		0.0	0.0	6.38e-03	0.0	184.0	14.43	-0.07	0.0	-8.87e-03	0.0	0.0
40	3	0.03	0.0	-1.16e-04	-0.11	0.0	1.30	0.06	0.0	9.70e-04	0.0	0.0
		0.0	0.0	1.07e-03	0.0	184.0	1.17	-0.06	0.0	9.70e-04	0.0	0.0
40	4	0.03	0.0	-3.13e-03	-0.11	0.0	14.20	0.06	0.0	-9.16e-03	0.0	0.0
		0.0	0.0	6.06e-03	0.0	184.0	14.08	-0.06	0.0	-9.16e-03	0.0	0.0
40	5	0.03	0.0	-1.16e-04	-0.11	0.0	1.30	0.06	0.0	9.70e-04	0.0	0.0
		0.0	0.0	1.07e-03	0.0	184.0	1.17	-0.06	0.0	9.70e-04	0.0	0.0
40	6	0.03	0.0	-2.13e-03	-0.11	0.0	9.90	0.06	0.0	-5.79e-03	0.0	0.0
		0.0	0.0	4.40e-03	0.0	184.0	9.78	-0.06	0.0	-5.79e-03	0.0	0.0
40	7	0.03	0.0	-1.16e-04	-0.11	0.0	1.30	0.06	0.0	9.70e-04	0.0	0.0
		0.0	0.0	1.07e-03	0.0	184.0	1.17	-0.06	0.0	9.70e-04	0.0	0.0
40	8	0.03	0.0	-1.52e-03	-0.11	0.0	7.32	0.06	0.0	-3.76e-03	0.0	0.0
		0.0	0.0	3.40e-03	0.0	184.0	7.20	-0.06	0.0	-3.76e-03	0.0	0.0
40	9	0.03	0.0	-1.16e-04	-0.11	0.0	1.30	0.06	0.0	9.70e-04	0.0	0.0
		0.0	0.0	1.07e-03	0.0	184.0	1.17	-0.06	0.0	9.70e-04	0.0	0.0
40	10	0.03	0.0	-1.32e-03	-0.11	0.0	6.46	0.06	0.0	-3.08e-03	0.0	0.0
		0.0	0.0	3.06e-03	0.0	184.0	6.34	-0.06	0.0	-3.08e-03	0.0	0.0
40	20	0.03	0.0	-5.46e-03	-0.11	0.0	6.83	0.06	0.0	0.09	0.0	0.0
		0.0	0.0	-3.09e-03	0.0	184.0	6.71	-0.06	0.0	0.09	0.0	0.0
40	25	0.03	0.0	2.82e-03	-0.11	0.0	6.09	0.06	0.0	-0.09	0.0	0.0
		0.0	0.0	9.22e-03	0.0	184.0	5.96	-0.06	0.0	-0.09	0.0	0.0
40	44	0.03	0.0	-7.75e-03	-0.11	0.0	-1.81	0.06	0.0	-7.01e-03	0.0	0.0
		0.0	0.0	8.35e-03	0.0	184.0	-1.94	-0.06	0.0	-7.01e-03	0.0	0.0
40	54	0.03	0.0	3.69e-03	-0.11	0.0	17.62	0.06	0.0	0.06	0.0	0.0
		0.0	0.0	-7.28e-03	0.0	184.0	17.49	-0.06	0.0	0.06	0.0	0.0
40	55	0.03	0.0	-6.34e-03	-0.11	0.0	-4.70	0.06	0.0	-0.06	0.0	0.0
		0.0	0.0	0.01	0.0	184.0	-4.82	-0.06	0.0	-0.06	0.0	0.0
40	65	0.03	0.0	5.34e-03	-0.11	0.0	14.42	0.06	0.0	7.87e-03	0.0	0.0
		0.0	0.0	-3.85e-03	0.0	184.0	14.29	-0.06	0.0	7.87e-03	0.0	0.0
40	79	0.03	0.0	-3.67e-03	-0.11	0.0	6.21	0.06	0.0	0.05	0.0	0.0
		0.0	0.0	-3.24e-04	0.0	184.0	6.08	-0.06	0.0	0.05	0.0	0.0
40	82	0.03	0.0	1.02e-03	-0.11	0.0	6.71	0.06	0.0	-0.05	0.0	0.0
		0.0	0.0	6.45e-03	0.0	184.0	6.59	-0.06	0.0	-0.05	0.0	0.0
40	91	0.03	0.0	-5.04e-03	-0.11	0.0	1.23	0.06	0.0	-4.35e-03	0.0	0.0
		0.0	0.0	6.09e-03	0.0	184.0	1.10	-0.06	0.0	-4.35e-03	0.0	0.0
40	96	0.03	0.0	1.61e-03	-0.11	0.0	12.53	0.06	0.0	0.03	0.0	0.0

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		0.0	0.0	-2.91e-03	0.0	184.0	12.40	-0.06	0.0	0.03	0.0	0.0
40	97	0.03	0.0	-4.25e-03	-0.11	0.0	0.39	0.06	0.0	-0.04	0.0	0.0
		0.0	0.0	9.04e-03	0.0	184.0	0.27	-0.06	0.0	-0.04	0.0	0.0
40	102	0.03	0.0	2.53e-03	-0.11	0.0	11.51	0.06	0.0	2.26e-03	0.0	0.0
		0.0	0.0	-9.02e-04	0.0	184.0	11.38	-0.06	0.0	2.26e-03	0.0	0.0
40	143	0.03	0.0	-3.17e-03	-0.11	0.0	6.22	0.06	0.0	0.04	0.0	0.0
		0.0	0.0	4.78e-04	0.0	184.0	6.10	-0.06	0.0	0.04	0.0	0.0
40	146	0.03	0.0	5.28e-04	-0.11	0.0	6.70	0.06	0.0	-0.04	0.0	0.0
		0.0	0.0	5.65e-03	0.0	184.0	6.58	-0.06	0.0	-0.04	0.0	0.0
40	155	0.03	0.0	-4.31e-03	-0.11	0.0	2.23	0.06	0.0	-4.61e-03	0.0	0.0
		0.0	0.0	5.53e-03	0.0	184.0	2.11	-0.06	0.0	-4.61e-03	0.0	0.0
40	160	0.03	0.0	1.05e-03	-0.11	0.0	11.34	0.06	0.0	0.02	0.0	0.0
		0.0	0.0	-1.69e-03	0.0	184.0	11.21	-0.06	0.0	0.02	0.0	0.0
40	161	0.03	0.0	-3.70e-03	-0.11	0.0	1.58	0.06	0.0	-0.03	0.0	0.0
		0.0	0.0	7.81e-03	0.0	184.0	1.46	-0.06	0.0	-0.03	0.0	0.0
40	166	0.03	0.0	1.77e-03	-0.11	0.0	10.54	0.06	0.0	1.71e-03	0.0	0.0
		0.0	0.0	-1.52e-04	0.0	184.0	10.41	-0.06	0.0	1.71e-03	0.0	0.0
41	1	0.03	0.0	-1.20e-04	-0.15	0.0	0.32	0.07	0.0	2.80e-03	0.0	0.0
		0.0	0.0	1.32e-03	0.0	184.0	0.16	-0.07	0.0	2.80e-03	0.0	0.0
41	2	0.03	0.0	-1.69e-03	-0.15	0.0	4.17	0.07	0.0	-1.43e-03	0.0	0.0
		0.0	0.0	5.92e-03	0.0	184.0	4.01	-0.07	0.0	-1.43e-03	0.0	0.0
41	3	0.03	0.0	-9.22e-05	-0.11	0.0	0.25	0.06	0.0	2.15e-03	0.0	0.0
		0.0	0.0	1.02e-03	0.0	184.0	0.12	-0.06	0.0	2.15e-03	0.0	0.0
41	5	0.03	0.0	-9.22e-05	-0.11	0.0	0.25	0.06	0.0	2.15e-03	0.0	0.0
		0.0	0.0	1.02e-03	0.0	184.0	0.12	-0.06	0.0	2.15e-03	0.0	0.0
41	6	0.03	0.0	-1.14e-03	-0.11	0.0	2.82	0.06	0.0	-6.67e-04	0.0	0.0
		0.0	0.0	4.08e-03	0.0	184.0	2.69	-0.06	0.0	-6.67e-04	0.0	0.0
41	7	0.03	0.0	-9.22e-05	-0.11	0.0	0.25	0.06	0.0	2.15e-03	0.0	0.0
		0.0	0.0	1.02e-03	0.0	184.0	0.12	-0.06	0.0	2.15e-03	0.0	0.0
41	8	0.03	0.0	-8.26e-04	-0.11	0.0	2.04	0.06	0.0	1.78e-04	0.0	0.0
		0.0	0.0	3.16e-03	0.0	184.0	1.92	-0.06	0.0	1.78e-04	0.0	0.0
41	9	0.03	0.0	-9.22e-05	-0.11	0.0	0.25	0.06	0.0	2.15e-03	0.0	0.0
		0.0	0.0	1.02e-03	0.0	184.0	0.12	-0.06	0.0	2.15e-03	0.0	0.0
41	10	0.03	0.0	-7.21e-04	-0.11	0.0	1.79	0.06	0.0	4.60e-04	0.0	0.0
		0.0	0.0	2.86e-03	0.0	184.0	1.66	-0.06	0.0	4.60e-04	0.0	0.0
41	18	0.03	0.0	4.40e-04	-0.11	0.0	4.63	0.06	0.0	-0.10	0.0	0.0
		0.0	0.0	9.93e-03	0.0	184.0	4.51	-0.06	0.0	-0.10	0.0	0.0
41	26	0.03	0.0	2.92e-04	-0.11	0.0	4.27	0.06	0.0	-0.10	0.0	0.0
		0.0	0.0	9.44e-03	0.0	184.0	4.15	-0.06	0.0	-0.10	0.0	0.0
41	44	0.03	0.0	-3.07e-03	-0.11	0.0	-5.29	0.06	0.0	-5.39e-03	0.0	0.0
		0.0	0.0	8.17e-03	0.0	184.0	-5.41	-0.06	0.0	-5.39e-03	0.0	0.0
41	49	0.03	0.0	1.63e-03	-0.11	0.0	8.86	0.06	0.0	6.31e-03	0.0	0.0
		0.0	0.0	-2.46e-03	0.0	184.0	8.74	-0.06	0.0	6.31e-03	0.0	0.0
41	59	0.03	0.0	-3.19e-03	-0.11	0.0	-3.63	0.06	0.0	-4.96e-03	0.0	0.0
		0.0	0.0	9.34e-03	0.0	184.0	-3.75	-0.06	0.0	-4.96e-03	0.0	0.0
41	65	0.03	0.0	1.14e-03	-0.11	0.0	7.65	0.06	0.0	0.01	0.0	0.0
		0.0	0.0	-4.08e-03	0.0	184.0	7.53	-0.06	0.0	0.01	0.0	0.0
41	78	0.03	0.0	-2.24e-04	-0.11	0.0	3.56	0.06	0.0	-0.05	0.0	0.0
		0.0	0.0	6.55e-03	0.0	184.0	3.43	-0.06	0.0	-0.05	0.0	0.0
41	82	0.03	0.0	-3.10e-04	-0.11	0.0	3.35	0.06	0.0	-0.05	0.0	0.0
		0.0	0.0	6.27e-03	0.0	184.0	3.22	-0.06	0.0	-0.05	0.0	0.0
41	91	0.03	0.0	-2.26e-03	-0.11	0.0	-2.19	0.06	0.0	-1.66e-03	0.0	0.0
		0.0	0.0	5.86e-03	0.0	184.0	-2.32	-0.06	0.0	-1.66e-03	0.0	0.0
41	94	0.03	0.0	8.23e-04	-0.11	0.0	5.77	0.06	0.0	2.58e-03	0.0	0.0
		0.0	0.0	-1.51e-04	0.0	184.0	5.64	-0.06	0.0	2.58e-03	0.0	0.0
41	99	0.03	0.0	-1.98e-03	-0.11	0.0	-1.49	0.06	0.0	-5.98e-03	0.0	0.0
		0.0	0.0	6.79e-03	0.0	184.0	-1.61	-0.06	0.0	-5.98e-03	0.0	0.0
41	102	0.03	0.0	5.37e-04	-0.11	0.0	5.06	0.06	0.0	6.90e-03	0.0	0.0
		0.0	0.0	-1.08e-03	0.0	184.0	4.94	-0.06	0.0	6.90e-03	0.0	0.0
41	142	0.03	0.0	-3.21e-04	-0.11	0.0	3.20	0.06	0.0	-0.04	0.0	0.0
		0.0	0.0	5.69e-03	0.0	184.0	3.08	-0.06	0.0	-0.04	0.0	0.0
41	146	0.03	0.0	-3.90e-04	-0.11	0.0	3.03	0.06	0.0	-0.04	0.0	0.0
		0.0	0.0	5.46e-03	0.0	184.0	2.91	-0.06	0.0	-0.04	0.0	0.0
41	155	0.03	0.0	-1.97e-03	-0.11	0.0	-1.42	0.06	0.0	-1.76e-03	0.0	0.0
		0.0	0.0	5.30e-03	0.0	184.0	-1.54	-0.06	0.0	-1.76e-03	0.0	0.0
41	158	0.03	0.0	5.23e-04	-0.11	0.0	4.99	0.06	0.0	2.68e-03	0.0	0.0
		0.0	0.0	4.10e-04	0.0	184.0	4.87	-0.06	0.0	2.68e-03	0.0	0.0
41	163	0.03	0.0	-1.73e-03	-0.11	0.0	-0.85	0.06	0.0	-5.23e-03	0.0	0.0
		0.0	0.0	6.05e-03	0.0	184.0	-0.97	-0.06	0.0	-5.23e-03	0.0	0.0
41	166	0.03	0.0	2.93e-04	-0.11	0.0	4.42	0.06	0.0	6.15e-03	0.0	0.0
		0.0	0.0	-3.38e-04	0.0	184.0	4.30	-0.06	0.0	6.15e-03	0.0	0.0

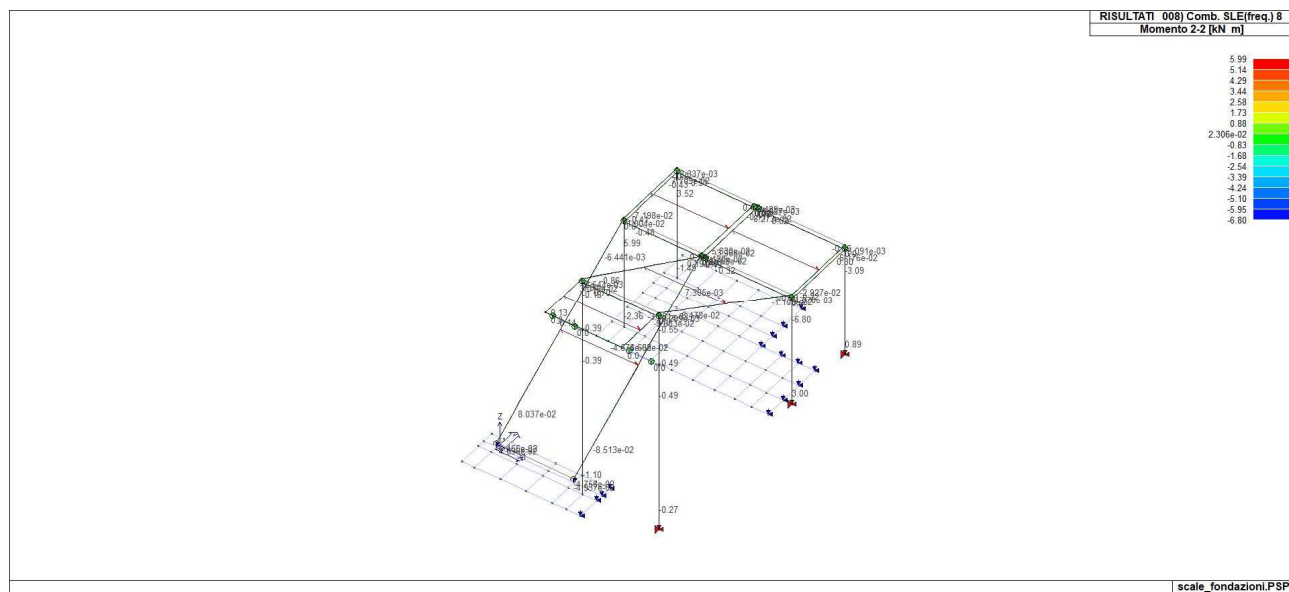
Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
Trave		M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3		N	V 2	V 3	T		
		-25.44	-12.08	-0.04	-37.79		-29.38	-28.71	-11.45	-0.46		
		35.95	12.42	0.04	37.80		22.84	26.74	12.27	0.45		



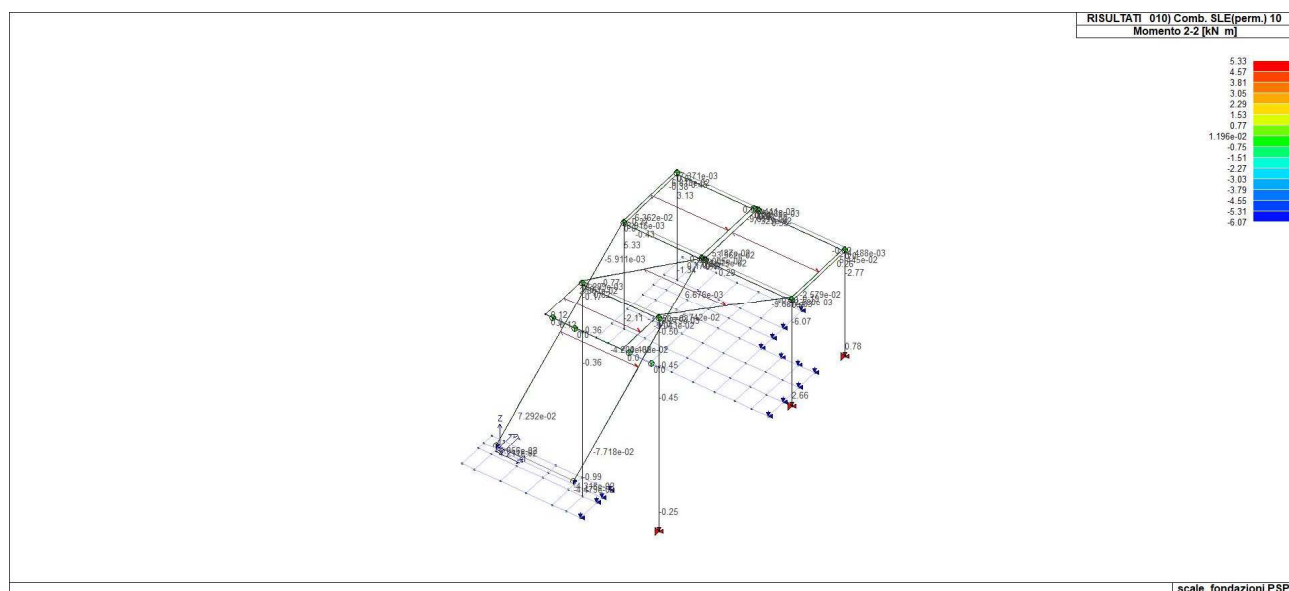
43\_RIS\_M2\_002\_Comb. SLU A1 2



43\_RIS\_M2\_006\_Comb. SLE(rara) 6

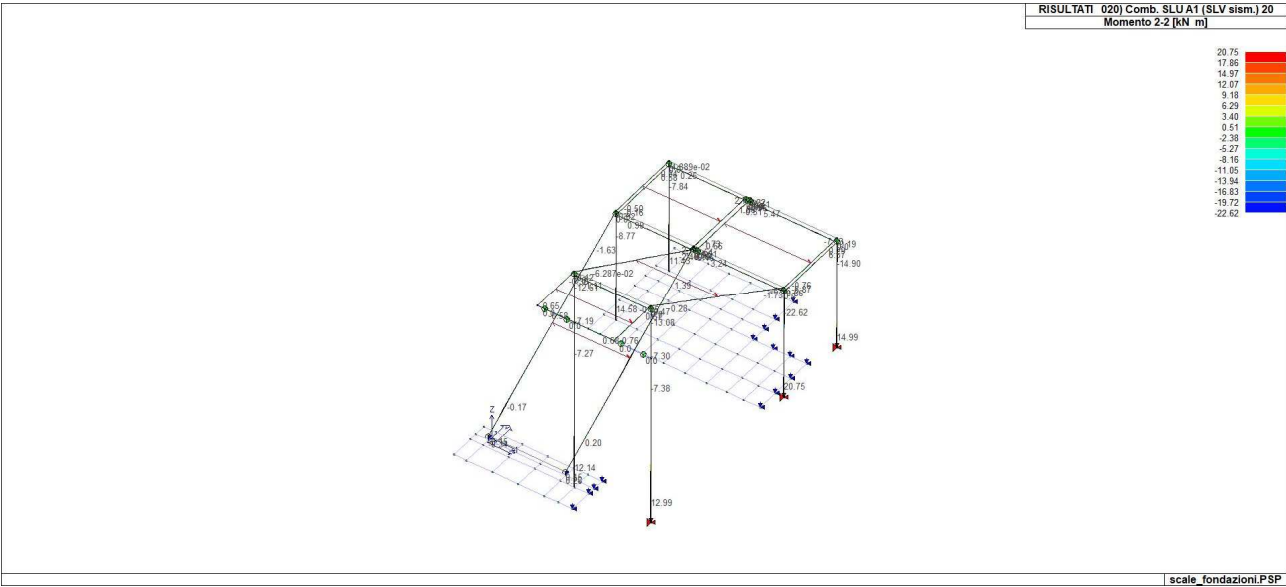


43\_RIS\_M2\_008\_Comb. SLE(freq.) 8

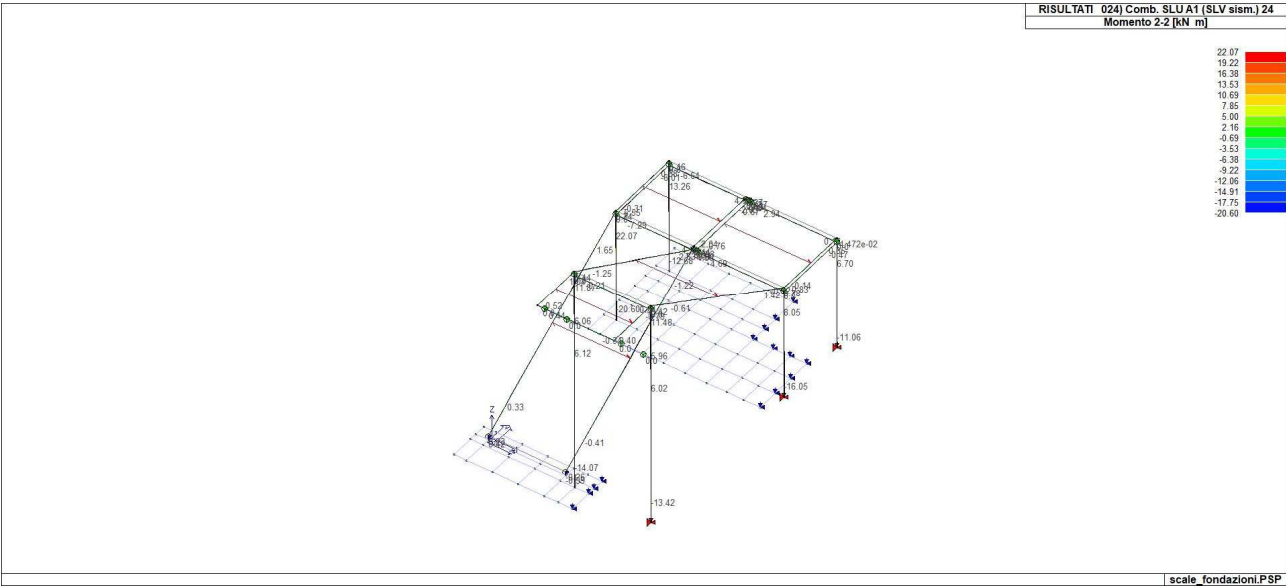


43\_RIS\_M2\_010\_Comb. SLE(perm.) 10



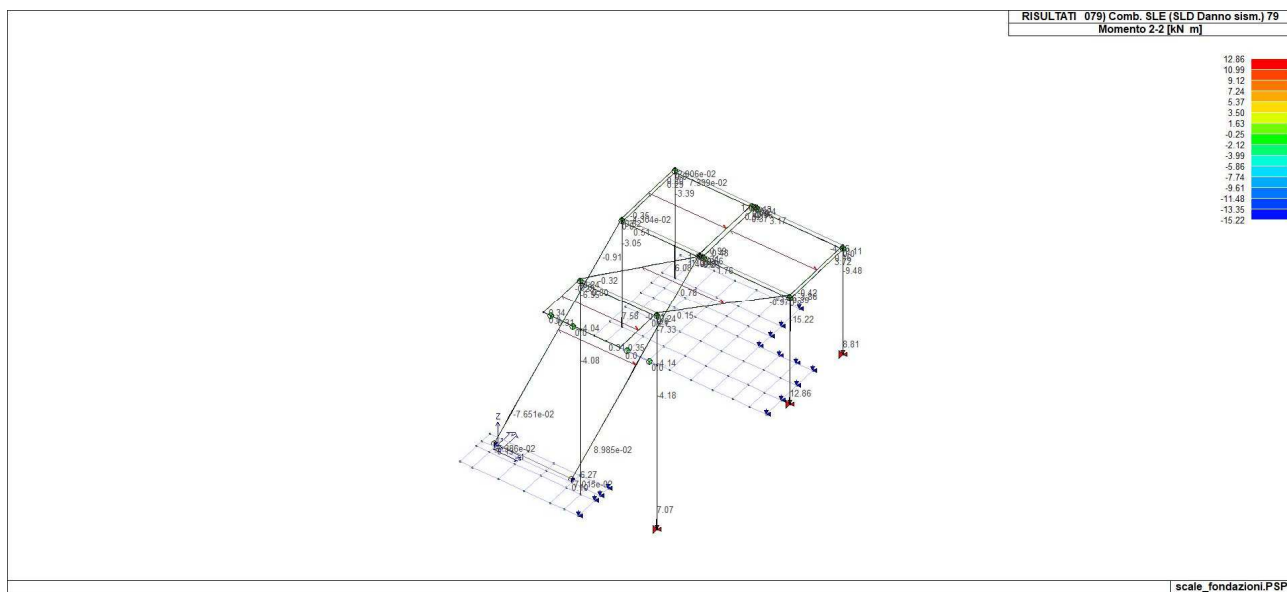


43\_RIS\_M2\_020\_Comb. SLU A1 (SLV sism.) 20

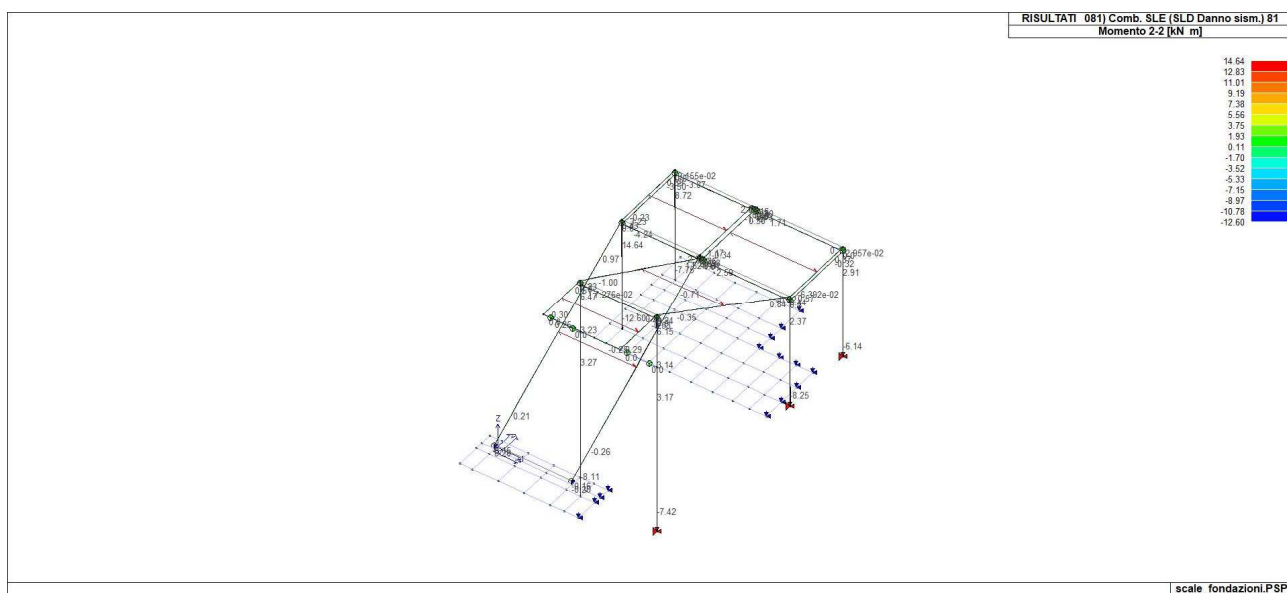


43\_RIS\_M2\_024\_Comb. SLU A1 (SLV sism.) 24

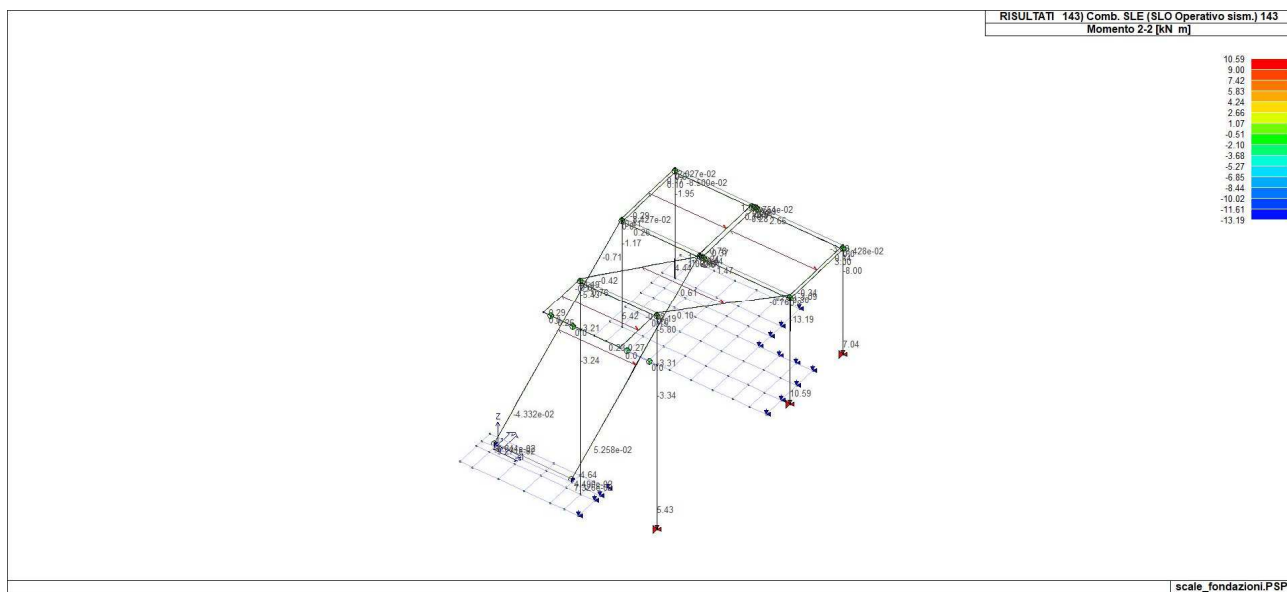




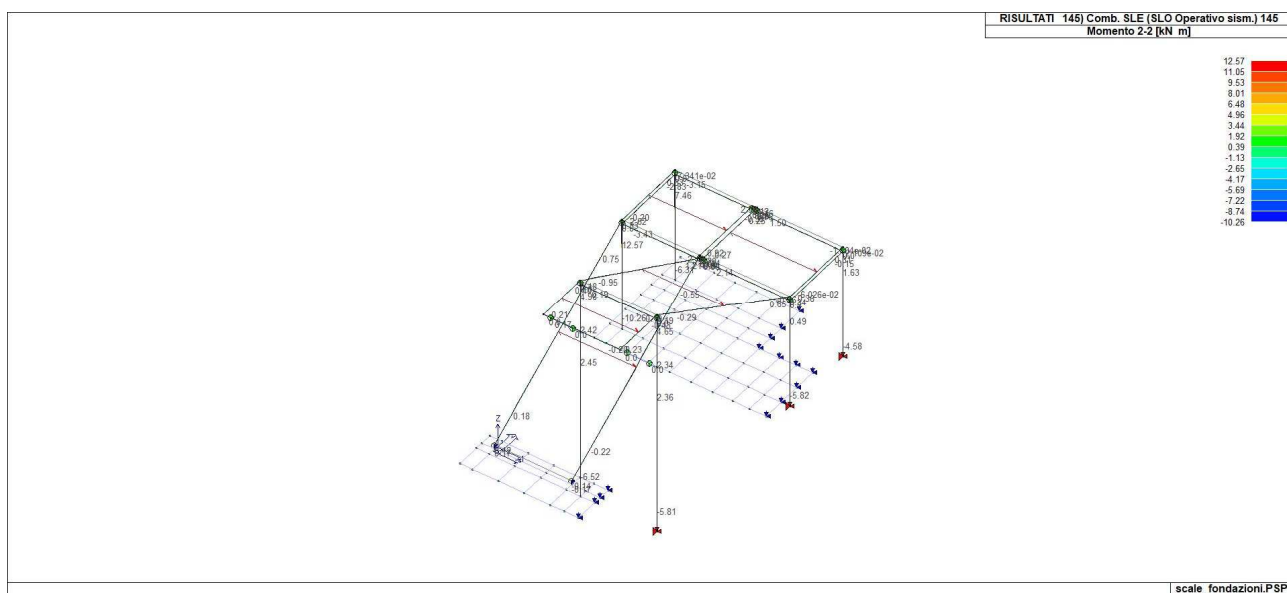
43\_RIS\_M2\_079\_Comb. SLE (SLD Danno sism.) 79



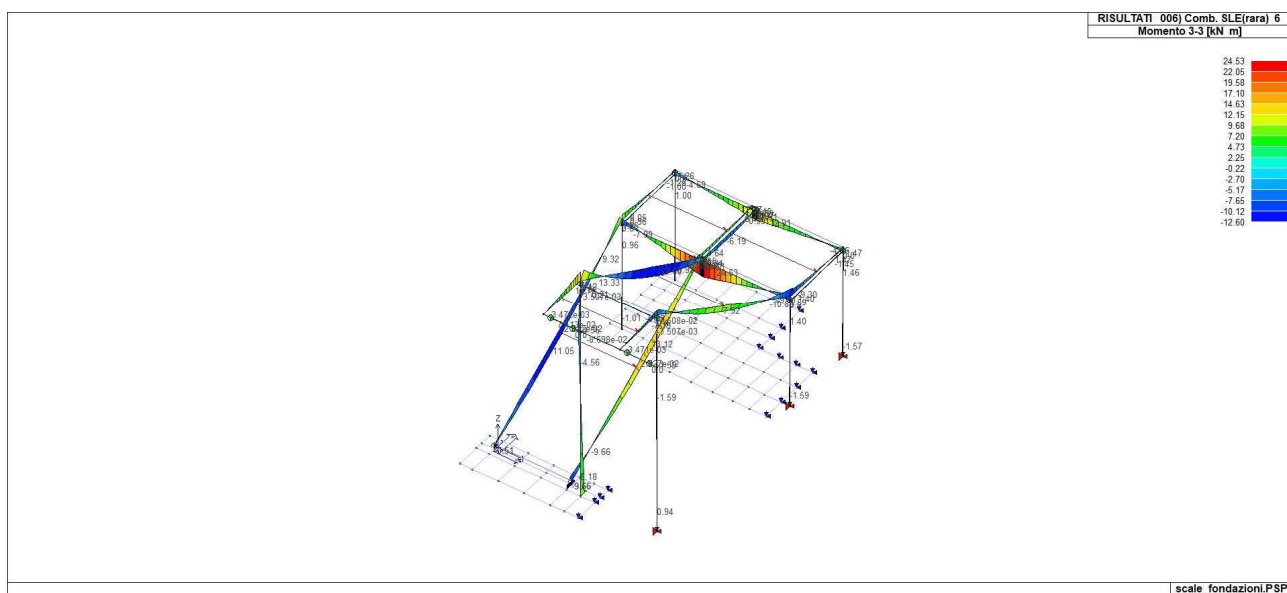
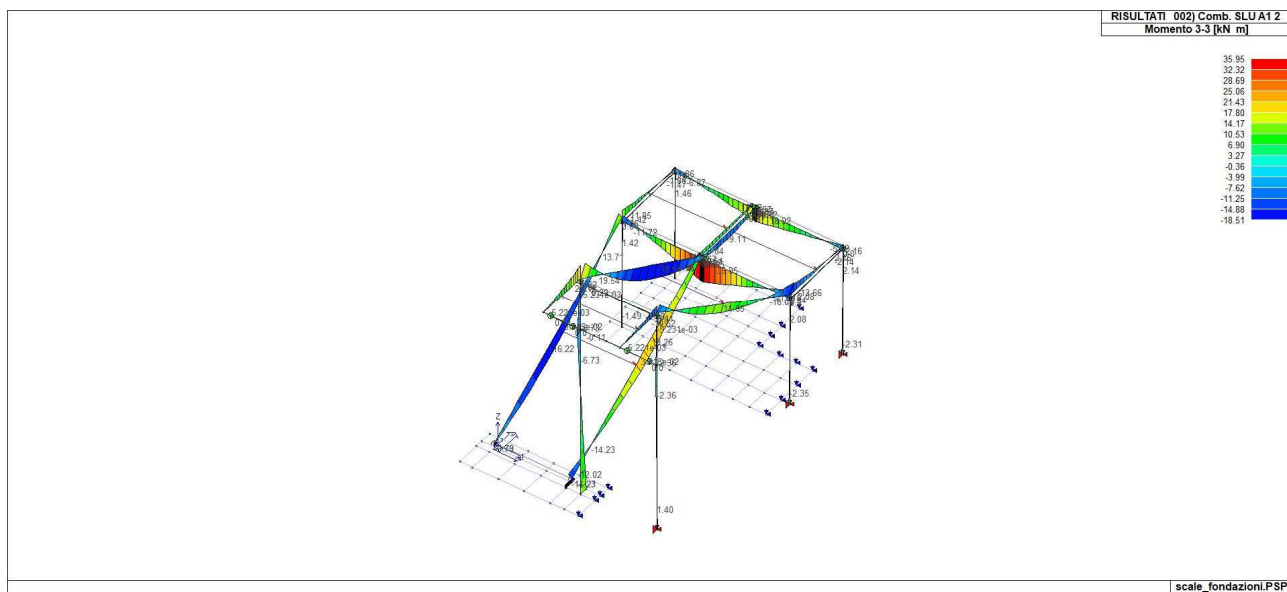
43\_RIS\_M2\_081\_Comb. SLE (SLD Danno sism.) 81

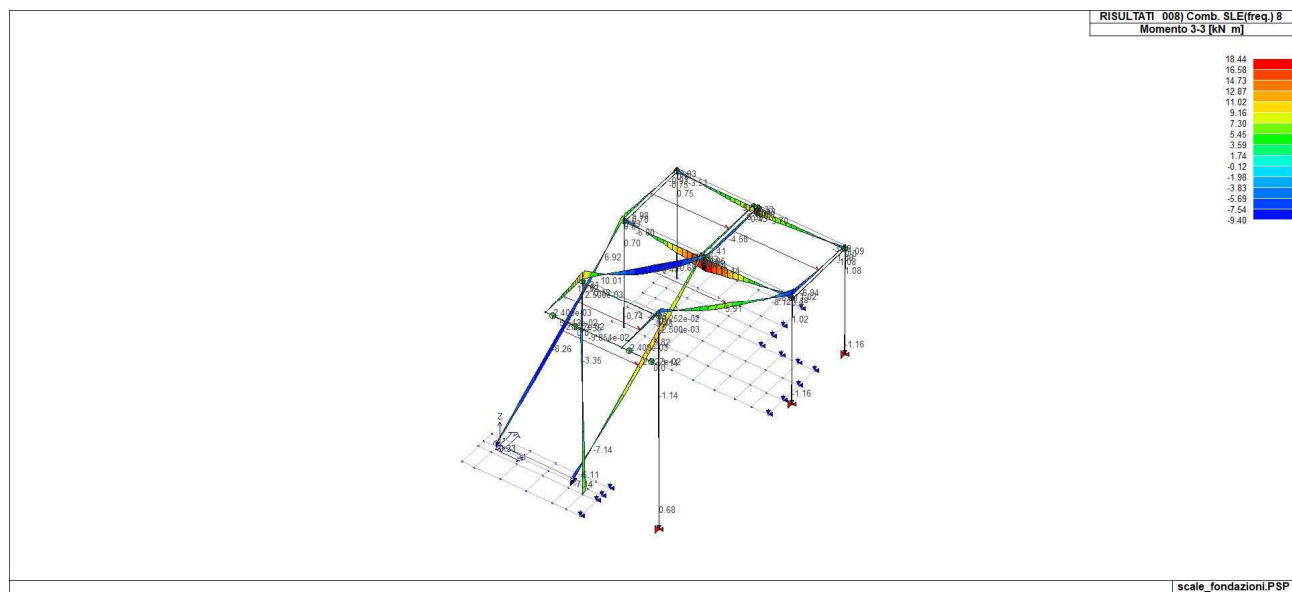


43\_RIS\_M2\_143\_Comb. SLE (SLO Operativo sism.) 143

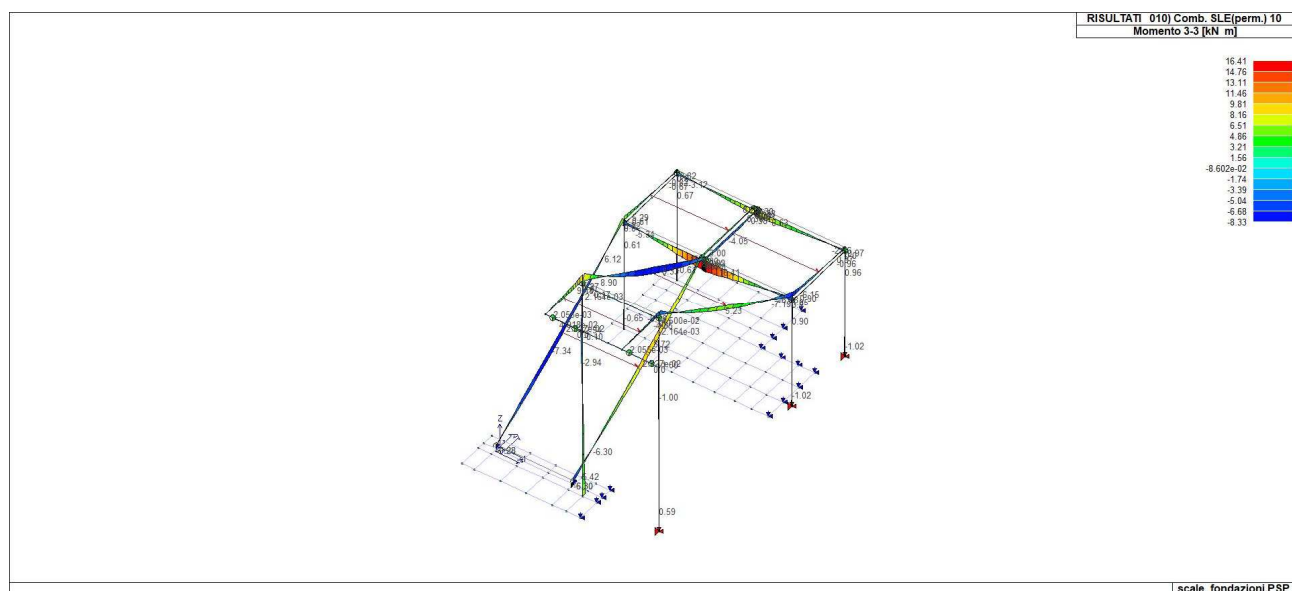


43\_RIS\_M2\_145\_Comb. SLE (SLO Operativo sism.) 145

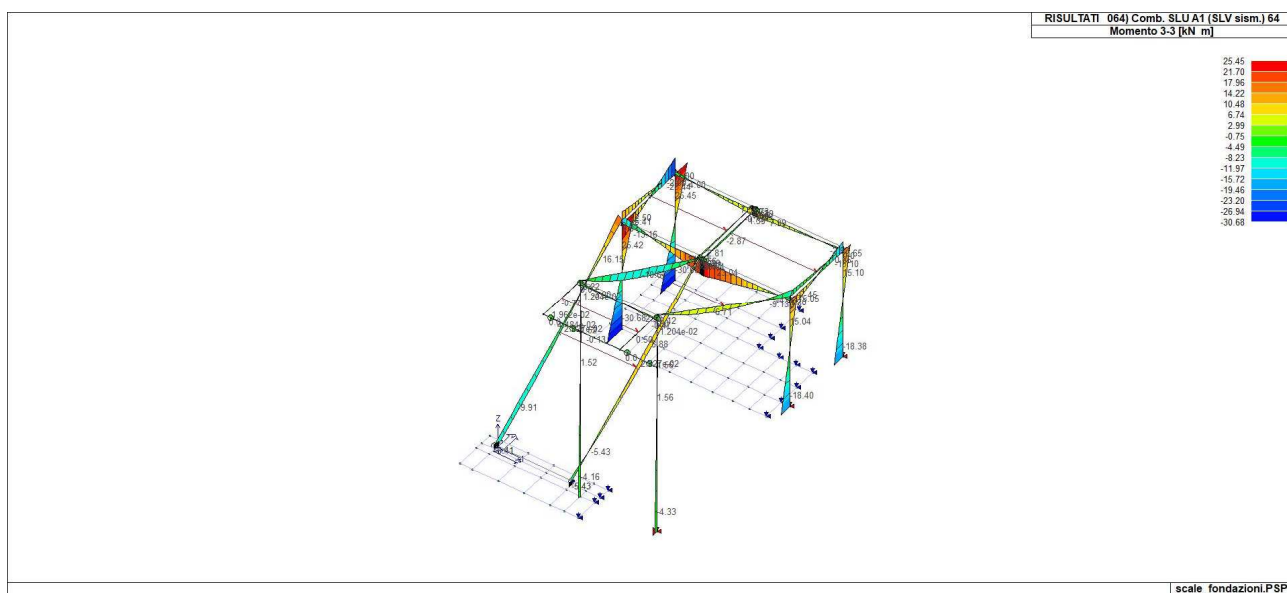
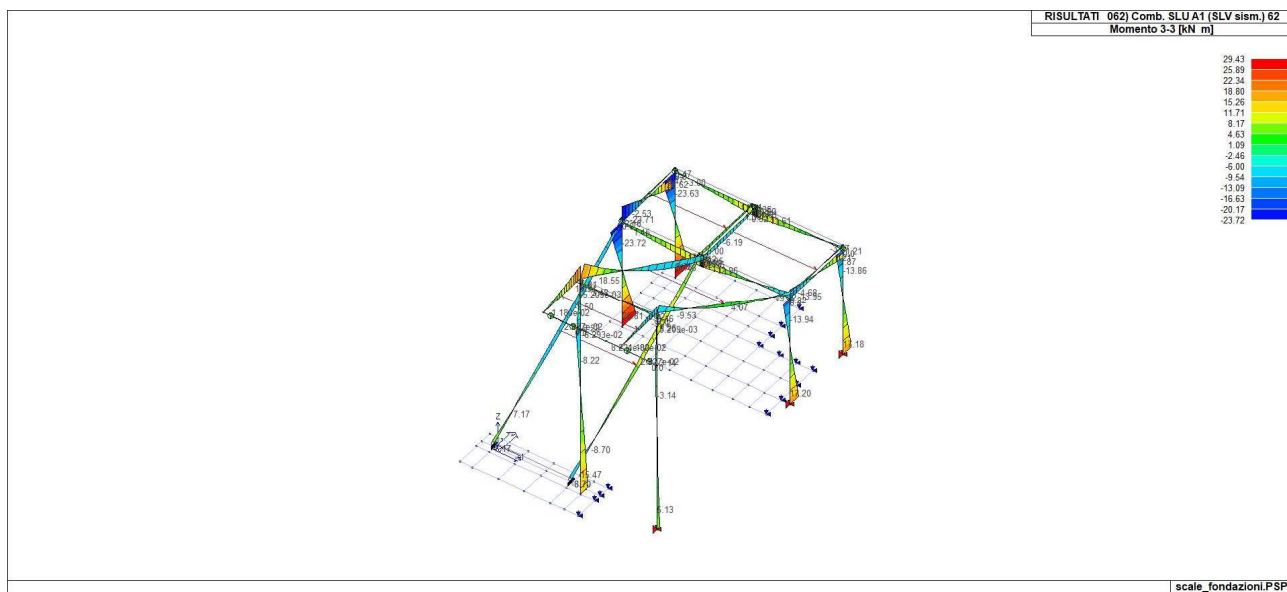


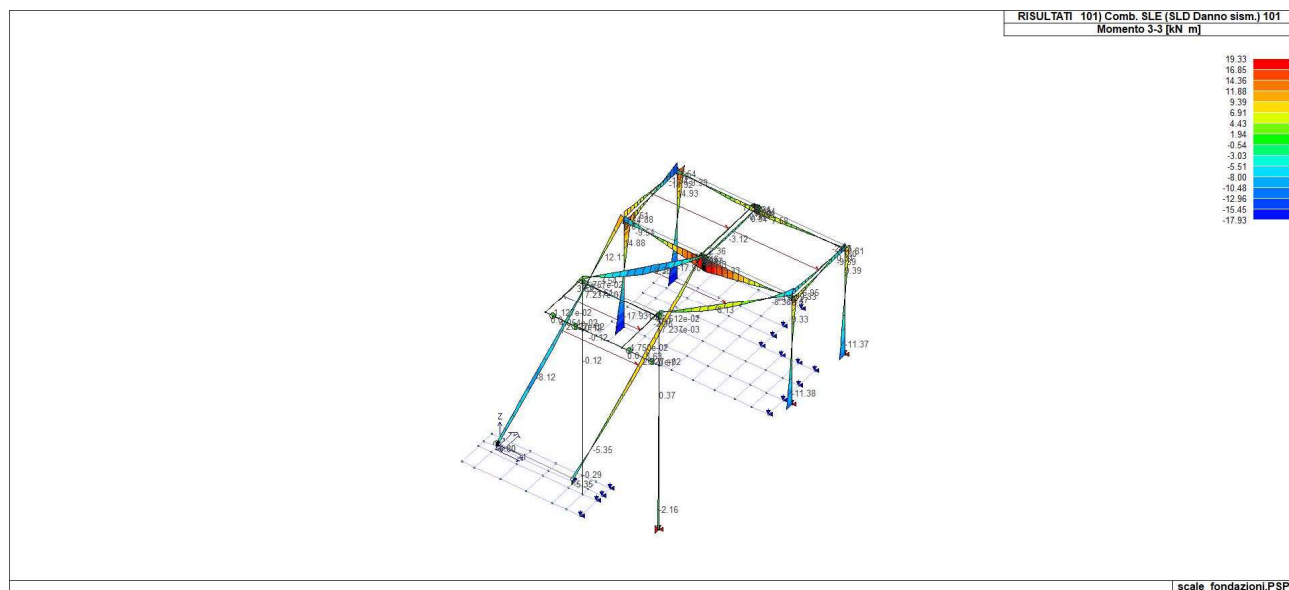


43\_RIS\_M3\_008\_Comb. SLE(freq.) 8

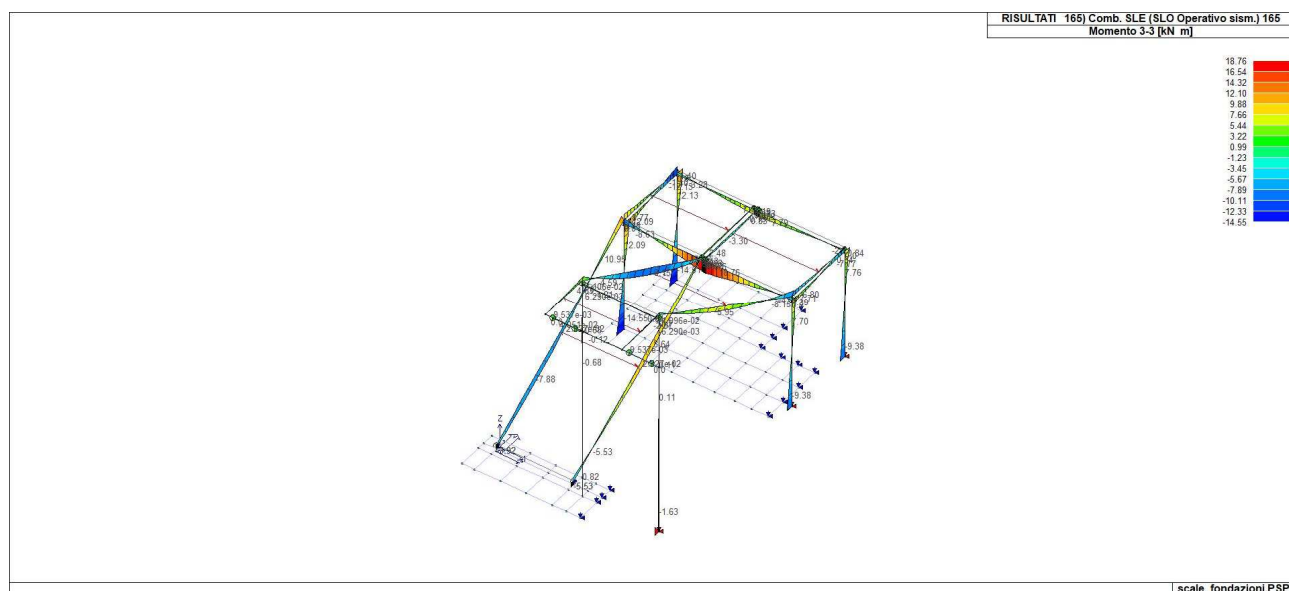


43\_RIS\_M3\_010\_Comb. SLE(perm.) 10

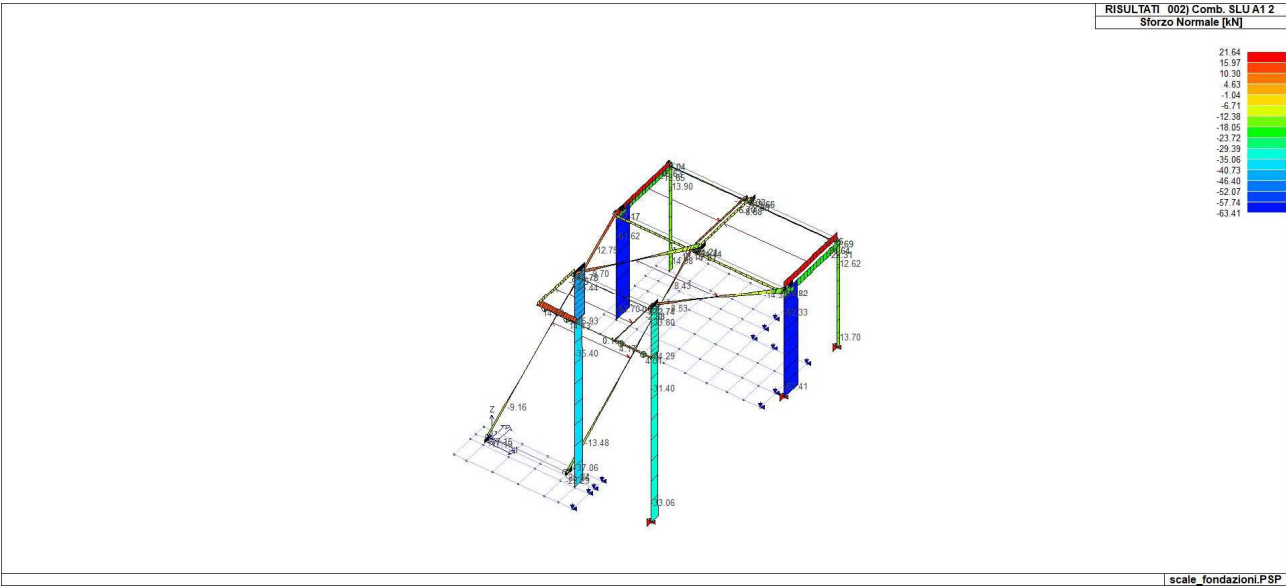




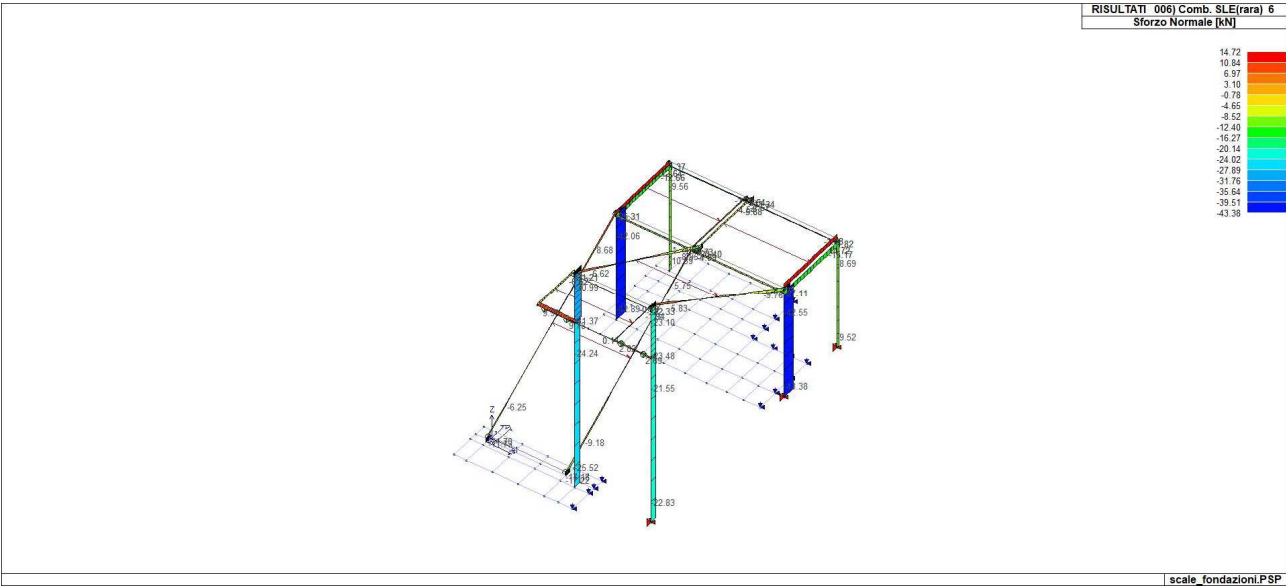
43\_RIS\_M3\_101\_Comb. SLE (SLD Danno sism.) 101



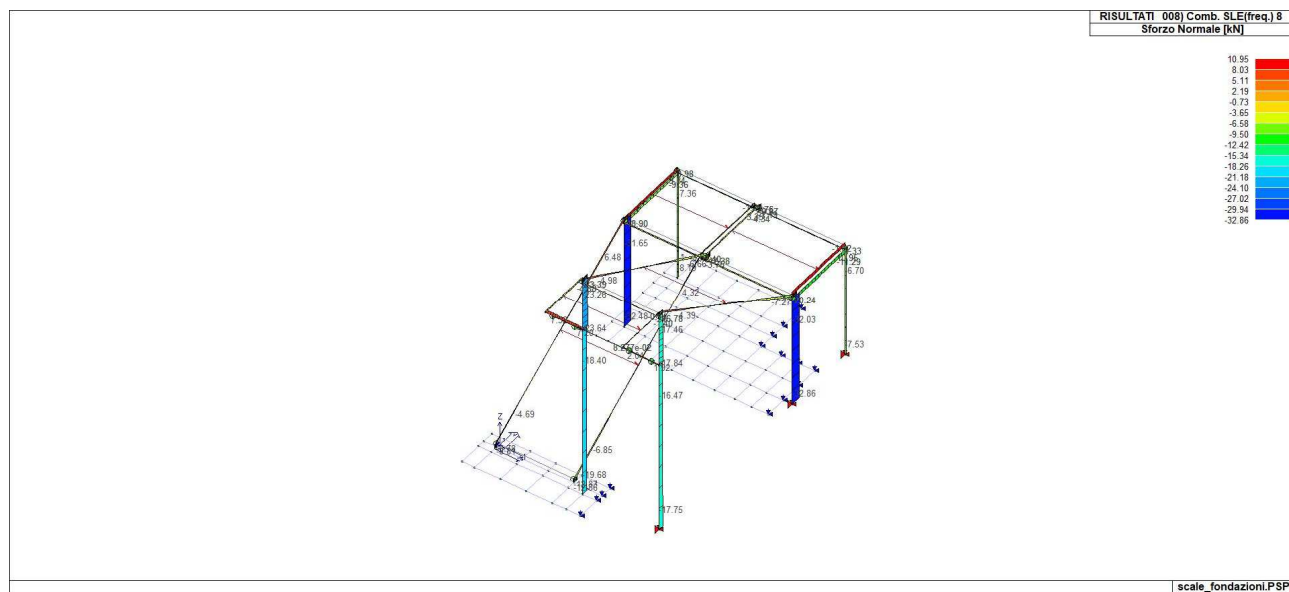
43\_RIS\_M3\_165\_Comb. SLE (SLO Operativo sism.) 165



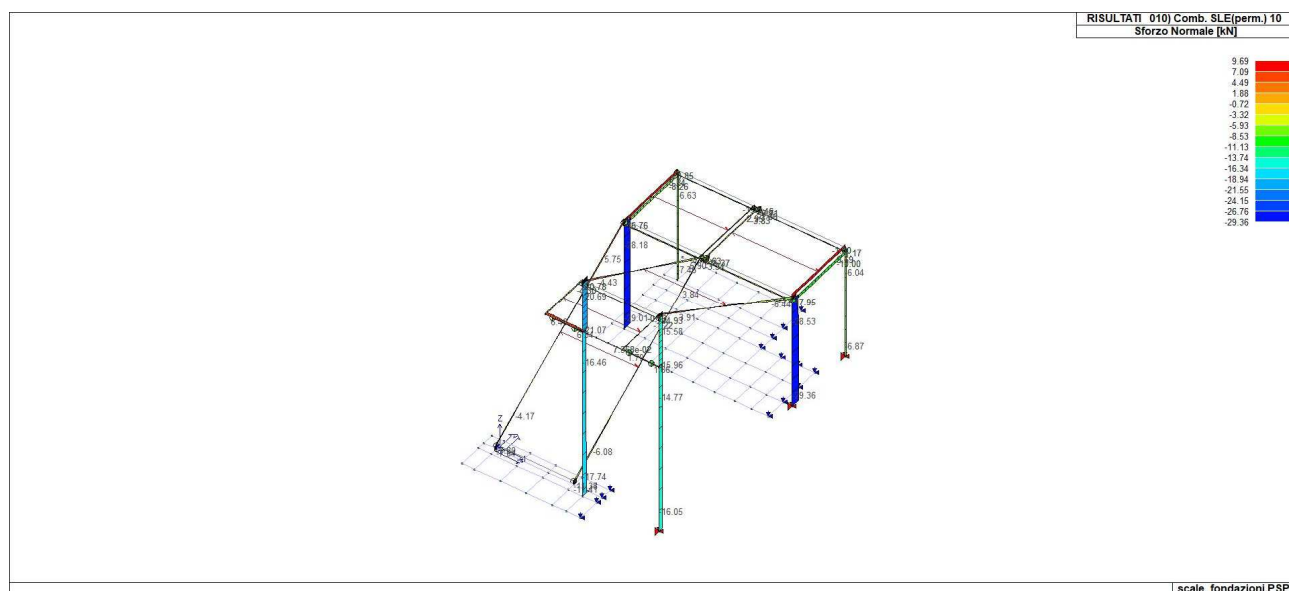
43\_RIS\_N\_002\_Comb. SLU A1 2



43\_RIS\_N\_006\_Comb. SLE(rara) 6

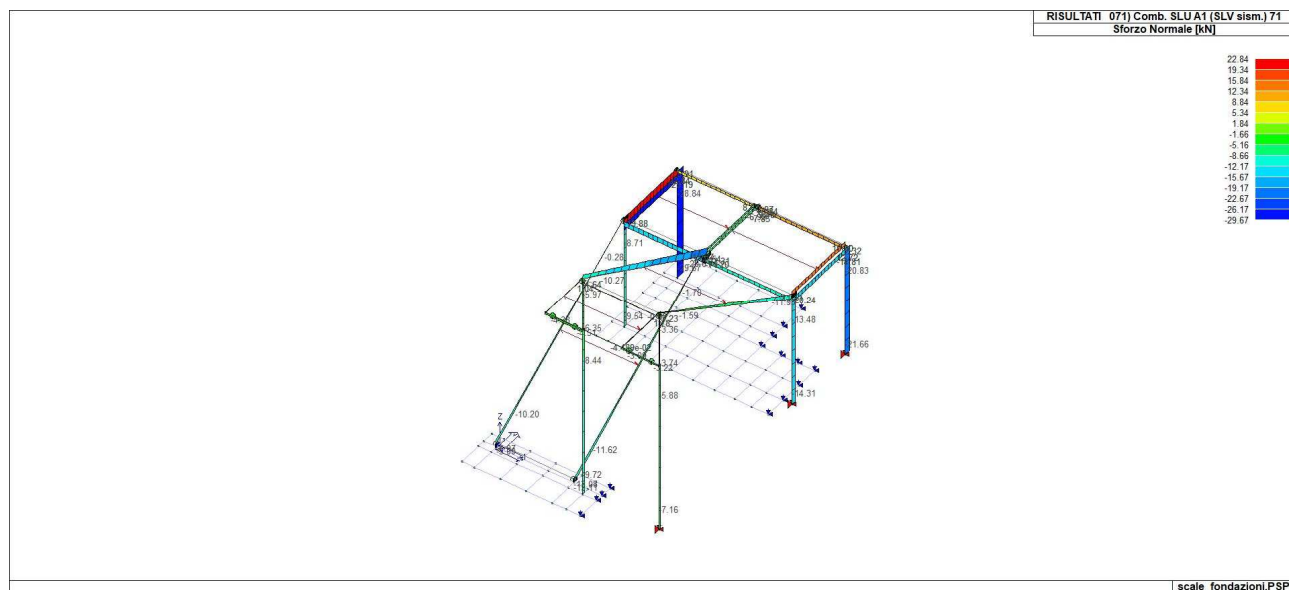


43\_RIS\_N\_008\_Comb. SLE(freq.) 8

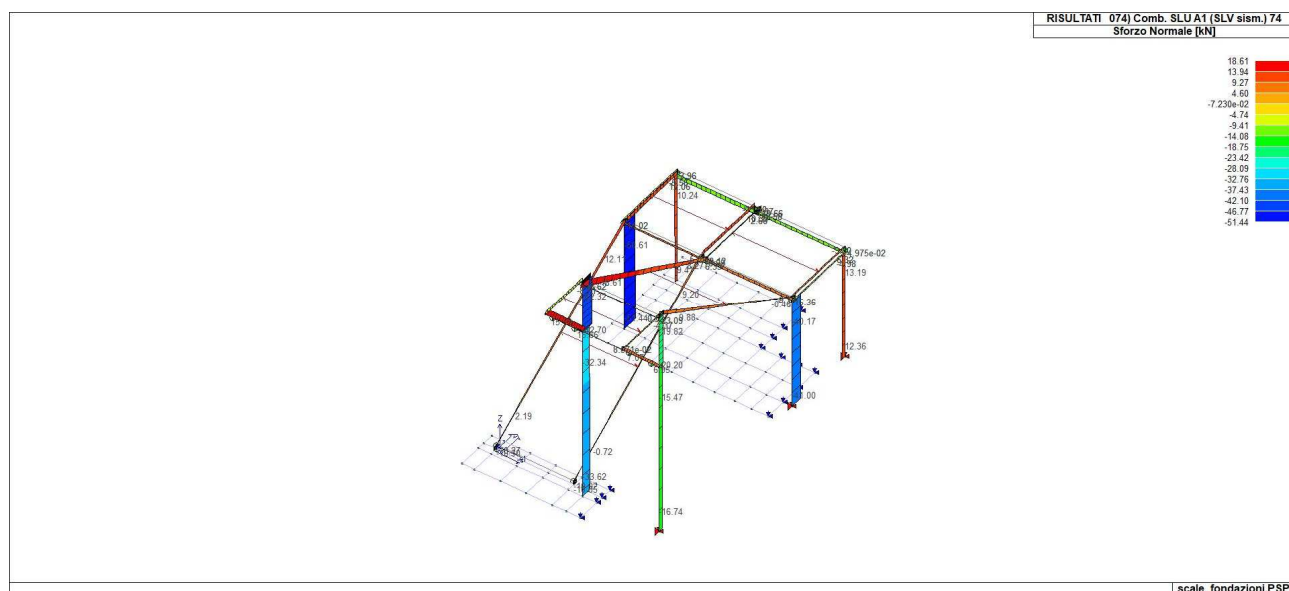


43\_RIS\_N\_010\_Comb. SLE(perm.) 10

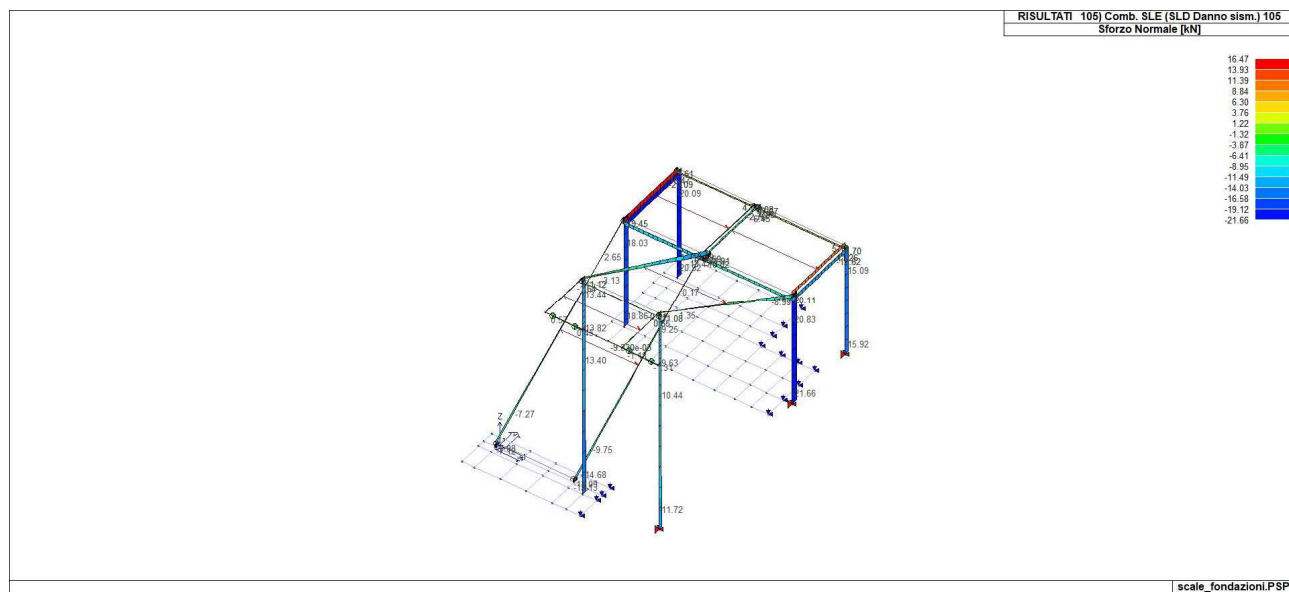




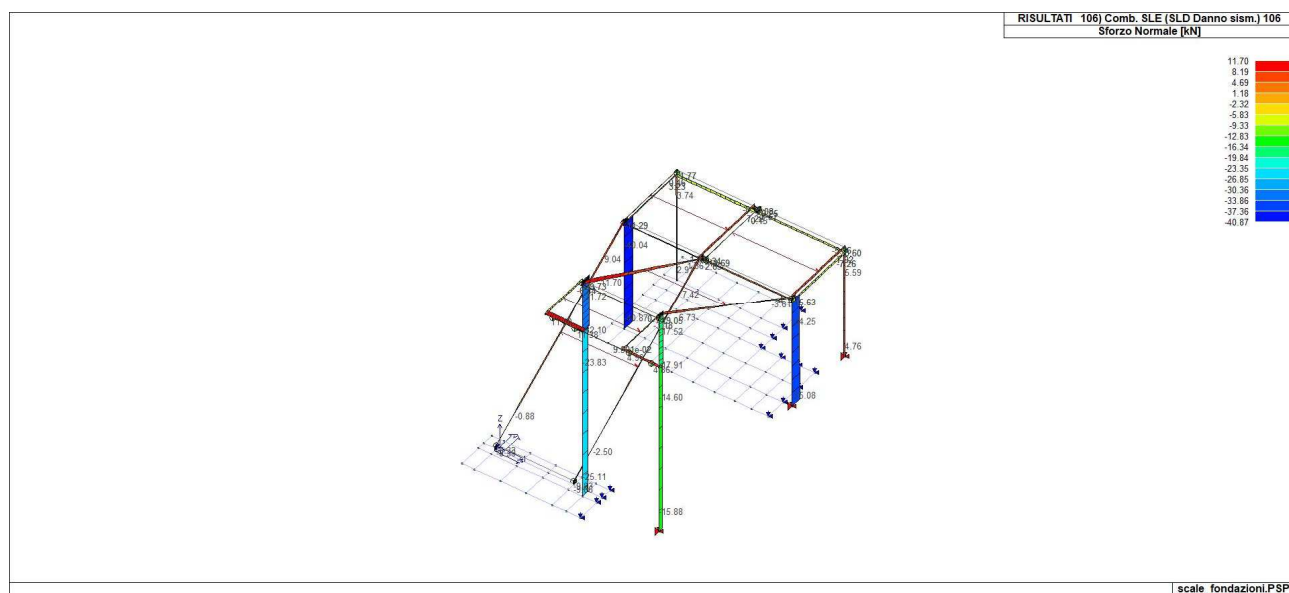
43\_RIS\_N\_071\_Comb. SLU A1 (SLV sism.) 71



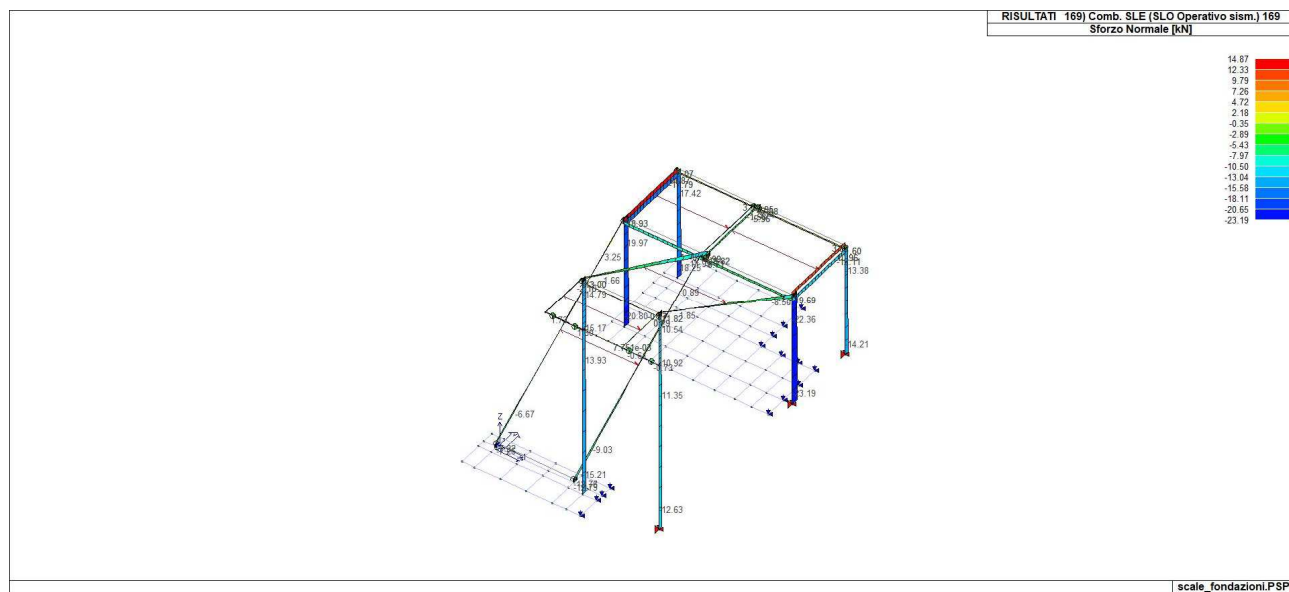
43\_RIS\_N\_074\_Comb. SLU A1 (SLV sism.) 74



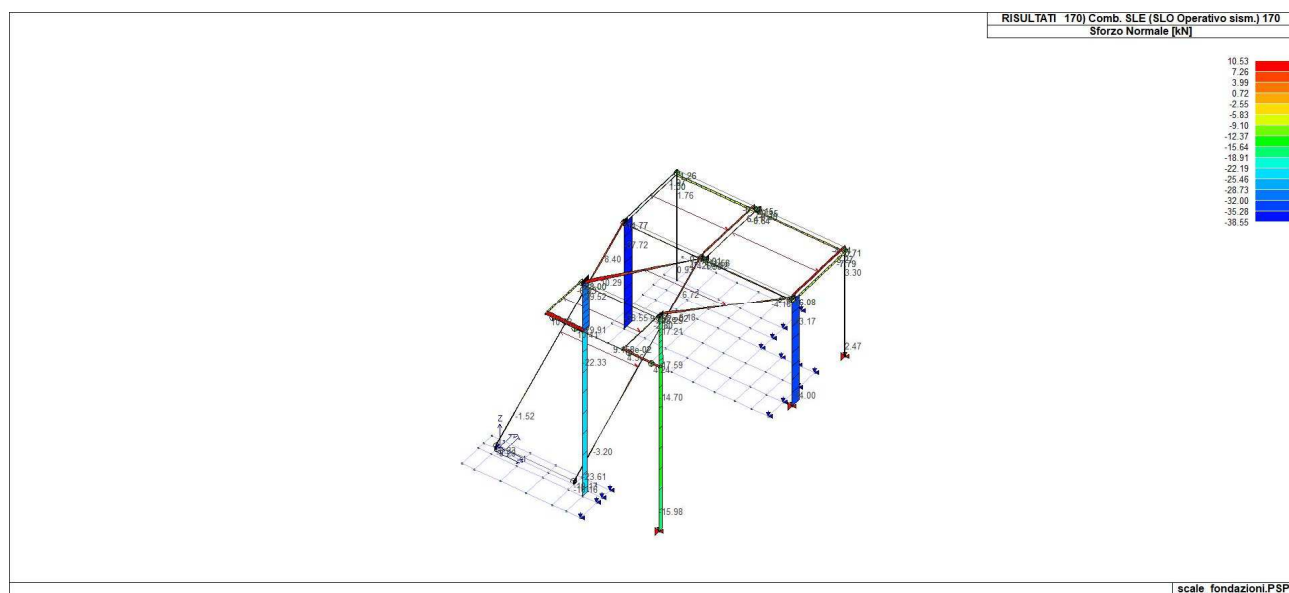
43\_RIS\_N\_105\_Comb. SLE (SLD Danno sism.) 105



43\_RIS\_N\_106\_Comb. SLE (SLD Danno sism.) 106



43\_RIS\_N\_169\_Comb. SLE (SLO Operativo sism.) 169



43\_RIS\_N\_170\_Comb. SLE (SLO Operativo sism.) 170

# VERIFICHE PER ELEMENTI IN ACCIAIO

## LEGENDA TABELLA VERIFICHE PER ELEMENTI IN ACCIAIO

Il programma consente la verifica dei seguenti tipi di elementi:

1. **aste**                      2. **travi**                      3. **pilastr**

L'esito delle verifiche è espresso con un codice come di seguito indicato

**Ok:**                      verifica con esito positivo

**NV:**                      verifica con esito negativo

**Nr:**                      verifica non richiesta.

Per comodità gli elementi vengono raggruppati in tabelle in relazione al tipo.

Ai fini delle verifiche (come da D.M. 17 Gennaio 2018 e circolare 21 Gennaio 2019 n.7) i tipi elementi differiscono per i seguenti aspetti:

Verifica	Aste	Travi	Pilastr
4.2.3.1      Classificazione	X	X	X
4.2.4.1.2.1      Trazione	X	X	X
4.2.4.1.2.2      Compressione	X	X	X
4.2.4.1.2.4      Taglio		X	X
4.2.4.1.2.5      Torsione		X	X
Flessione, taglio e forza assiale		X	X
4.2.4.1.3.1      Aste compresse	X	X	X
4.2.4.1.3.2      Instabilità flesso-torsionale		X	X
4.2.4.1.3.3      Membrature inflesse e compresse		X	X

Ai fini delle verifiche per strutture dissipative (come da D.M. 17 Gennaio 2018 e 2018 e circolare 21 Gennaio 2019 n.7) per strutture intelaiate e a controventi concentrici) si considerano le verifiche del capitolo 4 con azioni amplificate e le verifiche del capitolo 7:

Verifica	Travi	Pilastr
4.2.4.1.2.1      Trazione	X	X
4.2.4.1.2.2      Compressione	X	X
4.2.4.1.2.4      Taglio	X	X
4.2.4.1.2.5      Torsione	X	X
Flessione, taglio e forza assiale	X	X
4.2.4.1.3.1      Aste compresse	X	X
4.2.4.1.3.2      Instabilità flesso-torsionale	X	X
4.2.4.1.3.3      Membrature inflesse e compresse	X	X
7.5.3              Sfruttamento per momento	X	
7.5.4              Sfruttamento per sforzo normale	X	
7.5.5              Sfruttamento per taglio da capacità flessionale	X	
7.5.9              Sfruttamento per taglio amplificato		X

Viene inoltre riportata la verifica della "Gerarchia delle resistenze trave-colonna" per ogni colonna, considerando piede e testa in entrambe le direzioni globali X e Y.

L'insieme delle verifiche sopra riportate è condotto sugli elementi purché dotati di sezione idonea come da tabella seguente:

Azione	SEZIONI GENERICHE	PROFILI SEMPLICI	PROFILI ACCOPPIATI
4.2.3.1      Classificazione automatica	L, doppio T, C, rettangolare cava, circolare cava	Tutti	Da profilo semplice
4.2.3.1      Classificazione di default 2	Circolare		

4.2.3.1	Classificazione di default 3	restanti		
4.2.4.1.2.1	Trazione	si	si	si
4.2.4.1.2.2	Compressione	si	si	si
4.2.4.1.2.4	Taglio	si	si	si
4.2.4.1.2.5	Torsione	si	si	si
	Flessione, taglio e forza assiale	si	si	si
4.2.4.1.3.1	Aste compresse	si	si	per elementi ravvicinati e a croce o coppie calastrellate
4.2.4.1.3.2	Travi inflesse	doppio T simmetrica	doppio T	no

Le verifiche sono riportate in tabelle con il significato sotto indicato; le verifiche sono espresse dal rapporto tra l'azione di progetto e la capacità ultima, pertanto la verifica ha esito positivo per rapporti non superiori all'unità.

Asta	Trave	Pilastro	numero dell'elemento			
Stato			codice di verifica per resistenza, stabilità, svergolamento			
Note			sezione e materiali adottati per l'elemento			
V N			(ASTE) verifica come da par. 4.2.4.1.2 per punto (4.2.6) e (4.2.10)			
V V/T			(TRAVI E PILASTRI) verifica di resistenza come da par. 4.2.4.1.2 per azioni taglio-torsione (4.2.16 e 4.2.28)			
V N/M			(TRAVI E PILASTRI) verifica di resistenza come da par. 4.2.4.1.2 per azioni composte (4.2.33) con riduzione per taglio (4.2.40) ove richiesto			
N	M3	M2	V2	V3	T	sollecitazioni di interesse per la verifica
V stab			(ASTE) verifica come da par. 4.2.4.1.3.1 per punto (4.2.41)			
V stab			(TRAVI E PILASTRI) verifica come da par. 4.2.4.1.3 per punti (C4.2.32) o (C4.2.36) (membrature inflesse e compresse senza/con presenza di instabilità flessio-torsionale)			
BetaxL		B22xL	B33xL		lunghezze libere di inflessione (se indicato riferiti al piano di normale 22 o 33 rispettivamente)	
Snellezza			snellezza massima			
Classe			classe del profilo			
Chi mn			coefficiente di riduzione (della capacità) per la modalità di instabilità pertinente			
Rif. cmb			combinazioni in cui si sono rispettivamente attinti i valori di verifica più elevati			
V flst			(TRAVI E PILASTRI) verifica di stabilità come da par. 4.2.4.1.3.2 per punto (4.2.48)			
B1-1 x L			Beta1-1 x L: interasse tra i ritegni torsionali			
Chi LT			coefficiente di riduzione (della capacità) per la modalità di instabilità flessio-torsionale			
Snell adim			Valore della snellezza adimensionale, utilizzato per il controllo previsto al par. 7.5.5			
v.Omeg			Valore del rapporto capacità/domanda per l' azione di interesse (momento per travi e azione assiale per aste) utilizzato per l' amplificazione delle azioni			
f.Om. N			Fattore di amplificazione delle azioni assiali per travi e colonne (prodotto di 1.1 x Omega x gamma rd materiale); utilizzato come specificato al par. 7.5.5			
f.Om. T			Fattore di amplificazione delle azioni (assiali, flettenti e taglianti) per colonne (prodotto di 1.1 x Omega x gamma rd materiale); utilizzato come specificato al par. 7.5.4			
V.7.5.4 M Ed			Verifica come prevista al punto 7.5.4 e valore dell' azione flettente			
V.7.5.5 N Ed			Verifica come prevista al punto 7.5.5 e valore dell' azione assiale			
V.7.5.6 V Ed,G V Ed,M			Verifica come prevista al punto 7.5.6 e valore dei tagli dovuti ai carichi e alla capacità			
V.7.5.10			V Ed		Verifica come prevista al punto 7.5.10 e valore dell' azione di taglio	
sovr. Xi (Xf, Yi, Yf)			Valore della sovraresistenza come prevista al par. 7.5.4.2 (i valori non sono normalizzati pertanto saranno maggiori uguali a gamma rd in base alla classe di duttilità)			

**Nel caso in cui  $\lambda_{dS}$  sia minore di 0.2, oppure nel caso in cui la sollecitazione di calcolo  $N_{Ed}$  sia inferiore a 0.04 Ncr, gli effetti legati ai fenomeni di instabilità sono trascurati, come da paragrafo 4.2.4.1.3.1**

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
7	ok	s=2,m=12	0.07	0.51		1					0.28	0.1	1.00	2,48,0,2
9	ok	s=2,m=12	0.13	0.70		1					0.54	0.1	1.00	2,64,0,2
10	ok	s=2,m=12	0.05	0.53		1					0.29	1.34e-02	1.00	42,52,0,2
11	ok	s=2,m=12	0.07	0.25		1					0.20	0.3	1.00	20,22,0,20

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
12	ok	s=3,m=12	0.09	0.23		1					0.18	0.5	0.77	56,67,0,63
15	ok	s=2,m=12	0.14	0.68		1					0.40	0.3	1.00	64,64,0,64
16	ok	s=2,m=12	0.12	0.64		1					0.33	0.3	1.00	43,44,0,43
17	ok	s=3,m=12	0.11	0.17		1					0.19	0.5	0.77	68,2,0,2
18	ok	s=3,m=12	0.25	0.12		1					0.13	0.5	0.77	42,30,0,2
19	ok	s=3,m=12	0.16	0.17		1					0.14	0.4	0.87	20,49,0,50
20	ok	s=3,m=12	0.19	0.25		1					0.25	0.4	0.87	42,61,0,2
21	ok	s=2,m=12	0.12	0.74		1					0.56	0.2	1.00	2,64,0,2
22	ok	s=3,m=12	0.06	0.21		1					0.44	1.1	0.41	2,63,0,63
23	ok	s=3,m=12	0.12	0.15		1					0.10	0.5	0.77	40,16,0,2
24	ok	s=3,m=12	0.06	0.18	0.38	1	2.5	0.7	217.7	0.13	0.43	1.1	0.40	2,2,43,2
25	ok	s=3,m=12	0.07	0.30	0.46	1	2.5	0.7	217.9	0.13	0.52	1.1	0.40	2,2,67,2
36	ok	s=2,m=12	0.06	0.54		1					0.29	0.4	1.00	36,44,0,2
37	ok	s=2,m=12	0.08	0.73		1					0.56	1.35e-02	1.00	16,68,0,2
38	ok	s=3,m=12	0.06	0.21	0.35	1	2.4	0.6	211.1	0.14	0.50	1.1	0.41	2,2,48,2
39	ok	s=3,m=12	0.01	0.05		1					6.12e-03	0.4	0.84	60,22,0,42
40	ok	s=6,m=11	0.02	0.07		1								24,54,0,0
41	ok	s=6,m=11	0.02	0.04		1								21,49,0,0
Trave			V V/T	V N/M	V stab		LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	
			0.25	0.74	0.46		2.51	0.66	217.91	0.13	0.56	1.14	0.40	

Pilas.	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
1	ok	s=1,m=12	0.10	0.91		1					0.48	0.3	1.00	64,24,0,64
2	ok	s=1,m=12	0.03	0.41		1					0.13	0.1	1.00	54,20,0,54
3	ok	s=1,m=12	0.09	0.88		1					0.41	0.3	1.00	43,12,0,43
4	ok	s=1,m=12	0.09	0.65		1					0.41	0.3	1.00	43,12,0,43
5	ok	s=1,m=12	0.01	0.50	0.48	1	1.2	0.7	105.4	0.43	0.11	0.3	1.00	49,18,29,49
6	ok	s=1,m=12	0.03	0.61	0.58	1	1.2	0.7	105.4	0.43	0.25	0.3	1.00	46,26,26,66
8	ok	s=3,m=12	0.11	0.10		1					0.09	2.17e-02	1.00	24,64,0,64
13	ok	s=3,m=12	0.14	0.18		1					0.15	2.17e-02	1.00	40,2,0,2
35	ok	s=1,m=12	0.10	0.68		1					0.48	0.3	1.00	64,74,0,63
42	ok	s=1,m=12	0.03	0.42		1					0.07	0.1	1.00	22,20,0,49
Pilas.			V V/T	V N/M	V stab		LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	
										0.43			1.00	
			0.14	0.91	0.58		1.21	0.74	105.41		0.48	0.35		

## STATI LIMITE D' ESERCIZIO ACCIAIO

### LEGENDA TABELLA STATI LIMITE D' ESERCIZIO ACCIAIO

In tabella vengono riportati i valori di interesse per il controllo degli stati limite d'esercizio.

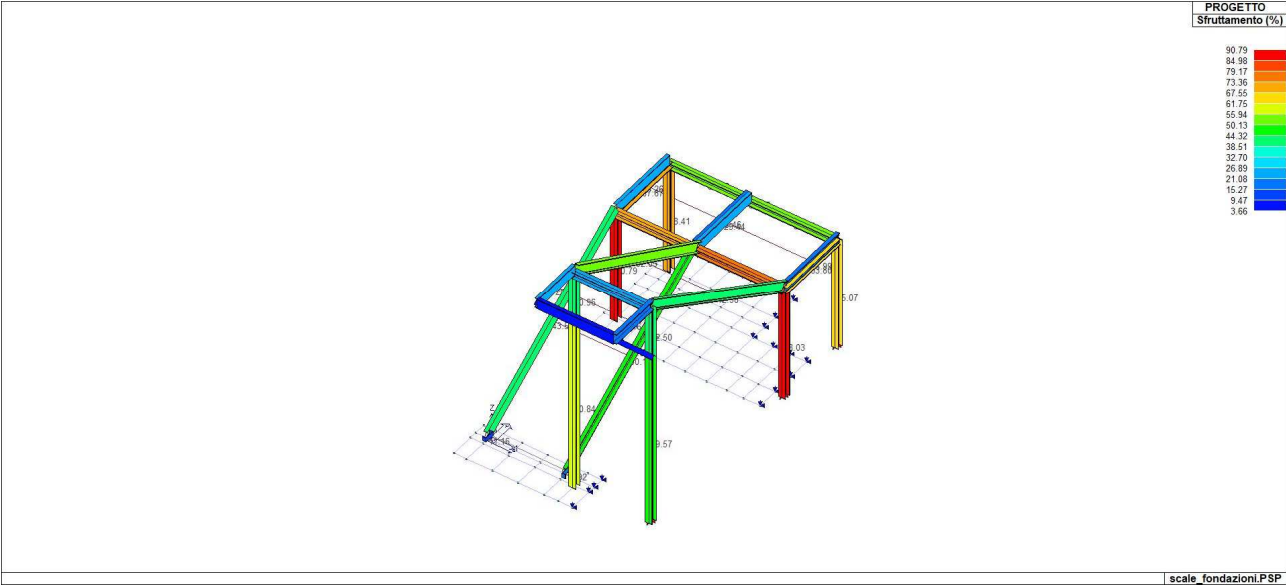
In particolare vengono riportati, per gli elementi trave, i risultati relativi alle combinazioni considerate (rare o caratteristiche).

I valori di interesse sono i seguenti:

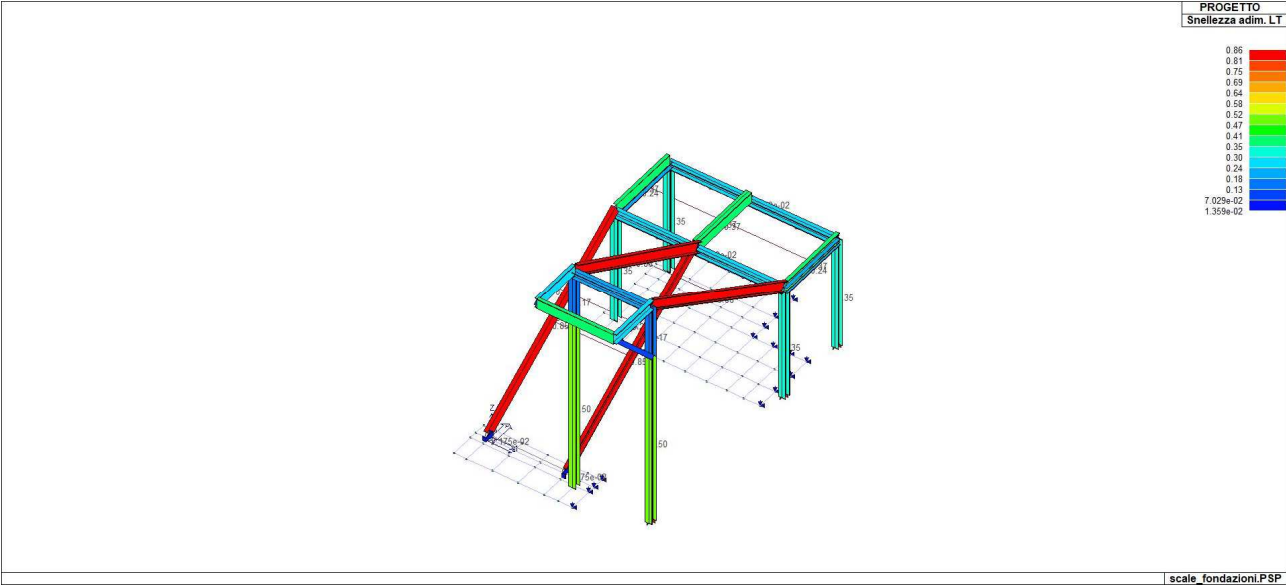
<b>f*1000/L</b>	massima deformazione normalizzata in combinazioni rare
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Si precisa che i valori di massima deformazione per travi sono riferiti ai due piani locali (1-2 con momenti flettenti 3-3 e 1-3 con momenti flettenti 2-2). Il valore riportato (massimo) è espresso in 1000/L per rendere agevole il confronto di più valori e in particolare di più range di valori ( ad esempio 2 rappresenta L/500, 4 L/250 e così via ).

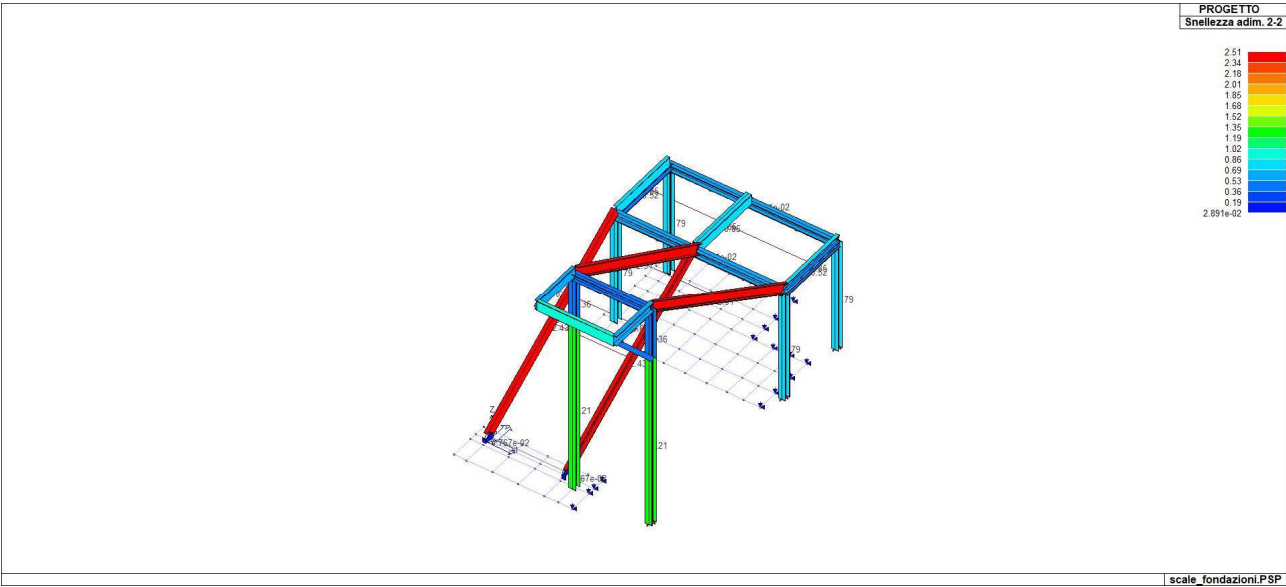
Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L
7	1.7	9	3.5	10	0.6	11	2.2	12	0.6	15	0.6	16	0.4
17	0.3	18	2.4	19	1.4	20	1.2	21	4.6	22	0.7	23	2.4
24	0.8	25	1.2	36	2.5	37	0.4	38	1.2	39	1.8	40	2.4
41	2.2												



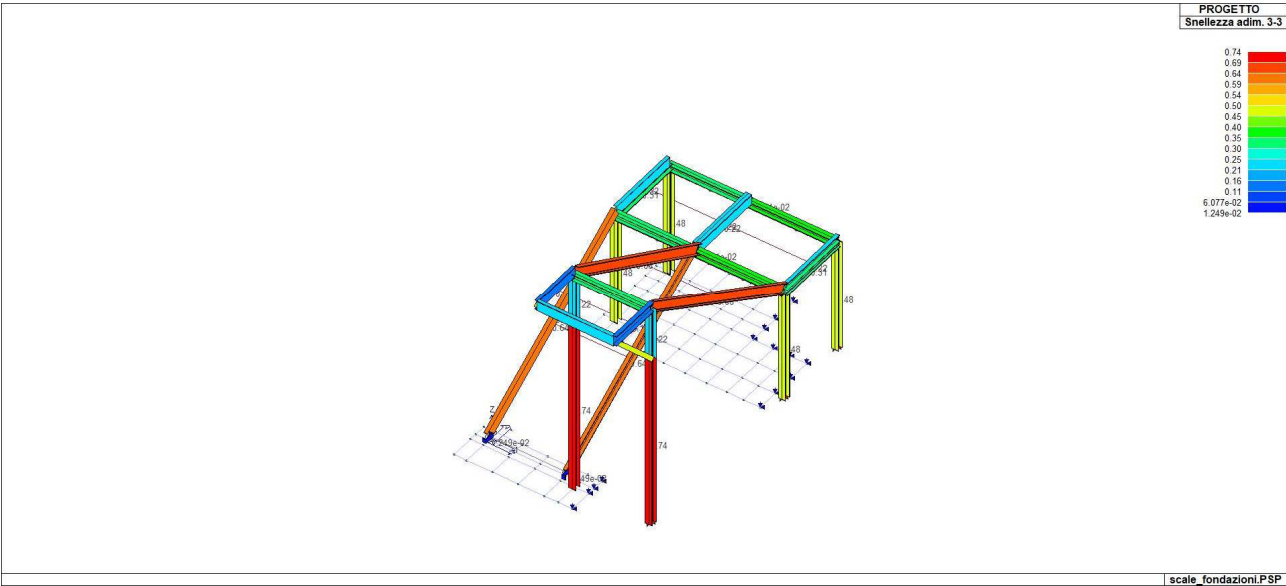
73\_PRO\_ST\_SFRUTTAMENTO



73\_PRO\_ST\_SNELLEZZATOR



73\_PRO\_ST\_SNELLEZZAXX



73\_PRO\_ST\_SNELLEZZAYY



# VERIFICHE ELEMENTI PARETE E/O GUSCIO IN C.A.

## LEGENDA TABELLA VERIFICHE ELEMENTI PARETE E GUSCIO IN C.A.

Per le pareti in c.a., in ottemperanza al cap. 7 del DM 17-01-18, viene effettuata una doppia progettazione: sia come *Singolo Elemento* sia come *Parete Sismica* o *Parete Debolmente Armata*.

Per la progettazione come *Singolo Elemento* di ogni elemento vengono riportati il codice dello stato di verifica con le sigle **Ok** e **NV**, il rapporto  $x/d$ , la verifica per sollecitazioni ultime (verifica a compressione media gli sforzi membranali, verifica a presso-flessionale e verifica a sollecitazioni taglianti), gli sforzi membranali e flessionali, il quantitativo di armatura nella direzione principale e secondaria sia inferiore che superiore e il quantitativo di armatura a taglio.

Per la progettazione come *Parete Sismica* o *Parete Debolmente Armata* vengono riportate invece le caratteristiche geometriche della parete e delle zone dissipative (quest'ultime solo nel caso di parete sismica), i coefficienti di verifica a compressione assiale, pressoflessione e sollecitazioni taglianti.

Inoltre vengono riportate per ogni quota significativa l'armatura principale e secondaria, l'armatura in zona confinata (solo per parete sismica) e non confinata, l'armatura concentrata all'estremità (per pareti debolmente armate), lo sforzo assiale aggiuntivo per  $q$  superiore a 2 e i valori di involuppo di taglio e momento. Per le pareti debolmente armate viene riportato anche lo stato di verifica relativo alla snellezza.

Le azioni derivate dall'analisi, in ogni combinazione di calcolo, sono elaborate come previsto al punto 7.4.4.5.1: traslazione del momento, incremento e variazione diagramma taglio, incremento e decremento sforzo assiale

La progettazione nel caso dei gusci viene effettuata una progettazione come *Singolo Elemento*, riportando in tabella il rapporto  $x/d$ , la verifica per sollecitazioni ultime, (verifica a compressione media gli sforzi membranali, verifica a presso-flessionale e verifica a sollecitazioni taglianti) di ogni elemento.

Per ogni elemento, viene riportata inoltre la maglia di armatura necessaria in relazione alle risultanze della progettazione dei nodi dell'elemento stesso. Le quantità di armature necessarie sono armature (disposte rispettivamente in direzione principale e secondaria, inferiore e superiore) distribuite nell'elemento ed espresse in centimetri quadri per sviluppo lineare pari ad un metro.

Nel caso dei gusci viene effettuata, inoltre, la verifica a punzonamento, riportando in tabella il codice dello stato di verifica, il coefficiente di verifica per piastre prive di armature a taglio lungo il perimetro resistente e lungo il perimetro del pilastro, coefficiente di incremento dovuto ai momenti flettenti, fattore di amplificazione per le fondazioni, il fattore di amplificazione dell'altezza utile per individuare il perimetro di verifica lungo il quale l'armatura a taglio non è richiesta, il quantitativo di armatura a punzonamento, il numero di serie di armature, il numero di braccia di armatura ed il riferimento alla combinazione più gravosa.

### Simbologia adottata nelle tabelle di verifica

Per gli elementi con progettazione "*Singolo Elemento* ..." è presente una tabella con i simboli di seguito descritti:

Macro Guscio	Numero del macroelemento di tipo guscio (elementi non verticali contigui ed analoghi per proprietà)
Macro Setto	Numero del macroelemento di tipo setto (elementi verticali contigui ed analoghi per proprietà)
Spessore	Spessore della parete
Id Materiale	Codice del materiale assegnato all'elemento
Id Criterio	Codice del criterio di progetto assegnato all'elemento
Progettazione	Sigla tipo di Elemento: - Singolo Elemento; - Singolo Elemento FONDAZIONE; - Singolo Elemento NON DISSIPATIVO

Per gli elementi con progettazione “*Parete Sismica o Parete Debolmente Armata*” è presente una tabella con i simboli di seguito descritti:

Parete	Numero della PARETE SISMICA
Parete PDA	Numero della PARETE DEBOLMENTE ARMATA
H totale	Altezza complessiva della parete
Spessore	Spessore della parete
H critica	Altezza come da punto 7.4.4.5.1 per traslazione momento (solo in Parete Sismica)
H critica V	Altezza della zona dissipativa (solo in Parete Sismica)
L totale	Larghezza di base della parete
L confinata	Lunghezza della zona dissipativa (solo in Parete Sismica)
Verif. N	Verifica di cui al punto 7.4.4.5.1 compressione semplice
Verif. N-M	Verifica di cui al punto 7.4.4.5.1 pressoflessione
Fattore V	Fattore di amplificazione del taglio di cui al punto 7.4.4.5.1
Diagramma V	Diagramma elaborato per effetto modi superiori come da fig. 7.4.4
Verif. V	Verifica di cui al punto 7.4.4.5.1 taglio (compressione cls, trazione acciaio, scorrimento in zona critica) (solo in Parete Sismica)
Verifica Snellezza	Verifica di cui al punto 7.4.4.5.1 limitazione compressione per prevenire l'instabilità (solo in Parete Debolmente Armata)
Prog. composta	Sigla per la progettazione composta

Per le verifiche degli elementi con progettazione “*Singolo Elemento ...*” e *Progettazione Composta* è presente una tabella con i simboli di seguito descritti:

Nodo	numero del nodo
Stato	codice di verifica dell'elemento <b>ok</b> o <b>NV</b>
x/d	rapporto tra posizione dell'asse neutro e altezza utile alla rottura della sezione (per sola flessione)
V N/M	Verifica delle sollecitazioni Normali (momento e sforzo normale)
Ver. rid	Rapporto Nd/Nu (Nu ottenuto con riduzione del 25% di fcd)
Af pr+	quantità di armatura richiesta in direzione principale relativa alla faccia positiva (estradosso piastre) (valore derivante da calcolo o minimo normativo)
Af pr-	quantità di armatura richiesta in direzione principale relativa alla faccia negativa (intradosso piastre) (valore derivante da calcolo o minimo normativo)
Af sec+	quantità di armatura richiesta in direzione secondaria relativa alla faccia positiva (estradosso piastre) (valore derivante da calcolo o minimo normativo)
Af sec-	quantità di armatura richiesta in direzione secondaria relativa alla faccia negativa (intradosso piastre) (valore derivante da calcolo o minimo normativo)
Nz No Nzo	Sforzi membranali per pareti e/o setti verticali
Mz Mo Mzo	Sforzi flessionali per pareti e/o setti verticali
Nx Ny Nxy	Sforzi membranali per gusci orizzontali
Mx Mx Mxy	Sforzi flessionali per gusci orizzontali

Nodo	numero del nodo
Stato	codice di verifica dell'elemento <b>ok</b> o <b>NV</b>
Max tau	Tensione tangenziale Massima
Ver V pr	Verifica a taglio nella direzione principale lato calcestruzzo
Ver V sec	Verifica a taglio nella direzione secondaria lato calcestruzzo
Af V pr	Armatura nella direzione principale
V pr-	Verifica dell'armatura nella direzione principale
Af V sec	Armatura nella direzione secondaria
V sec-	Verifica dell'armatura nella direzione secondaria

Per le verifiche degli elementi con progettazione “*Parete Sismica o Parete Debolmente Armata*”, oltre alla tabella con le verifiche per gli elementi con progettazione “*Singolo Elemento ...*”, è presente una tabella con i simboli di seguito descritti:

Quota	Ascissa verticale di riferimento
Af conf.	Numero e diametro armatura presente in una zona confinata
Af std	Diametro e passo armatura in zona non confinata (doppia maglia)

Af estremi	Diametro dei ferri di estremità del pannello; se posto uguale 0, viene utilizzato il diametro standard
Af V (ori)	Diametro e passo armatura orizzontale (doppia maglia)
Ver. N	Rapporto tra azione di calcolo e resistenza a compressione (normalizzato a 1 in quanto da confrontare con 40% in CDB e 35 % in CDA)
Ver. N/M	Rapporto tra azione di calcolo e resistenza a pressoflessione
Ver. V acc(7)	Rapporto tra azione di calcolo e resistenza a taglio-trazione per $\alpha_s$ minore di 2 secondo paragrafo 7.4.4.5.1
Ver. V cls	Rapporto tra azione di calcolo e resistenza a taglio-compressione
Ver. V acc	Rapporto tra azione di calcolo e resistenza a taglio-trazione
Ver. V scorr.	Rapporto tra azione di calcolo e resistenza a taglio scorrimento
N add	Sforzo assiale di cui al punto 7.4.4.5.1 da sommare e sottrarre nelle verifiche quando q supera 2
N invil M invil	Inviluppo del Momento e Sforzo Normale come al punto 7.4.4.5.1 (informativo) (solo in Parete Sismica)

Quota	Ascissa verticale di riferimento
N v.N	Valore dello sforzo assiale per cui Ver. N attinge il massimo valore
N v.M/N, M v.M/N	Valore dello sforzo assiale e momento per cui Ver. N/M attinge il massimo valore
N v.M/N, M v.M/N Mo v.M/N	Valore dello sforzo assiale e dei momenti per cui Ver. N/M attinge il massimo valore (per le pareti estese debolmente armate)
N v.Vcls, V v.Vcls,	Valore dello sforzo assiale e taglio per cui Ver. V. cls attinge il massimo valore
N v.Vacc, M v.Vacc, V v.Vacc,	Valore dello sforzo assiale, momento e taglio per cui Ver. V. acc attinge il massimo valore
N v.Vscorr, M v.Vscorr, V v.Vscorr,	Valore dello sforzo assiale, momento e taglio per cui Ver. V. scorr.e
N v.N	Valore dello sforzo assiale per cui Ver. N attinge il massimo valore
N v.M/N, M v.M/N	Valore dello sforzo assiale e momento per cui Ver. N/M attinge il massimo valore
N v.M/N, M v.M/N Mo v.M/N	Valore dello sforzo assiale e dei momenti per cui Ver. N/M attinge il massimo valore (per le pareti estese debolmente armate)
N v.Vcls, V v.Vcls,	Valore dello sforzo assiale e taglio per cui Ver. V. cls attinge il massimo valore

Quota	Ascissa verticale di riferimento
CtgT Vcls	Valore di ctg(teta) adottato nella verifica V compressione cls
Vrsd Vcls	Valore della resistenza a taglio trazione (armatura di calcolo)
Vrcd Vcls	Valore della resistenza a taglio compressione
CtgT Vacc	Valore di ctg(teta) adottato nella verifica V trazione armatura
Vrsd Vacc	Valore della resistenza a taglio trazione (armatura presente)
Vrcd Vacc	Valore della resistenza a taglio compressione
Vdd	Valore del contributo alla resistenza allo scorrimento come da [7.4.20]
Vid	Valore del contributo alla resistenza allo scorrimento come da [7.4.21]
A s.i.	Somma delle aree di armature
Incli.	Angolo di inclinazione delle armature
Dist.	Distanza alla base tra le armature inclinate

Quota	Ascissa verticale di riferimento
V[7.4.16]	Verifica a taglio-trazione dell'armatura dell'anima (7.4.16)
N M V	Sollecitazioni di calcolo della condizione più gravosa
Alfas	Rapporto di Taglio
Vrd,c	Resistenza a taglio degli elementi non armati
VRd,s	Resistenza a taglio nei confronti dello scorrimento
V[7.4.17]	Verifica a taglio-trazione dell'armatura dell'anima (7.4.17)
roH	Rapporto tra l'armatura orizzontale e l'area della sezione relativa di calcestruzzo
roV	Rapporto tra l'armatura verticale e l'area della sezione relativa di calcestruzzo
roN	Sforzo normale adimensionalizzato $N_{ed}/(b w f_{yd})$

Per la verifica a **Punzonamento** è presente una tabella con i simboli di seguito descritti:

Nodo	numero del nodo
Stato	codice di verifica dell'elemento <b>ok</b> o <b>NV</b>
V. 6.47	Fattore di sicurezza per la verifica per piastre prive di armature a taglio lungo il perimetro resistente U1
V. 6.53	Fattore di sicurezza per la verifica per piastre prive di armature a taglio lungo il perimetro del pilastro U0
Beta	Fattore di incremento dovuto ai momenti flettenti
f. a fon	fattore di amplificazione per le fondazioni (solo per gusci di fondazione)
f. Uout	fattore di amplificazione dell'altezza utile per individuare il perimetro di verifica lungo il quale l'armatura a taglio non è richiesta
Aw tot	Quantitativo di armatura per la verifica di piastre munite di armatura (formula 6.52 dell'EC2)
Asw,min	Quantitativo minimo di armatura previsto dai dettagli costruttivi (formula 9.11 dell'EC2)
n. x serie	Numero di serie di armature
n.ser 0(R)	Numero di braccia delle armature in direzione 0 (o numero di braccia radiale)
n.ser 90	Numero di braccia delle armature in direzione 90 (solo se armatura cruciforme)
Rif. cmb	Riferimento combinazioni da cui si generano le verifiche più gravose

## PROGETTAZIONE DELLE FONDAZIONI

Il D.M.17/01/2018 - par: 7.2.5 prevede:

“Sia per CD“A” sia per CD“B” il dimensionamento delle strutture di fondazione e la verifica di sicurezza del complesso fondazione-terreno devono essere eseguiti assumendo come azione in fondazione, trasmessa dagli elementi soprastanti, una tra le seguenti:

- quella derivante dall'analisi strutturale eseguita ipotizzando comportamento strutturale non dissipativo;
- [...];
- quella trasferita dagli elementi soprastanti nell'ipotesi di comportamento strutturale dissipativo, amplificata di un coefficiente pari a 1,30 in CD“A” e 1,10 in CD“B”;

Nel contesto visualizzazione risultati e nella stampa della relazione sulle fondazioni PRO\_SAP mostra le sollecitazioni che derivano dall'analisi non incrementate sia in termini di pressioni sul terreno che in termini di sollecitazioni.

La progettazione degli elementi strutturali con proprietà fondazione è effettuata da PRO\_SAP (per travi e platee) o da PRO\_CAD Plinti (per plinti e pali di fondazione) incrementando le sollecitazioni delle combinazioni con sisma di un coefficiente pari 1.1 in CDB e 1.3 in CDA per pali, plinti, travi e platee.

Per i bicchieri dei plinti di fondazione prefabbricati l'incremento delle sollecitazioni ha un fattore pari a 1.2 in CDB e 1.35 in CDA.

N.B.: nel caso di comportamento strutturale non dissipativo la progettazione viene effettuata senza nessun incremento.

Le verifiche geotecniche vengono effettuate dal modulo geotecnico incrementando automaticamente le sollecitazioni del fattore 1.1 in CDB e 1.3 in CDA per pali, plinti, travi e platee.

N.B.: nel caso di comportamento strutturale non dissipativo le verifiche geotecniche vengono effettuate senza nessun incremento.

Macro Guscio	Spessore	Id Materiale	Id Criterio	Progettazione
	cm			
1	30.00	4	2	Singolo elemento

Nodo	Stato	x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N x	N y	N xy	M x	M y	M xy
									kN/ m	kN/ m	kN/ m	kN	kN	kN
7	ok	0.12	0.9	2.26e-03	5.7	5.7	5.7	5.7	-4.3	11.0	-9.2	10.9	31.9	-20.1
10	ok	0.12	0.8	2.82e-03	5.7	5.7	5.7	5.7	-2.7	-15.3	2.6	-14.6	-37.8	12.3

Nodo	Stato	x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N x	N y	N xy	M x	M y	M xy
35	ok	0.12	0.6	3.94e-03	5.7	5.7	5.7	5.7	-12.3	-2.0	4.7	-4.1	2.7	18.6
36	ok	0.12	0.4	3.88e-03	5.7	5.7	5.7	5.7	7.6	0.4	3.5	13.9	1.9	5.9
37	ok	0.12	0.7	3.41e-03	5.7	5.7	5.7	5.7	-5.9	-12.6	-8.2	-6.0	-21.7	-5.2
38	ok	0.12	0.4	4.98e-03	5.7	5.7	5.7	5.7	-14.4	9.37e-04	12.6	11.1	3.1	10.2
39	ok	0.12	0.4	4.23e-03	5.7	5.7	5.7	5.7	-1.2	2.6	13.8	7.3	3.2	10.5
40	ok	0.12	0.3	5.66e-03	5.7	5.7	5.7	5.7	-13.9	1.8	12.5	10.6	1.8	8.9
41	ok	0.12	0.3	4.18e-03	5.7	5.7	5.7	5.7	13.8	-1.9	-8.2	13.5	1.1	-2.8
42	ok	0.12	0.3	6.08e-03	5.7	5.7	5.7	5.7	-19.9	3.7	10.1	8.7	1.6	6.4
43	ok	0.12	0.3	4.09e-03	5.7	5.7	5.7	5.7	16.1	-3.4	-6.4	10.8	9.08e-02	-3.6
44	ok	0.12	0.2	6.15e-03	5.7	5.7	5.7	5.7	-24.5	5.5	5.7	5.8	1.2	4.1
45	ok	0.12	0.2	4.97e-03	5.7	5.7	5.7	5.7	18.7	-25.5	-10.5	6.7	-0.8	-4.7
46	ok	0.12	0.1	6.25e-03	5.7	5.7	5.7	5.7	-27.0	1.3	-0.6	3.1	0.5	2.5
47	ok	0.12	0.2	4.66e-03	5.7	5.7	5.7	5.7	19.0	2.2	7.2	5.7	-0.8	-0.1
48	ok	0.12	0.1	6.50e-03	5.7	5.7	5.7	5.7	-35.3	-4.6	-3.9	0.7	0.6	1.7
49	ok	0.12	9.41e-02	3.40e-03	5.7	5.7	5.7	5.7	13.6	4.7	4.5	2.8	-0.3	0.2
50	ok	0.12	0.3	1.86e-02	5.7	5.7	5.7	5.7	-98.2	-19.5	-19.5	3.4	2.7	-2.7
51	ok	0.12	0.3	3.68e-03	5.7	5.7	5.7	5.7	2.7	2.3	13.2	6.1	4.7	8.9
52	ok	0.12	0.3	3.05e-03	5.7	5.7	5.7	5.7	1.5	3.0	-15.2	4.2	8.2	-4.7
53	ok	0.12	0.3	3.67e-03	5.7	5.7	5.7	5.7	6.9	1.3	3.1	12.5	1.3	2.8
54	ok	0.12	0.3	3.92e-03	5.7	5.7	5.7	5.7	8.3	-2.8	-10.4	12.5	1.5	-2.7
55	ok	0.12	0.3	5.68e-03	5.7	5.7	5.7	5.7	20.4	-10.9	-24.3	9.3	2.2	-5.9
56	ok	0.12	0.4	6.30e-03	5.7	5.7	5.7	5.7	25.5	4.4	-25.6	8.5	2.4	-10.4
57	ok	0.12	0.2	1.83e-03	5.7	5.7	5.7	5.7	-0.5	-1.6	9.2	10.1	0.9	-1.0
58	ok	0.12	4.97e-02	1.29e-03	5.7	5.7	5.7	5.7	0.5	2.8	4.6	2.1	-2.53e-02	0.4
59	ok	0.12	2.39e-02	5.85e-04	5.7	5.7	5.7	5.7	0.2	0.3	0.2	9.78e-02	0.3	0.3
60	ok	0.12	0.3	3.83e-03	5.7	5.7	5.7	5.7	-3.5	1.0	-20.1	8.0	6.3	-7.1
61	ok	0.12	0.7	3.32e-03	5.7	5.7	5.7	5.7	3.7	12.3	0.5	7.1	32.9	-8.0
62	ok	0.12	0.3	4.66e-03	5.7	5.7	5.7	5.7	-6.0	-1.6	-18.9	8.8	4.0	-6.6
63	ok	0.12	0.3	5.05e-03	5.7	5.7	5.7	5.7	-5.1	-7.1	-20.7	8.3	2.1	-6.2
64	ok	0.12	0.3	6.64e-03	5.7	5.7	5.7	5.7	-4.9	-7.6	-23.3	7.3	2.8	-6.8
65	ok	0.12	0.3	5.09e-03	5.7	5.7	5.7	5.7	-4.8	-1.1	-24.2	2.3	4.3	-6.2
66	ok	0.12	0.4	3.76e-03	5.7	5.7	5.7	5.7	5.8	19.3	-9.6	1.9	14.5	-6.7
67	ok	0.12	0.3	4.28e-04	5.7	5.7	5.7	5.7	-1.0	-1.1	-0.6	0.4	-1.3	-13.1
68	ok	0.12	0.1	9.09e-03	5.7	5.7	5.7	5.7	-51.0	-10.4	-0.9	0.5	0.6	0.7
69	ok	0.12	0.6	4.03e-03	5.7	5.7	5.7	5.7	13.0	2.5	3.7	11.2	-1.4	15.8
70	ok	0.12	0.3	5.65e-03	5.7	5.7	5.7	5.7	-18.6	-4.0	-19.0	10.1	3.9	-7.4
71	ok	0.12	0.3	7.49e-03	5.7	5.7	5.7	5.7	-19.2	-6.2	-19.0	9.1	2.0	-6.8
72	ok	0.12	0.2	8.10e-03	5.7	5.7	5.7	5.7	-27.4	-12.1	-23.3	7.1	2.8	-6.3
73	ok	0.12	0.2	7.62e-03	5.7	5.7	5.7	5.7	-27.2	-5.5	-24.0	2.6	4.6	-5.1
74	ok	0.12	0.2	2.35e-03	5.7	5.7	5.7	5.7	1.0	0.5	-2.17e-02	9.0	4.4	-4.0
75	ok	0.12	0.4	4.20e-03	5.7	5.7	5.7	5.7	3.4	16.4	-9.0	2.0	15.4	-3.1
76	ok	0.12	0.3	4.46e-03	5.7	5.7	5.7	5.7	-19.8	-4.4	-8.7	8.6	4.5	-8.2
77	ok	0.12	0.3	2.87e-03	5.7	5.7	5.7	5.7	-2.0	-9.7	0.8	-8.3	-12.4	5.5
78	ok	0.12	0.6	2.04e-03	5.7	5.7	5.7	5.7	-1.1	-2.1	-1.4	-1.6	-24.4	-12.6
79	ok	0.12	0.3	7.28e-03	5.7	5.7	5.7	5.7	-37.7	-3.4	-9.5	11.9	0.9	-6.8
80	ok	0.12	0.3	1.14e-02	5.7	5.7	5.7	5.7	-38.3	-2.7	-9.5	11.1	1.5	-5.9
81	ok	0.12	0.3	1.80e-02	5.7	5.7	5.7	5.7	-60.4	-4.2	-12.6	8.4	2.0	-4.5
82	ok	0.12	0.3	3.14e-03	5.7	5.7	5.7	5.7	2.8	6.7	7.4	1.2	8.7	8.8
83	ok	0.12	9.64e-02	5.99e-03	5.7	5.7	5.7	5.7	-32.5	-6.5	-3.5	-7.28e-04	0.4	0.9
84	ok	0.12	5.07e-02	2.86e-03	5.7	5.7	5.7	5.7	-14.9	-3.0	-3.4	-0.3	0.1	0.9
85	ok	0.12	0.7	2.30e-03	5.7	5.7	5.7	5.7	2.9	1.6	0.8	11.5	25.3	-13.1
86	ok	0.12	0.4	4.51e-03	5.7	5.7	5.7	5.7	-12.8	-1.9	7.7	10.7	5.3	10.2
87	ok	0.12	0.5	6.60e-03	5.7	5.7	5.7	5.7	-26.5	-1.1	5.2	13.3	0.6	8.3
88	ok	0.12	0.3	8.33e-03	5.7	5.7	5.7	5.7	-26.3	-7.45e-02	5.1	13.3	1.2	7.3
89	ok	0.12	0.3	9.33e-03	5.7	5.7	5.7	5.7	-35.5	0.1	3.9	10.6	0.9	5.3
90	ok	0.12	0.2	9.58e-03	5.7	5.7	5.7	5.7	-41.3	-0.2	1.8	7.4	0.9	3.4
91	ok	0.12	0.2	9.63e-03	5.7	5.7	5.7	5.7	-43.1	-1.2	-0.5	4.4	0.7	2.0
92	ok	0.12	0.2	9.26e-03	5.7	5.7	5.7	5.7	-50.9	-2.0	-1.8	1.9	0.7	1.4
93	ok	0.12	0.3	7.15e-04	5.7	5.7	5.7	5.7	-1.2	-1.2	0.8	-5.1	2.8	11.9
Nodo		x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N x	N y	N xy	M x	M y	M xy
		0.12	0.90	0.02	5.65	5.65	5.65	5.65	-98.24	-25.53	-25.65	-14.57	-37.85	-20.10
		0.12	0.90	0.02	5.65	5.65	5.65	5.65	25.52	19.29	13.77	13.86	32.91	18.65

Nodo	Stato	Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
		daN/cm2					kN/ m	kN/ m
7	ok	2.20						
10	ok	2.81						
35	ok	2.81						
36	ok	1.71						

Nodo	Stato	Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
37	ok	2.53						
38	ok	1.58						
39	ok	0.62						
40	ok	0.92						
41	ok	0.39						
42	ok	0.75						
43	ok	0.48						
44	ok	0.60						
45	ok	0.61						
46	ok	0.44						
47	ok	0.61						
48	ok	0.28						
49	ok	0.31						
50	ok	0.22						
51	ok	1.02						
52	ok	1.02						
53	ok	0.43						
54	ok	0.40						
55	ok	0.94						
56	ok	0.94						
57	ok	0.61						
58	ok	0.31						
59	ok	0.12						
60	ok	1.42						
61	ok	1.62						
62	ok	0.60						
63	ok	0.40						
64	ok	0.94						
65	ok	0.94						
66	ok	1.62						
67	ok	1.01						
68	ok	0.11						
69	ok	2.20						
70	ok	1.13						
71	ok	0.73						
72	ok	0.70						
73	ok	0.70						
74	ok	1.62						
75	ok	0.98						
76	ok	2.20						
77	ok	2.53						
78	ok	2.20						
79	ok	1.13						
80	ok	0.73						
81	ok	0.46						
82	ok	2.53						
83	ok	0.21						
84	ok	0.21						
85	ok	2.81						
86	ok	2.81						
87	ok	1.58						
88	ok	0.92						
89	ok	0.75						
90	ok	0.60						
91	ok	0.44						
92	ok	0.28						
93	ok	1.34						
Nodo		Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
		2.81						

Macro Guscio	Spessore	Id Materiale	Id Criterio	Progettazione
	cm			
2	30.00	4	2	Singolo elemento

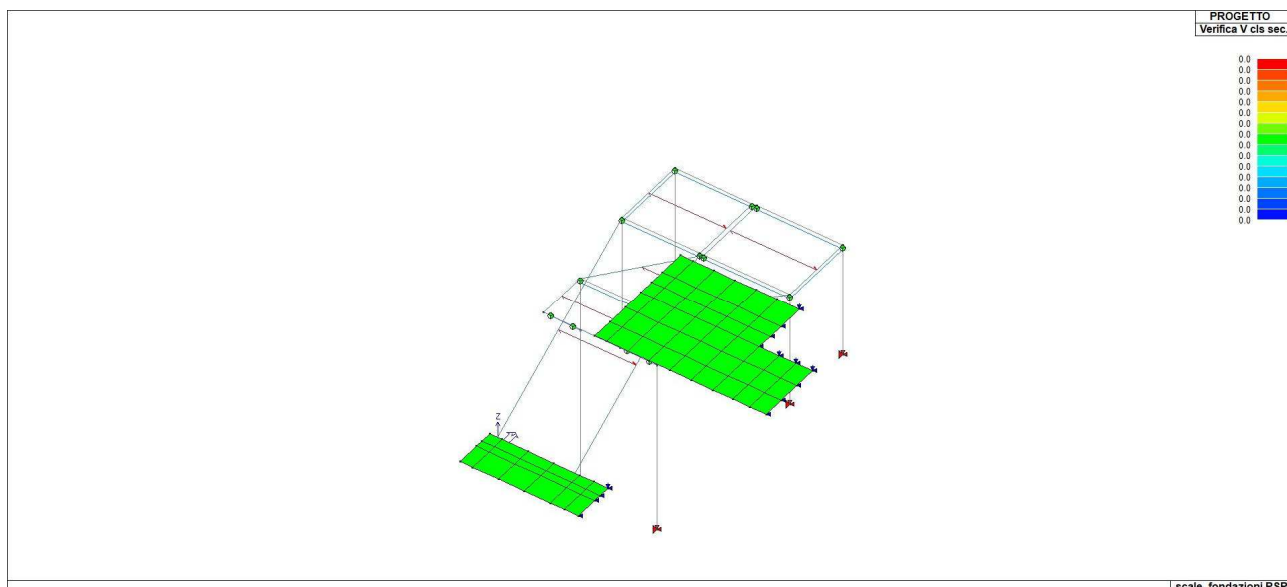
Nodo	Stato	x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N x	N y	N xy	M x	M y	M xy
									kN/ m	kN/ m	kN/ m	kN	kN	kN
1	ok	0.12	0.4	9.20e-04	5.7	5.7	5.7	5.7	1.8	-0.2	0.2	-2.9	-15.8	6.1

Nodo	Stato	x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N x	N y	N xy	M x	M y	M xy
2	ok	0.12	0.8	1.36e-03	5.7	5.7	5.7	5.7	1.0	0.5	0.2	-11.5	-31.9	-21.9
3	ok	0.12	0.8	1.30e-03	5.7	5.7	5.7	5.7	5.0	-2.3	-0.4	-30.3	-22.3	-15.6
94	ok	0.12	0.3	2.38e-03	5.7	5.7	5.7	5.7	4.2	0.5	-0.1	-6.5	-4.9	-4.7
95	ok	0.12	0.3	1.36e-03	5.7	5.7	5.7	5.7	-0.5	1.7	0.3	3.5	16.3	4.2
96	ok	0.12	0.1	1.76e-03	5.7	5.7	5.7	5.7	10.8	1.3	3.0	-0.2	-0.7	-1.0
97	ok	0.12	0.2	2.02e-03	5.7	5.7	5.7	5.7	-0.2	-0.3	-0.7	2.6	-3.9	5.8
98	ok	0.12	0.1	4.74e-05	5.7	5.7	5.7	5.7	0.1	-1.53e-02	-3.46e-03	-0.2	4.1	-1.4
99	ok	0.12	7.63e-02	1.38e-04	5.7	5.7	5.7	5.7	9.03e-04	-5.97e-02	1.48e-02	1.1	3.0	-1.6
100	ok	0.12	0.1	1.89e-04	5.7	5.7	5.7	5.7	0.3	0.2	4.59e-03	2.7	4.1	-1.9
101	ok	0.12	0.3	7.55e-04	5.7	5.7	5.7	5.7	0.9	-0.2	0.2	-2.8	-13.9	4.1
102	ok	0.12	6.13e-02	2.00e-04	5.7	5.7	5.7	5.7	-0.2	-0.3	0.1	-0.3	2.3	-0.9
103	ok	0.12	0.2	2.31e-04	5.7	5.7	5.7	5.7	9.88e-03	9.38e-02	3.22e-02	6.3	0.5	-3.5
104	ok	0.12	0.2	7.45e-04	5.7	5.7	5.7	5.7	-1.1	-0.2	4.83e-02	4.4	1.8	5.5
105	ok	0.12	0.2	3.19e-04	5.7	5.7	5.7	5.7	-1.7	0.2	0.1	11.3	0.6	-1.6
106	ok	0.12	0.2	7.68e-04	5.7	5.7	5.7	5.7	-0.2	-1.0	0.4	9.6	-1.5	3.7
107	ok	0.12	0.2	3.56e-04	5.7	5.7	5.7	5.7	-0.6	-0.7	-0.8	-1.0	-11.0	-1.8
108	ok	0.12	0.5	1.26e-03	5.7	5.7	5.7	5.7	4.4	-3.2	0.7	-23.9	-9.0	-3.1
109	ok	0.12	0.2	9.87e-04	5.7	5.7	5.7	5.7	-1.7	-0.2	-0.2	-2.0	-5.5	-3.5
110	ok	0.12	0.2	1.42e-03	5.7	5.7	5.7	5.7	1.0	0.2	-0.2	8.2	-0.9	1.0
111	ok	0.12	0.3	1.27e-03	5.7	5.7	5.7	5.7	8.4	0.5	1.6	9.6	-6.2	-5.3
112	ok	0.12	0.2	1.46e-03	5.7	5.7	5.7	5.7	0.6	2.33e-02	0.1	5.8	-3.7	3.1
113	ok	0.12	0.1	1.24e-04	5.7	5.7	5.7	5.7	6.48e-03	-3.44e-03	5.20e-02	0.6	-5.1	-2.0
114	ok	0.12	0.2	9.35e-04	5.7	5.7	5.7	5.7	1.8	0.4	0.2	5.0	3.2	7.1
115	ok	0.12	0.3	9.16e-04	5.7	5.7	5.7	5.7	0.3	-9.37e-02	-0.2	11.3	18.4	-1.8
116	ok	0.12	0.3	1.16e-03	5.7	5.7	5.7	5.7	1.1	-0.5	-6.89e-02	-6.0	4.2	1.7
117	ok	0.12	0.5	1.60e-03	5.7	5.7	5.7	5.7	-0.2	1.2	2.8	-2.2	24.1	-0.5
118	ok	0.12	0.2	1.37e-03	5.7	5.7	5.7	5.7	11.4	2.2	3.4	-3.0	-3.5	-0.5
Nodo		x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N x	N y	N xy	M x	M y	M xy
		0.12	0.83	2.38e-03	5.65	5.65	5.65	5.65	-1.69	-3.16	-0.80	-30.27	-31.89	-21.89
									11.41	2.20	3.37	11.35	24.12	7.14

Nodo	Stato	Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
		daN/cm2					kN/ m	kN/ m
1	ok	1.43						
2	ok	1.97						
3	ok	1.89						
94	ok	1.97						
95	ok	1.84						
96	ok	0.86						
97	ok	0.83						
98	ok	0.36						
99	ok	0.21						
100	ok	0.60						
101	ok	0.71						
102	ok	0.38						
103	ok	0.60						
104	ok	0.71						
105	ok	0.77						
106	ok	0.89						
107	ok	1.84						
108	ok	1.89						
109	ok	1.43						
110	ok	1.43						
111	ok	0.83						
112	ok	1.73						
113	ok	0.38						
114	ok	1.43						
115	ok	1.73						
116	ok	1.97						
117	ok	1.97						
118	ok	0.86						
Nodo		Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
		1.97						







72\_PRO\_CA\_D3\_VER\_VII

## STATI LIMITE D' ESERCIZIO

### LEGENDA TABELLA STATI LIMITE D' ESERCIZIO

In tabella vengono riportati i valori di interesse per il controllo degli stati limite d'esercizio.

In particolare vengono riportati, in relazione al tipo di elemento strutturale, i risultati relativi alle tre categorie di combinazione considerate:

- Combinazioni rare
- Combinazioni frequenti
- Combinazioni quasi permanenti.

I valori di interesse sono i seguenti:

<b>rRfck</b>	rapporto tra la massima compressione nel calcestruzzo e la tensione fck in combinazioni rare	[normalizzato a 1]
<b>rRfyk</b>	rapporto tra la massima tensione nell'acciaio e la tensione fyk in combinazioni rare	[normalizzato a 1]
<b>rPfck</b>	rapporto tra la massima compressione nel calcestruzzo e la tensione fck in combinazioni quasi permanenti	[normalizzato a 1]
<b>wR</b>	apertura caratteristica delle fessure in combinazioni rare	[mm]
<b>wF</b>	apertura caratteristica delle fessure in combinazioni frequenti	[mm]
<b>wP</b>	apertura caratteristica delle fessure in combinazioni quasi permanenti	[mm]
<b>dR</b>	massima deformazione in combinazioni rare	
<b>dF</b>	massima deformazione in combinazioni frequenti	
<b>dP</b>	massima deformazione in combinazioni quasi permanenti	

Per ognuno dei nove valori soprariportati viene indicata (Rif.cmb) la combinazione in cui si è verificato.

In relazione al tipo di elemento strutturale i valori sono selezionati nel modo seguente:

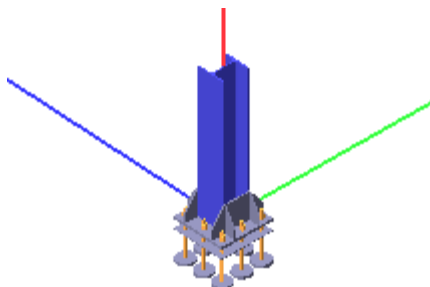
pilastr	<b>rRfck</b>	<b>rRfyk</b>	<b>rPfck</b>	per sezioni significative
travi	<b>rRfck</b>	<b>rRfyk</b>	<b>rPfck</b>	per sezioni significative
	<b>wR</b>	<b>wF</b>	<b>wP</b>	per sezioni significative
	<b>dR</b>	<b>dF</b>	<b>dP</b>	massimi in campata
setti e gusci	<b>rRfck</b>	<b>rRfyk</b>	<b>rPfck</b>	massimi nei nodi dell'elemento
	<b>wR</b>	<b>wF</b>	<b>wP</b>	massimi nei nodi dell'elemento

Si precisa che i valori di massima deformazione per travi sono riferiti al piano verticale (piano locale 1-2 con momenti flettenti 3-3).

Guscio	rRfck	rRfyk	rPfck	Rif. cmb	wR	wF	wP	Rif. cmb
					mm	mm	mm	
1	0.11	0.29	0.10	6,6,10	0.0	0.0	0.0	0,0,0
2	0.08	0.21	0.07	6,6,10	0.0	0.0	0.0	0,0,0
3	0.07	0.21	0.07	6,6,10	0.0	0.0	0.0	0,0,0
4	0.07	0.19	0.06	6,6,10	0.0	0.0	0.0	0,0,0
5	0.05	0.15	0.05	6,6,10	0.0	0.0	0.0	0,0,0
6	0.03	0.10	0.03	6,6,10	0.0	0.0	0.0	0,0,0
7	0.02	0.06	0.02	6,6,10	0.0	0.0	0.0	0,0,0
8	6.41e-03	0.03	5.60e-03	6,6,10	0.0	0.0	0.0	0,0,0
9	0.06	0.17	0.06	6,6,10	0.0	0.0	0.0	0,0,0
10	0.07	0.19	0.06	6,6,10	0.0	0.0	0.0	0,0,0
11	0.07	0.19	0.06	6,6,10	0.0	0.0	0.0	0,0,0
12	0.06	0.17	0.05	6,6,10	0.0	0.0	0.0	0,0,0
13	0.05	0.14	0.04	6,6,10	0.0	0.0	0.0	0,0,0
14	0.05	0.14	0.05	6,6,10	0.0	0.0	0.0	0,0,0
15	0.02	0.06	0.02	6,6,10	0.0	0.0	0.0	0,0,0
16	7.54e-03	0.03	6.61e-03	6,6,10	0.0	0.0	0.0	0,0,0
17	0.05	0.14	0.05	6,6,10	0.0	0.0	0.0	0,0,0
18	0.06	0.15	0.05	6,6,10	0.0	0.0	0.0	0,0,0
19	0.06	0.15	0.05	6,6,10	0.0	0.0	0.0	0,0,0
20	0.05	0.13	0.04	6,6,10	0.0	0.0	0.0	0,0,0
21	0.03	0.10	0.03	6,6,10	0.0	0.0	0.0	0,0,0
22	0.04	0.11	0.03	6,6,10	0.0	0.0	0.0	0,0,0
23	0.02	0.06	0.02	6,6,10	0.0	0.0	0.0	0,0,0
24	5.83e-03	0.03	5.07e-03	6,6,10	0.0	0.0	0.0	0,0,0
25	0.05	0.12	0.04	6,6,10	0.0	0.0	0.0	0,0,0
26	0.05	0.13	0.04	6,6,10	0.0	0.0	0.0	0,0,0
27	0.05	0.13	0.04	6,6,10	0.0	0.0	0.0	0,0,0
28	0.04	0.11	0.04	6,6,10	0.0	0.0	0.0	0,0,0
29	0.02	0.07	0.02	6,6,10	0.0	0.0	0.0	0,0,0
30	0.15	0.40	0.14	6,6,10	0.0	0.0	0.0	0,0,0
31	0.05	0.14	0.05	6,6,10	0.0	0.0	0.0	0,0,0
32	0.05	0.14	0.05	6,6,10	0.0	0.0	0.0	0,0,0
33	0.04	0.11	0.04	6,6,10	0.0	0.0	0.0	0,0,0
34	0.04	0.12	0.04	6,6,10	0.0	0.0	0.0	0,0,0
35	0.04	0.12	0.04	6,6,10	0.0	0.0	0.0	0,0,0
36	0.03	0.09	0.03	6,6,10	0.0	0.0	0.0	0,0,0
37	0.02	0.04	0.01	6,6,10	0.0	0.0	0.0	0,0,0
38	0.05	0.13	0.04	6,6,10	0.0	0.0	0.0	0,0,0
39	0.05	0.14	0.05	6,6,10	0.0	0.0	0.0	0,0,0
40	0.10	0.28	0.09	6,6,10	0.0	0.0	0.0	0,0,0
41	0.07	0.21	0.07	6,6,10	0.0	0.0	0.0	0,0,0
42	0.08	0.21	0.07	6,6,10	0.0	0.0	0.0	0,0,0
43	0.08	0.21	0.07	6,6,10	0.0	0.0	0.0	0,0,0
44	0.07	0.20	0.06	6,6,10	0.0	0.0	0.0	0,0,0
45	0.06	0.17	0.05	6,6,10	0.0	0.0	0.0	0,0,0
46	4.89e-03	0.01	4.47e-03	6,6,10	0.0	0.0	0.0	0,0,0
47	0.04	0.11	0.04	6,6,10	0.0	0.0	0.0	0,0,0
48	0.04	0.12	0.04	6,6,10	0.0	0.0	0.0	0,0,0
49	0.05	0.13	0.04	6,6,10	0.0	0.0	0.0	0,0,0
50	0.23	0.62	0.21	6,6,10	0.0	0.0	0.0	0,0,0
51	0.16	0.42	0.14	6,6,10	0.0	0.0	0.0	0,0,0
52	0.03	0.08	0.03	6,6,10	0.0	0.0	0.0	0,0,0
53	0.05	0.13	0.04	6,6,10	0.0	0.0	0.0	0,0,0
54	0.06	0.17	0.05	6,6,10	0.0	0.0	0.0	0,0,0
55	0.17	0.47	0.15	6,6,10	0.0	0.0	0.0	0,0,0
56	0.24	0.65	0.21	6,6,10	0.0	0.0	0.0	0,0,0
57	0.19	0.52	0.17	6,6,10	0.0	0.0	0.0	0,0,0
58	0.02	0.05	0.02	6,6,10	0.0	0.0	0.0	0,0,0
59	0.05	0.13	0.04	6,6,10	0.0	0.0	0.0	0,0,0
60	0.05	0.14	0.05	6,6,10	0.0	0.0	0.0	0,0,0
61	0.18	0.48	0.16	6,6,10	0.0	0.0	0.0	0,0,0
62	0.24	0.66	0.21	6,6,10	0.0	0.0	0.0	0,0,0
63	0.04	0.10	0.03	6,6,10	0.0	0.0	0.0	0,0,0
Guscio	rRfck	rRfyk	rPfck		wR	wF	wP	
	0.24	0.66	0.21		0.0	0.0	0.0	

## 2. RELAZIONE DI CALCOLO COLLEGAMENTI SCALA DOPPIA RAMPA

Verifica secondo il D.M. 17/01/2018 dei nodi: 3, 4, 7, 8, 9, 10



### Coefficienti di sicurezza utilizzati

$\gamma_{M0} = 1.05$

$\gamma_{M1} = 1.10$

$\gamma_{M2} = 1.25$

### Colonna

Tipo di profilo: HEA 160

Materiale: Acciaio S275  $f_y = 275 \text{ N/mm}^2$   $f_t = 430 \text{ N/mm}^2$   $\gamma_{ov} = 1.25$

Classe sezione: 1

### Flangia:

Materiale: Acciaio S275  $f_y = 275 \text{ N/mm}^2$   $f_t = 430 \text{ N/mm}^2$   $\gamma_{ov} = 1.25$

Dimensioni (B x H x Sp): 300.0 x 300.0 x 15.0 mm

Spessore nervature verticali: 8.0 mm

Spessore nervature orizzontali: 8.0 mm

### Bullonature:

Viti cl. 8.8 Dadi 8 o 10 ( $f_{yb} = 640 \text{ N/mm}^2$ ,  $f_{tb} = 800 \text{ N/mm}^2$ )

Diametro gambo  $\varnothing = 16 \text{ mm}$   $A_{res} = 156.8 \text{ mm}^2$  (ridotta per filettatura)

Diametro dado/testa  $d_m = 24 \text{ mm}$

Diametro foro  $\varnothing_0 = 17 \text{ mm}$

### Saldature:

Materiale: Acciaio S275  $f_y = 275 \text{ N/mm}^2$   $f_t = 430 \text{ N/mm}^2$   $\beta_1 = 0.70$   $\beta_2 = 0.85$

Spessore cordoni d'angolo  $s_c = 5 \text{ mm}$

### Sollecitazioni:

Nodo.CMB	V2 [N]	V3 [N]	N [N]	M2 [N mm]	M3 [N mm]	T [N mm]
3.1	-552.4	64.0	-7886.0	-486735.0	1647000.0	202.0
3.2	-4465.9	320.6	-37060.6	-2033000.0	12020000.0	-3565.0
3.3	-425.0	49.2	-6066.2	-374412.0	1267000.0	155.0
3.4	-4338.5	305.8	-35240.7	-1920000.0	11640000.0	-3611.0
3.11	-1193.2	-4620.9	442.6	12320000.0	1660000.0	11207.0
3.12	-1493.1	-4582.0	-5507.3	12120000.0	2135000.0	9015.0
3.13	-3255.1	-4543.8	-4376.1	12110000.0	7602000.0	20574.0
3.14	-3555.0	-4504.9	-10326.0	11910000.0	8076000.0	18382.0

3.15	-425.7	4808.6	-25145.9	-13900000.0	2758000.0	-21084.0
3.16	-725.6	4847.5	-31095.9	-14090000.0	3233000.0	-23277.0
3.17	-2487.6	4885.7	-29964.7	-14110000.0	8699000.0	-11717.0
3.18	-2787.5	4924.6	-35914.6	-14310000.0	9174000.0	-13910.0
3.19	-1198.8	-4627.1	725.2	12340000.0	1636000.0	10226.0
3.20	-1498.8	-4588.2	-5224.7	12140000.0	2111000.0	8033.0
3.21	-3249.5	-4537.6	-4658.7	12090000.0	7625000.0	21555.0
3.22	-3549.4	-4498.7	-10608.6	11890000.0	8100000.0	19363.0
3.23	-431.3	4802.4	-24863.4	-13880000.0	2734000.0	-22066.0
3.24	-731.2	4841.3	-30813.3	-14070000.0	3209000.0	-24258.0
3.25	-2482.0	4891.9	-30247.3	-14130000.0	8723000.0	-10736.0
3.26	-2781.9	4930.8	-36197.2	-14330000.0	9198000.0	-12929.0
3.27	-1183.7	-4620.0	762.9	12330000.0	1881000.0	9994.0
3.28	-1483.6	-4581.1	-5187.0	12130000.0	2356000.0	7802.0
3.29	-3245.6	-4542.9	-4055.8	12110000.0	7823000.0	19361.0
3.30	-3545.5	-4504.0	-10005.7	11920000.0	8298000.0	17169.0
3.31	-435.2	4807.7	-25466.3	-13900000.0	2536000.0	-19871.0
3.32	-735.1	4846.6	-31416.2	-14100000.0	3011000.0	-22064.0
3.33	-2497.1	4884.9	-30285.0	-14110000.0	8478000.0	-10504.0
3.34	-2797.0	4923.7	-36234.9	-14310000.0	8953000.0	-12697.0
3.35	-1189.3	-4626.2	1045.5	12350000.0	1857000.0	9013.0
3.36	-1489.2	-4587.3	-4904.4	12150000.0	2332000.0	6820.0
3.37	-3240.0	-4536.7	-4338.4	12090000.0	7846000.0	20342.0
3.38	-3539.9	-4497.8	-10288.3	11900000.0	8321000.0	18150.0
3.39	-440.8	4801.6	-25183.7	-13880000.0	2513000.0	-20853.0
3.40	-740.8	4840.4	-31133.6	-14080000.0	2988000.0	-23045.0
3.41	-2491.5	4891.0	-30567.6	-14130000.0	8502000.0	-9523.0
3.42	-2791.4	4929.9	-36517.5	-14330000.0	8977000.0	-11716.0
3.43	1481.0	-1410.6	-2891.6	3393000.0	-4888000.0	-11023.0
3.44	1181.1	-1371.7	-8841.5	3195000.0	-4413000.0	-13216.0
3.45	-5392.1	-1153.4	-18953.9	2685000.0	14920000.0	20200.0
3.46	-5692.0	-1114.5	-24903.8	2486000.0	15390000.0	18008.0
3.47	1711.3	1418.2	-10568.1	-4472000.0	-4558000.0	-20710.0
3.48	1411.3	1457.1	-16518.0	-4670000.0	-4083000.0	-22903.0
3.49	-5161.8	1675.4	-26630.5	-5180000.0	15250000.0	10513.0
3.50	-5461.7	1714.3	-32580.4	-5379000.0	15720000.0	8320.0
3.51	1483.9	-1410.3	-2795.5	3395000.0	-4821000.0	-11387.0
3.52	1183.9	-1371.4	-8745.4	3196000.0	-4346000.0	-13579.0
3.53	-5389.2	-1153.2	-18857.8	2686000.0	14980000.0	19836.0
3.54	-5689.1	-1114.3	-24807.7	2487000.0	15460000.0	17644.0
3.55	1708.4	1418.0	-10664.2	-4473000.0	-4625000.0	-20347.0
3.56	1408.5	1456.9	-16614.1	-4672000.0	-4150000.0	-22539.0
3.57	-5164.7	1675.2	-26726.6	-5182000.0	15180000.0	10877.0
3.58	-5464.6	1714.1	-32676.5	-5381000.0	15660000.0	8684.0
3.59	1462.2	-1431.1	-1949.6	3458000.0	-4967000.0	-14294.0
3.60	1162.3	-1392.2	-7899.5	3259000.0	-4492000.0	-16486.0
3.61	-5373.2	-1132.9	-19895.9	2620000.0	15000000.0	23471.0
3.62	-5673.2	-1094.1	-25845.8	2421000.0	15470000.0	21279.0
3.63	1692.5	1397.8	-9626.2	-4407000.0	-4638000.0	-23981.0
3.64	1392.5	1436.7	-15576.1	-4606000.0	-4163000.0	-26174.0
3.65	-5143.0	1695.9	-27572.5	-5245000.0	15330000.0	13784.0
3.66	-5442.9	1734.8	-33522.4	-5444000.0	15800000.0	11591.0
3.67	1465.1	-1430.8	-1853.5	3460000.0	-4901000.0	-14658.0
3.68	1165.1	-1391.9	-7803.4	3261000.0	-4426000.0	-16850.0
3.69	-5370.4	-1132.7	-19799.8	2622000.0	15060000.0	23107.0
3.70	-5670.3	-1093.8	-25749.7	2423000.0	15540000.0	20915.0
3.71	1689.6	1397.5	-9722.3	-4408000.0	-4704000.0	-23617.0
3.72	1389.7	1436.4	-15672.2	-4607000.0	-4229000.0	-25810.0
3.73	-5145.8	1695.6	-27668.6	-5247000.0	15260000.0	14148.0

3.74	-5445.8	1734.5	-33618.5	-5446000.0	15730000.0	11955.0
3.107	-574.6	-1366.0	-1571.9	3377000.0	1490000.0	2463.0
3.108	-1574.4	-1236.3	-21404.9	2715000.0	3073000.0	-4845.0
3.109	-2636.6	-1288.8	-6390.6	3165000.0	7432000.0	11830.0
3.110	-3636.3	-1159.2	-26223.6	2502000.0	9015000.0	4522.0
3.111	-344.4	1462.9	-9248.4	-4488000.0	1819000.0	-7224.0
3.112	-1344.1	1592.5	-29081.4	-5150000.0	3403000.0	-14533.0
3.113	-2406.3	1540.0	-14067.1	-4700000.0	7761000.0	2143.0
3.114	-3406.1	1669.7	-33900.1	-5363000.0	9344000.0	-5166.0
3.115	-580.3	-1372.1	-1289.3	3397000.0	1466000.0	1482.0
3.116	-1580.0	-1242.5	-21122.3	2734000.0	3049000.0	-5827.0
3.117	-2630.9	-1282.7	-6673.2	3145000.0	7455000.0	12811.0
3.118	-3630.7	-1153.0	-26506.2	2483000.0	9039000.0	5503.0
3.119	-350.0	1456.7	-8965.8	-4468000.0	1796000.0	-8206.0
3.120	-1349.8	1586.4	-28798.8	-5131000.0	3379000.0	-15514.0
3.121	-2400.7	1546.2	-14349.7	-4720000.0	7785000.0	3124.0
3.122	-3400.4	1675.8	-34182.7	-5383000.0	9368000.0	-4185.0
3.123	-571.8	-1365.7	-1475.8	3379000.0	1556000.0	2099.0
3.124	-1571.5	-1236.1	-21308.8	2716000.0	3140000.0	-5209.0
3.125	-2633.7	-1288.5	-6294.5	3166000.0	7498000.0	11466.0
3.126	-3633.5	-1158.9	-26127.5	2504000.0	9081000.0	4158.0
3.127	-347.2	1462.6	-9344.5	-4489000.0	1753000.0	-6860.0
3.128	-1347.0	1592.3	-29177.5	-5152000.0	3336000.0	-14169.0
3.129	-2409.2	1539.8	-14163.2	-4702000.0	7694000.0	2507.0
3.130	-3408.9	1669.4	-33996.2	-5365000.0	9278000.0	-4802.0
3.131	-577.4	-1371.8	-1193.2	3398000.0	1533000.0	1118.0
3.132	-1577.2	-1242.2	-21026.2	2736000.0	3116000.0	-6191.0
3.133	-2628.1	-1282.4	-6577.1	3147000.0	7522000.0	12448.0
3.134	-3627.8	-1152.8	-26410.1	2484000.0	9105000.0	5139.0
3.135	-352.9	1456.5	-9061.9	-4470000.0	1729000.0	-7842.0
3.136	-1352.6	1586.1	-28894.9	-5133000.0	3312000.0	-15150.0
3.137	-2403.5	1545.9	-14445.8	-4721000.0	7718000.0	3488.0
3.138	-3403.3	1675.5	-34278.8	-5384000.0	9302000.0	-3821.0
4.1	-51.3	-25.5	-7656.9	-168025.0	74398.0	202.0
4.2	-895.6	-91.8	-33062.9	-478820.0	1400000.0	-4033.0
4.3	-39.5	-19.6	-5890.0	-129250.0	57229.0	156.0
4.4	-883.7	-85.9	-31295.9	-440045.0	1383000.0	-4079.0
4.11	570.7	-4776.1	-26755.4	13170000.0	-2135000.0	11137.0
4.12	755.0	-4889.2	-29177.1	12970000.0	-2508000.0	8911.0
4.13	-768.6	-4684.0	-29607.8	12940000.0	1613000.0	20139.0
4.14	-584.3	-4797.1	-32029.5	12730000.0	1240000.0	17913.0
4.15	-170.0	4704.9	-75.2	-13240000.0	-65480.0	-20990.0
4.16	14.2	4591.7	-2496.9	-13440000.0	-438345.0	-23216.0
4.17	-1509.4	4796.9	-2927.6	-13480000.0	3682000.0	-11987.0
4.18	-1325.1	4683.8	-5349.3	-13680000.0	3310000.0	-14213.0
4.19	440.2	-4785.3	-27106.8	13200000.0	-1772000.0	10133.0
4.20	624.5	-4898.5	-29528.5	12990000.0	-2145000.0	7906.0
4.21	-638.1	-4674.7	-29256.3	12920000.0	1251000.0	21143.0
4.22	-453.8	-4787.8	-31678.1	12710000.0	877861.1	18917.0
4.23	-300.6	4695.6	-426.6	-13220000.0	296886.0	-21994.0
4.24	-116.3	4582.5	-2848.3	-13420000.0	-75978.0	-24220.0
4.25	-1378.9	4806.2	-2576.1	-13500000.0	3320000.0	-10983.0
4.26	-1194.6	4693.1	-4997.9	-13700000.0	2947000.0	-13209.0
4.27	405.4	-4771.8	-27084.8	13170000.0	-1651000.0	9911.0
4.28	589.7	-4884.9	-29506.5	12960000.0	-2024000.0	7685.0
4.29	-933.9	-4679.7	-29937.2	12930000.0	2097000.0	18913.0
4.30	-749.7	-4792.9	-32358.9	12720000.0	1724000.0	16687.0
4.31	-4.7	4700.6	254.2	-13230000.0	-549571.0	-19764.0
4.32	179.6	4587.5	-2167.5	-13440000.0	-922434.9	-21990.0

4.33	-1344.0	4792.7	-2598.2	-13470000.0	3198000.0	-10761.0
4.34	-1159.8	4679.6	-5019.9	-13670000.0	2825000.0	-12987.0
4.35	274.9	-4781.1	-27436.2	13190000.0	-1288000.0	8907.0
4.36	459.1	-4894.2	-29857.9	12980000.0	-1661000.0	6681.0
4.37	-803.4	-4670.5	-29585.8	12910000.0	1735000.0	19917.0
4.38	-619.2	-4783.6	-32007.5	12700000.0	1362000.0	17691.0
4.39	-135.2	4691.4	-97.2	-13210000.0	-187204.0	-20768.0
4.40	49.0	4578.2	-2518.9	-13410000.0	-560068.0	-22994.0
4.41	-1213.5	4802.0	-2246.7	-13490000.0	2836000.0	-9757.0
4.42	-1029.3	4688.9	-4668.4	-13700000.0	2463000.0	-11983.0
4.43	1874.0	-1565.2	-14089.5	4206000.0	-5783000.0	-10610.0
4.44	2058.3	-1678.3	-16511.2	4001000.0	-6156000.0	-12837.0
4.45	-2590.4	-1258.2	-23597.5	3416000.0	6710000.0	19398.0
4.46	-2406.1	-1371.3	-26019.2	3211000.0	6337000.0	17172.0
4.47	1651.8	1279.1	-6085.4	-3718000.0	-5162000.0	-20248.0
4.48	1836.0	1166.0	-8507.2	-3923000.0	-5535000.0	-22474.0
4.49	-2812.6	1586.1	-15593.4	-4508000.0	7331000.0	9760.0
4.50	-2628.4	1472.9	-18015.2	-4713000.0	6958000.0	7534.0
4.51	1824.4	-1563.9	-14188.3	4204000.0	-5638000.0	-10978.0
4.52	2008.7	-1677.0	-16610.0	3999000.0	-6011000.0	-13204.0
4.53	-2640.0	-1257.0	-23696.3	3413000.0	6855000.0	19030.0
4.54	-2455.7	-1370.1	-26118.0	3209000.0	6482000.0	16804.0
4.55	1701.4	1277.8	-5986.6	-3716000.0	-5307000.0	-19881.0
4.56	1885.6	1164.7	-8408.3	-3921000.0	-5680000.0	-22107.0
4.57	-2763.0	1584.8	-15494.6	-4506000.0	7185000.0	10128.0
4.58	-2578.8	1471.7	-17916.3	-4711000.0	6813000.0	7902.0
4.59	1439.0	-1596.1	-15260.9	4278000.0	-4575000.0	-13958.0
4.60	1623.2	-1709.2	-17682.6	4073000.0	-4948000.0	-16184.0
4.61	-2155.4	-1227.3	-22426.1	3344000.0	5502000.0	22745.0
4.62	-1971.1	-1340.4	-24847.8	3139000.0	5129000.0	20519.0
4.63	1216.7	1248.2	-7256.8	-3646000.0	-3954000.0	-23595.0
4.64	1401.0	1135.1	-9678.6	-3851000.0	-4327000.0	-25822.0
4.65	-2377.6	1617.0	-14422.0	-4580000.0	6123000.0	13107.0
4.66	-2193.3	1503.8	-16843.7	-4785000.0	5750000.0	10881.0
4.67	1389.4	-1594.8	-15359.7	4275000.0	-4430000.0	-14325.0
4.68	1573.6	-1707.9	-17781.4	4071000.0	-4803000.0	-16551.0
4.69	-2205.0	-1226.0	-22524.9	3342000.0	5647000.0	22377.0
4.70	-2020.7	-1339.2	-24946.6	3137000.0	5274000.0	20151.0
4.71	1266.3	1246.9	-7158.0	-3644000.0	-4100000.0	-23228.0
4.72	1450.6	1133.8	-9579.7	-3849000.0	-4472000.0	-25454.0
4.73	-2328.0	1615.7	-14323.2	-4578000.0	5978000.0	13475.0
4.74	-2143.7	1502.6	-16744.9	-4783000.0	5605000.0	11249.0
4.107	96.5	-1325.8	-14592.0	4168000.0	-975520.0	2490.0
4.108	710.7	-1702.8	-22664.3	3486000.0	-2218000.0	-4931.0
4.109	-1242.8	-1233.7	-17444.4	3931000.0	2772000.0	11492.0
4.110	-628.6	-1610.7	-25516.7	3249000.0	1529000.0	4072.0
4.111	-125.7	1518.5	-6587.9	-3756000.0	-354729.0	-7148.0
4.112	488.4	1141.5	-14660.3	-4438000.0	-1598000.0	-14569.0
4.113	-1465.1	1610.6	-9440.3	-3993000.0	3393000.0	1854.0
4.114	-850.9	1233.5	-17512.7	-4675000.0	2150000.0	-5566.0
4.115	-34.0	-1335.0	-14943.4	4190000.0	-613153.0	1485.0
4.116	580.2	-1712.1	-23015.8	3507000.0	-1856000.0	-5935.0
4.117	-1112.3	-1224.4	-17092.9	3909000.0	2410000.0	12496.0
4.118	-498.1	-1601.5	-25165.3	3227000.0	1167000.0	5076.0
4.119	-256.2	1509.2	-6939.3	-3734000.0	7638.0	-8152.0
4.120	357.9	1132.2	-15011.7	-4417000.0	-1235000.0	-15573.0
4.121	-1334.5	1619.9	-9088.9	-4015000.0	3031000.0	2858.0
4.122	-720.4	1242.8	-17161.3	-4697000.0	1788000.0	-4562.0
4.123	46.9	-1324.5	-14690.8	4166000.0	-830293.0	2122.0

4.124	661.1	-1701.6	-22763.2	3484000.0	-2073000.0	-5298.0
4.125	-1292.4	-1232.4	-17543.2	3929000.0	2918000.0	11124.0
4.126	-678.2	-1609.5	-25615.6	3247000.0	1675000.0	3704.0
4.127	-76.1	1517.2	-6489.1	-3754000.0	-499956.0	-6781.0
4.128	538.1	1140.2	-14561.5	-4436000.0	-1743000.0	-14201.0
4.129	-1415.4	1609.3	-9341.5	-3991000.0	3248000.0	2222.0
4.130	-801.3	1232.3	-17413.9	-4673000.0	2005000.0	-5198.0
4.131	-83.6	-1333.8	-15042.2	4187000.0	-467926.0	1118.0
4.132	530.6	-1710.8	-23114.6	3505000.0	-1711000.0	-6303.0
4.133	-1161.9	-1223.1	-17191.8	3907000.0	2555000.0	12128.0
4.134	-547.7	-1600.2	-25264.2	3225000.0	1312000.0	4708.0
4.135	-206.6	1508.0	-6840.5	-3732000.0	-137589.0	-7785.0
4.136	407.5	1130.9	-14912.9	-4414000.0	-1380000.0	-15205.0
4.137	-1284.9	1618.6	-8990.1	-4012000.0	2886000.0	3226.0
4.138	-670.8	1241.5	-17062.4	-4694000.0	1643000.0	-4194.0
7.1	152.1	558.9	-3981.9	-510945.0	-183961.0	390.0
7.2	1037.6	3581.7	-14975.1	-2868000.0	-1364000.0	2745.0
7.3	117.0	429.9	-3063.0	-393035.0	-141509.0	300.0
7.4	1002.5	3452.7	-14056.2	-2750000.0	-1322000.0	2655.0
7.11	1526.1	-7142.6	-1539.8	11270000.0	-2758000.0	11527.0
7.12	1911.2	-6761.7	-3463.1	10970000.0	-2185000.0	12080.0
7.13	-8256.4	-6550.0	9128.6	10460000.0	11850000.0	8439.0
7.14	-7871.4	-6169.0	7205.4	10170000.0	12420000.0	8992.0
7.15	8813.8	9447.1	-22126.0	-12840000.0	-13650000.0	-6508.0
7.16	9198.8	9828.0	-24049.2	-13140000.0	-13080000.0	-5955.0
7.17	-968.8	10039.8	-11457.6	-13640000.0	957846.0	-9596.0
7.18	-583.7	10420.7	-13380.8	-13940000.0	1531000.0	-9043.0
7.19	2284.3	-7452.3	-2356.1	11720000.0	-3891000.0	11015.0
7.20	2669.4	-7071.3	-4279.3	11430000.0	-3317000.0	11568.0
7.21	-9014.6	-6240.3	9944.8	10010000.0	12980000.0	8951.0
7.22	-8629.6	-5859.4	8021.6	9714000.0	13560000.0	9504.0
7.23	9572.0	9137.4	-22942.2	-12390000.0	-14780000.0	-7020.0
7.24	9957.1	9518.4	-24865.4	-12680000.0	-14210000.0	-6468.0
7.25	-1727.0	10349.4	-10641.4	-14100000.0	2090000.0	-9084.0
7.26	-1341.9	10730.4	-12564.6	-14390000.0	2663000.0	-8531.0
7.27	3112.7	-7662.7	-2941.1	12020000.0	-5126000.0	9075.0
7.28	3497.7	-7281.7	-4864.3	11720000.0	-4553000.0	9628.0
7.29	-6669.9	-7070.0	7727.3	11210000.0	9483000.0	5987.0
7.30	-6284.9	-6689.0	5804.1	10920000.0	10060000.0	6540.0
7.31	7227.3	9967.1	-20724.7	-13590000.0	-11280000.0	-4056.0
7.32	7612.3	10348.1	-22647.9	-13890000.0	-10710000.0	-3504.0
7.33	-2555.3	10559.8	-10056.3	-14390000.0	3326000.0	-7144.0
7.34	-2170.3	10940.7	-11979.5	-14690000.0	3899000.0	-6592.0
7.35	3870.9	-7972.3	-3757.3	12470000.0	-6259000.0	8563.0
7.36	4255.9	-7591.4	-5680.5	12180000.0	-5685000.0	9116.0
7.37	-7428.1	-6760.3	8543.5	10760000.0	10620000.0	6500.0
7.38	-7043.1	-6379.4	6620.3	10460000.0	11190000.0	7052.0
7.39	7985.5	9657.5	-21540.9	-13140000.0	-12420000.0	-4568.0
7.40	8370.5	10038.4	-23464.1	-13430000.0	-11840000.0	-4016.0
7.41	-3313.5	10869.4	-9240.1	-14850000.0	4458000.0	-6632.0
7.42	-2928.5	11250.4	-11163.3	-15140000.0	5031000.0	-6079.0
7.43	15489.8	-2027.7	-21191.5	3767000.0	-23620000.0	8818.0
7.44	15874.9	-1646.7	-23114.7	3472000.0	-23040000.0	9370.0
7.45	-17118.8	-52.1	14369.9	1088000.0	25080000.0	-1476.0
7.46	-16733.7	328.8	12446.7	792838.0	25660000.0	-923.0
7.47	17676.1	2949.2	-27367.3	-3465000.0	-26880000.0	3407.0
7.48	18061.2	3330.2	-29290.5	-3760000.0	-26310000.0	3960.0
7.49	-14932.5	4924.8	8194.1	-6144000.0	21810000.0	-6886.0
7.50	-14547.4	5305.8	6270.8	-6439000.0	22390000.0	-6334.0



7.51	15965.8	-2183.7	-21611.9	3992000.0	-24330000.0	8082.0
7.52	16350.8	-1802.7	-23535.1	3697000.0	-23750000.0	8635.0
7.53	-16642.8	-208.1	13949.5	1313000.0	24370000.0	-2211.0
7.54	-16257.8	172.8	12026.3	1018000.0	24950000.0	-1659.0
7.55	17200.2	3105.2	-26946.9	-3690000.0	-26170000.0	4143.0
7.56	17585.2	3486.2	-28870.1	-3985000.0	-25600000.0	4695.0
7.57	-15408.4	5080.8	8614.4	-6369000.0	22530000.0	-6151.0
7.58	-15023.4	5461.8	6691.2	-6664000.0	23100000.0	-5598.0
7.59	18017.2	-3059.8	-23912.2	5279000.0	-27390000.0	7110.0
7.60	18402.2	-2678.9	-25835.4	4984000.0	-26820000.0	7663.0
7.61	-19646.1	980.1	17090.6	-423975.0	28860000.0	231.0
7.62	-19261.1	1361.0	15167.4	-719341.0	29430000.0	784.0
7.63	20203.5	1917.1	-30088.0	-1952000.0	-30660000.0	1700.0
7.64	20588.5	2298.0	-32011.2	-2248000.0	-30080000.0	2252.0
7.65	-17459.8	5957.0	10914.7	-7656000.0	25590000.0	-5179.0
7.66	-17074.8	6337.9	8991.5	-7951000.0	26160000.0	-4627.0
7.67	18493.1	-3215.9	-24332.5	5505000.0	-28100000.0	6375.0
7.68	18878.2	-2834.9	-26255.7	5209000.0	-27530000.0	6927.0
7.69	-19170.2	824.0	16670.2	-198888.0	28150000.0	-504.0
7.70	-18785.1	1205.0	14747.0	-494254.0	28720000.0	48.0
7.71	19727.5	2073.1	-29667.6	-2178000.0	-29950000.0	2435.0
7.72	20112.6	2454.0	-31590.8	-2473000.0	-29370000.0	2988.0
7.73	-17935.8	6113.0	11335.1	-7881000.0	26300000.0	-4444.0
7.74	-17550.7	6493.9	9411.9	-8176000.0	26870000.0	-3891.0
7.107	3627.6	-1780.7	-6501.2	3174000.0	-7240000.0	4570.0
7.108	4911.1	-510.8	-12911.9	2190000.0	-5329000.0	6412.0
7.109	-6155.0	-1188.0	4167.2	2370000.0	7370000.0	1482.0
7.110	-4871.5	81.8	-2243.5	1386000.0	9281000.0	3324.0
7.111	5813.9	3196.2	-12677.1	-4058000.0	-10510000.0	-840.0
7.112	7097.4	4466.1	-19087.8	-5042000.0	-8597000.0	1002.0
7.113	-3968.7	3788.9	-2008.7	-4861000.0	4102000.0	-3928.0
7.114	-2685.2	5058.8	-8419.4	-5846000.0	6013000.0	-2087.0
7.115	4385.8	-2090.3	-7317.5	3628000.0	-8372000.0	4058.0
7.116	5669.3	-820.5	-13728.2	2643000.0	-6461000.0	5900.0
7.117	-6913.2	-878.4	4983.4	1917000.0	8502000.0	1994.0
7.118	-5629.7	391.5	-1427.3	932278.0	10410000.0	3836.0
7.119	6572.1	2886.6	-13493.3	-3604000.0	-11640000.0	-1352.0
7.120	7855.6	4156.4	-19904.0	-4589000.0	-9729000.0	489.0
7.121	-4726.9	4098.6	-1192.5	-5315000.0	5234000.0	-3416.0
7.122	-3443.4	5368.4	-7603.2	-6300000.0	7145000.0	-1574.0
7.123	4103.6	-1936.7	-6921.6	3399000.0	-7950000.0	3835.0
7.124	5387.1	-666.9	-13332.3	2415000.0	-6039000.0	5677.0
7.125	-5679.0	-1344.0	3746.8	2596000.0	6659000.0	747.0
7.126	-4395.5	-74.2	-2663.9	1611000.0	8570000.0	2589.0
7.127	5337.9	3352.3	-12256.7	-4283000.0	-9797000.0	-105.0
7.128	6621.4	4622.1	-18667.4	-5267000.0	-7886000.0	1737.0
7.129	-4444.7	3944.9	-1588.3	-5087000.0	4812000.0	-3193.0
7.130	-3161.2	5214.8	-7999.0	-6071000.0	6723000.0	-1351.0
7.131	4861.8	-2246.3	-7737.8	3853000.0	-9082000.0	3323.0
7.132	6145.3	-976.5	-14148.5	2868000.0	-7172000.0	5164.0
7.133	-6437.2	-1034.4	4563.0	2142000.0	7792000.0	1259.0
7.134	-5153.7	235.5	-1847.7	1157000.0	9702000.0	3101.0
7.135	6096.1	3042.6	-13072.9	-3829000.0	-10930000.0	-617.0
7.136	7379.6	4312.4	-19483.6	-4814000.0	-9019000.0	1225.0
7.137	-5202.9	4254.6	-772.1	-5540000.0	5944000.0	-2681.0
7.138	-3919.4	5524.4	-7182.8	-6525000.0	7855000.0	-839.0
8.1	204.1	-453.6	-3754.3	179998.0	-269997.0	220.0
8.2	1632.8	-2836.2	-13697.7	1788000.0	-2310000.0	1330.0
8.3	157.0	-348.9	-2887.9	138460.0	-207690.0	169.0



8.4	1585.7	-2731.5	-12831.3	1746000.0	-2248000.0	1280.0
8.11	8331.5	-10114.3	-20851.9	14010000.0	-12440000.0	7096.0
8.12	7772.2	-10611.0	-22396.2	14480000.0	-11600000.0	7517.0
8.13	-1019.7	-9480.1	-8321.9	13140000.0	1605000.0	12695.0
8.14	-1579.0	-9976.8	-9866.2	13600000.0	2444000.0	13117.0
8.15	3036.0	7372.9	-3864.4	-12040000.0	-4492000.0	-11890.0
8.16	2476.7	6876.2	-5408.7	-11570000.0	-3653000.0	-11469.0
8.17	-6315.2	8007.1	8665.7	-12910000.0	9550000.0	-6290.0
8.18	-6874.5	7510.4	7121.4	-12450000.0	10390000.0	-5869.0
8.19	7445.7	-10471.6	-19921.8	14520000.0	-11110000.0	6220.0
8.20	6886.4	-10968.3	-21466.1	14990000.0	-10270000.0	6641.0
8.21	-133.9	-9122.8	-9252.0	12620000.0	275276.0	13571.0
8.22	-693.2	-9619.5	-10796.3	13090000.0	1115000.0	13993.0
8.23	2150.2	7015.6	-2934.2	-11530000.0	-3162000.0	-12766.0
8.24	1590.9	6518.9	-4478.5	-11060000.0	-2323000.0	-12345.0
8.25	-5429.4	8364.4	7735.5	-13430000.0	8220000.0	-5414.0
8.26	-5988.7	7867.7	6191.2	-12960000.0	9060000.0	-4993.0
8.27	7092.9	-10646.2	-19747.4	14780000.0	-10580000.0	4480.0
8.28	6533.6	-11142.9	-21291.7	15250000.0	-9739000.0	4901.0
8.29	-2258.3	-10011.9	-7217.3	13910000.0	3464000.0	10080.0
8.30	-2817.6	-10508.6	-8761.6	14380000.0	4303000.0	10501.0
8.31	4274.6	7904.7	-4968.9	-12820000.0	-6351000.0	-9274.0
8.32	3715.3	7408.0	-6513.2	-12350000.0	-5511000.0	-8853.0
8.33	-5076.6	8539.0	7561.2	-13690000.0	7692000.0	-3674.0
8.34	-5635.9	8042.3	6016.9	-13220000.0	8531000.0	-3253.0
8.35	6207.2	-11003.5	-18817.2	15300000.0	-9249000.0	3604.0
8.36	5647.9	-11500.2	-20361.5	15760000.0	-8410000.0	4025.0
8.37	-1372.5	-9654.6	-8147.5	13400000.0	2134000.0	10955.0
8.38	-1931.8	-10151.3	-9691.8	13870000.0	2973000.0	11377.0
8.39	3388.8	7547.4	-4038.7	-12300000.0	-5021000.0	-10150.0
8.40	2829.5	7050.7	-5583.0	-11840000.0	-4182000.0	-9729.0
8.41	-4190.9	8896.3	6631.0	-14200000.0	6362000.0	-2799.0
8.42	-4750.2	8399.6	5086.7	-13730000.0	7201000.0	-2377.0
8.43	17387.8	-4733.8	-29524.7	5910000.0	-26040000.0	-6082.0
8.44	16828.5	-5230.5	-31069.0	6378000.0	-25200000.0	-5661.0
8.45	-13782.9	-2619.6	12242.2	3000000.0	20770000.0	12583.0
8.46	-14342.2	-3116.3	10697.9	3468000.0	21610000.0	13005.0
8.47	15799.1	512.4	-24428.4	-1905000.0	-23660000.0	-11778.0
8.48	15239.9	15.7	-25972.7	-1437000.0	-22820000.0	-11357.0
8.49	-15371.5	2626.6	17338.5	-4815000.0	23150000.0	6888.0
8.50	-15930.8	2129.9	15794.2	-4347000.0	23990000.0	7309.0
8.51	17016.2	-4893.3	-29193.3	6143000.0	-25480000.0	-6867.0
8.52	16456.9	-5390.0	-30737.7	6611000.0	-24640000.0	-6446.0
8.53	-14154.4	-2779.2	12573.6	3232000.0	21330000.0	11799.0
8.54	-14713.7	-3275.8	11029.2	3701000.0	22170000.0	12220.0
8.55	16170.7	671.9	-24759.8	-2138000.0	-24210000.0	-10993.0
8.56	15611.4	175.3	-26304.1	-1669000.0	-23370000.0	-10572.0
8.57	-14999.9	2786.1	17007.1	-5048000.0	22590000.0	7672.0
8.58	-15559.2	2289.4	15462.8	-4580000.0	23430000.0	8094.0
8.59	14435.3	-5924.8	-26424.1	7616000.0	-21610000.0	-9002.0
8.60	13876.0	-6421.5	-27968.5	8084000.0	-20770000.0	-8580.0
8.61	-10830.3	-1428.6	9141.6	1294000.0	16340000.0	15503.0
8.62	-11389.6	-1925.3	7597.3	1762000.0	17180000.0	15924.0
8.63	12846.6	-678.6	-21327.9	-199072.0	-19220000.0	-14697.0
8.64	12287.3	-1175.3	-22872.2	269291.0	-18380000.0	-14276.0
8.65	-12419.0	3817.6	14237.9	-6521000.0	18720000.0	9807.0
8.66	-12978.3	3320.9	12693.6	-6053000.0	19560000.0	10229.0
8.67	14063.7	-6084.3	-26092.8	7849000.0	-21050000.0	-9787.0
8.68	13504.4	-6581.0	-27637.1	8317000.0	-20210000.0	-9365.0

8.69	-11201.9	-1588.1	9473.0	1526000.0	16890000.0	14718.0
8.70	-11761.2	-2084.8	7928.7	1995000.0	17730000.0	15140.0
8.71	13218.2	-519.1	-21659.2	-431685.0	-19780000.0	-13913.0
8.72	12658.9	-1015.8	-23203.5	36678.0	-18940000.0	-13491.0
8.73	-12047.4	3977.1	13906.6	-6754000.0	18160000.0	10592.0
8.74	-12606.7	3480.4	12362.2	-6286000.0	19000000.0	11013.0
8.107	7130.6	-3414.3	-13104.6	4345000.0	-10640000.0	-41.0
8.108	5266.3	-5070.0	-18252.3	5906000.0	-7838000.0	1364.0
8.109	-2220.6	-2780.1	-574.5	3472000.0	3407000.0	5559.0
8.110	-4084.9	-4435.7	-5722.2	5033000.0	6205000.0	6963.0
8.111	5541.9	1831.8	-8008.3	-3470000.0	-8252000.0	-5737.0
8.112	3677.6	176.2	-13156.0	-1909000.0	-5454000.0	-4332.0
8.113	-3809.3	2466.1	4521.8	-4343000.0	5790000.0	-137.0
8.114	-5673.6	810.4	-626.0	-2782000.0	8588000.0	1268.0
8.115	6244.8	-3771.6	-12174.4	4857000.0	-9306000.0	-917.0
8.116	4380.5	-5427.3	-17322.1	6418000.0	-6508000.0	488.0
8.117	-1334.8	-2422.8	-1504.7	2960000.0	2077000.0	6435.0
8.118	-3199.2	-4078.4	-6652.4	4521000.0	4875000.0	7839.0
8.119	4656.2	1474.5	-7078.1	-2958000.0	-6922000.0	-6612.0
8.120	2791.8	-181.1	-12225.9	-1397000.0	-4125000.0	-5208.0
8.121	-2923.5	2823.4	3591.6	-4855000.0	4460000.0	739.0
8.122	-4787.8	1167.7	-1556.1	-3294000.0	7258000.0	2143.0
8.123	6759.0	-3573.9	-12773.2	4578000.0	-10080000.0	-826.0
8.124	4894.7	-5229.5	-17920.9	6139000.0	-7280000.0	579.0
8.125	-2592.2	-2939.6	-243.1	3705000.0	3964000.0	4774.0
8.126	-4456.5	-4595.3	-5390.9	5266000.0	6762000.0	6179.0
8.127	5913.5	1991.4	-8339.7	-3703000.0	-8810000.0	-4952.0
8.128	4049.2	335.7	-13487.4	-2141000.0	-6012000.0	-3547.0
8.129	-3437.7	2625.6	4190.4	-4576000.0	5233000.0	648.0
8.130	-5302.0	970.0	-957.3	-3015000.0	8030000.0	2052.0
8.131	5873.2	-3931.2	-11843.1	5089000.0	-8748000.0	-1701.0
8.132	4008.9	-5586.8	-16990.8	6651000.0	-5950000.0	-297.0
8.133	-1706.4	-2582.3	-1173.3	3193000.0	2634000.0	5650.0
8.134	-3570.7	-4238.0	-6321.0	4754000.0	5432000.0	7054.0
8.135	5027.7	1634.1	-7409.5	-3191000.0	-7480000.0	-5828.0
8.136	3163.4	-21.6	-12557.2	-1630000.0	-4682000.0	-4423.0
8.137	-2551.9	2982.9	3260.2	-5088000.0	3903000.0	1524.0
8.138	-4416.3	1327.3	-1887.5	-3526000.0	6701000.0	2928.0
9.1	145.9	-1096.5	-10821.1	814100.0	-223098.0	268.0
9.2	1625.5	-6999.4	-63408.6	5908000.0	-2350000.0	1742.0
9.3	112.2	-843.4	-8323.9	626231.0	-171614.0	206.0
9.4	1591.8	-6746.4	-60911.4	5720000.0	-2299000.0	1680.0
9.11	8314.7	-15408.4	-28107.3	20930000.0	-12450000.0	6369.0
9.12	7754.1	-16071.6	-31700.9	21540000.0	-11610000.0	6876.0
9.13	-1046.3	-15093.7	-36874.6	20580000.0	1610000.0	12053.0
9.14	-1606.8	-15756.9	-40468.2	21190000.0	2452000.0	12560.0
9.15	3014.9	9347.7	-18249.6	-15870000.0	-4496000.0	-10969.0
9.16	2454.3	8684.5	-21843.1	-15250000.0	-3655000.0	-10462.0
9.17	-6346.0	9662.4	-27016.9	-16220000.0	9562000.0	-5285.0
9.18	-6906.6	8999.2	-30610.4	-15600000.0	10400000.0	-4778.0
9.19	7427.6	-14802.6	-29027.2	20130000.0	-11120000.0	5481.0
9.20	6867.0	-15465.8	-32620.8	20750000.0	-10280000.0	5988.0
9.21	-159.2	-15699.5	-35954.7	21370000.0	278126.0	12940.0
9.22	-719.8	-16362.7	-39548.3	21990000.0	1120000.0	13447.0
9.23	2127.9	9953.5	-19169.5	-16660000.0	-3165000.0	-11856.0
9.24	1567.3	9290.3	-22763.0	-16050000.0	-2323000.0	-11349.0
9.25	-5459.0	9056.6	-26097.0	-15420000.0	8231000.0	-4397.0
9.26	-6019.5	8393.4	-29690.5	-14800000.0	9072000.0	-3890.0
9.27	7074.7	-15050.3	-28863.6	20410000.0	-10590000.0	3828.0

9.28	6514.1	-15713.4	-32457.1	21030000.0	-9746000.0	4335.0
9.29	-2286.3	-14735.6	-37630.9	20060000.0	3471000.0	9512.0
9.30	-2846.8	-15398.7	-41224.4	20680000.0	4313000.0	10019.0
9.31	4254.9	8989.5	-17493.4	-15350000.0	-6357000.0	-8428.0
9.32	3694.3	8326.4	-21086.9	-14730000.0	-5516000.0	-7921.0
9.33	-5106.0	9304.2	-26260.7	-15700000.0	7701000.0	-2743.0
9.34	-5666.6	8641.1	-29854.2	-15090000.0	8543000.0	-2236.0
9.35	6187.6	-14444.5	-29783.5	19620000.0	-9256000.0	2940.0
9.36	5627.0	-15107.6	-33377.0	20230000.0	-8414000.0	3447.0
9.37	-1399.2	-15341.4	-36711.0	20860000.0	2139000.0	10399.0
9.38	-1959.8	-16004.5	-40304.5	21470000.0	2981000.0	10906.0
9.39	3367.9	9595.3	-18413.2	-16150000.0	-5026000.0	-9315.0
9.40	2807.3	8932.2	-22006.8	-15530000.0	-4184000.0	-8808.0
9.41	-4219.0	8698.4	-25340.8	-14900000.0	6369000.0	-1856.0
9.42	-4779.5	8035.3	-28934.3	-14290000.0	7211000.0	-1349.0
9.43	17380.9	-7110.9	-14428.6	8461000.0	-26070000.0	-6331.0
9.44	16820.3	-7774.1	-18022.1	9077000.0	-25230000.0	-5824.0
9.45	-13822.3	-6061.9	-43653.0	7288000.0	20800000.0	12616.0
9.46	-14382.9	-6725.1	-47246.5	7904000.0	21640000.0	13123.0
9.47	15791.0	315.9	-11471.3	-2577000.0	-23680000.0	-11532.0
9.48	15230.4	-347.3	-15064.8	-1961000.0	-22840000.0	-11025.0
9.49	-15412.2	1364.9	-40695.6	-3750000.0	23180000.0	7415.0
9.50	-15972.8	701.7	-44289.2	-3134000.0	24020000.0	7922.0
9.51	17008.9	-7003.5	-14655.5	8307000.0	-25510000.0	-7093.0
9.52	16448.3	-7666.6	-18249.0	8923000.0	-24670000.0	-6586.0
9.53	-14194.3	-5954.5	-43879.8	7134000.0	21350000.0	11854.0
9.54	-14754.9	-6617.7	-47473.4	7750000.0	22200000.0	12361.0
9.55	16163.0	208.5	-11244.4	-2422000.0	-24240000.0	-10770.0
9.56	15602.4	-454.7	-14837.9	-1806000.0	-23400000.0	-10263.0
9.57	-15040.2	1257.5	-40468.8	-3595000.0	22620000.0	8178.0
9.58	-15600.8	594.3	-44062.3	-2980000.0	23460000.0	8685.0
9.59	14424.0	-5091.6	-17494.9	5803000.0	-21630000.0	-9289.0
9.60	13863.5	-5754.7	-21088.5	6419000.0	-20790000.0	-8782.0
9.61	-10865.4	-8081.3	-40586.6	9946000.0	16360000.0	15575.0
9.62	-11426.0	-8744.4	-44180.1	10560000.0	17200000.0	16081.0
9.63	12834.1	2335.3	-14537.6	-5235000.0	-19240000.0	-14490.0
9.64	12273.5	1672.1	-18131.1	-4619000.0	-18400000.0	-13983.0
9.65	-12455.4	-654.4	-37629.3	-1092000.0	18740000.0	10373.0
9.66	-13016.0	-1317.6	-41222.8	-475858.0	19580000.0	10880.0
9.67	14052.0	-4984.1	-17721.8	5648000.0	-21070000.0	-10051.0
9.68	13491.5	-5647.3	-21315.3	6264000.0	-20230000.0	-9544.0
9.69	-11237.4	-7973.8	-40813.5	9792000.0	16910000.0	14812.0
9.70	-11798.0	-8637.0	-44407.0	10410000.0	17760000.0	15319.0
9.71	13206.1	2227.8	-14310.8	-5081000.0	-19800000.0	-13728.0
9.72	12645.5	1564.6	-17904.3	-4465000.0	-18960000.0	-13221.0
9.73	-12083.4	-761.9	-37402.4	-937178.0	18180000.0	11136.0
9.74	-12644.0	-1425.1	-40995.9	-321256.0	19020000.0	11643.0
9.107	7113.8	-5970.1	-20464.7	7332000.0	-10650000.0	-291.0
9.108	5245.2	-8180.6	-32443.1	9385000.0	-7842000.0	1399.0
9.109	-2247.1	-5655.4	-29232.0	6980000.0	3412000.0	5393.0
9.110	-4115.8	-7865.9	-41210.4	9033000.0	6217000.0	7083.0
9.111	5523.9	1456.8	-17507.4	-3706000.0	-8262000.0	-5492.0
9.112	3655.2	-753.8	-29485.8	-1653000.0	-5456000.0	-3802.0
9.113	-3837.1	1771.4	-26274.7	-4058000.0	5797000.0	192.0
9.114	-5705.7	-439.1	-38253.1	-2005000.0	8603000.0	1882.0
9.115	6226.8	-5364.3	-21384.6	6535000.0	-9315000.0	-1178.0
9.116	4358.1	-7574.8	-33363.0	8588000.0	-6510000.0	512.0
9.117	-1360.1	-6261.2	-28312.1	7778000.0	2080000.0	6281.0
9.118	-3228.7	-8471.7	-40290.5	9831000.0	4885000.0	7971.0

9.119	4636.8	2062.6	-18427.3	-4504000.0	-6930000.0	-6379.0
9.120	2768.2	-148.0	-30405.7	-2451000.0	-4124000.0	-4690.0
9.121	-2950.0	1165.6	-25354.8	-3261000.0	4465000.0	1080.0
9.122	-4818.7	-1044.9	-37333.2	-1207000.0	7271000.0	2769.0
9.123	6741.8	-5862.6	-20691.6	7178000.0	-10090000.0	-1053.0
9.124	4873.2	-8073.2	-32670.0	9231000.0	-7284000.0	637.0
9.125	-2619.1	-5547.9	-29458.9	6826000.0	3970000.0	4631.0
9.126	-4487.8	-7758.5	-41437.3	8879000.0	6775000.0	6321.0
9.127	5895.9	1349.3	-17280.5	-3552000.0	-8820000.0	-4730.0
9.128	4027.2	-861.3	-29258.9	-1498000.0	-6015000.0	-3040.0
9.129	-3465.1	1664.0	-26047.8	-3903000.0	5239000.0	955.0
9.130	-5333.7	-546.6	-38026.2	-1850000.0	8044000.0	2644.0
9.131	5854.8	-5256.8	-21611.5	6380000.0	-8757000.0	-1941.0
9.132	3986.1	-7467.4	-33589.9	8433000.0	-5952000.0	-251.0
9.133	-1732.1	-6153.7	-28539.0	7623000.0	2638000.0	5518.0
9.134	-3600.7	-8364.3	-40517.4	9676000.0	5443000.0	7208.0
9.135	5008.8	1955.1	-18200.4	-4349000.0	-7488000.0	-5617.0
9.136	3140.2	-255.5	-30178.8	-2296000.0	-4683000.0	-3927.0
9.137	-2578.0	1058.2	-25127.9	-3106000.0	3907000.0	1842.0
9.138	-4446.7	-1152.4	-37106.3	-1053000.0	6712000.0	3532.0
10.1	101.6	936.5	-10645.8	-783079.0	-154988.0	380.0
10.2	1065.7	5960.3	-62696.6	-4543000.0	-1486000.0	2682.0
10.3	78.2	720.4	-8189.1	-602369.0	-119222.0	292.0
10.4	1042.2	5744.2	-60239.9	-4362000.0	-1450000.0	2595.0
10.11	1543.7	-9296.6	-18472.3	15290000.0	-2272000.0	12598.0
10.12	1929.0	-8771.2	-22510.5	14870000.0	-2846000.0	13138.0
10.13	-8244.6	-9991.9	-28028.1	16090000.0	12340000.0	9540.0
10.14	-7859.4	-9466.4	-32066.3	15670000.0	11760000.0	10079.0
10.15	8787.0	14926.2	-25952.5	-19890000.0	-13070000.0	-7653.0
10.16	9172.2	15451.7	-29990.7	-20300000.0	-13640000.0	-7114.0
10.17	-1001.4	14230.9	-35508.3	-19080000.0	1543000.0	-10712.0
10.18	-616.2	14756.4	-39546.4	-19500000.0	969292.0	-10172.0
10.19	2303.0	-9100.5	-17570.9	14990000.0	-3406000.0	12104.0
10.20	2688.2	-8575.1	-21609.1	14580000.0	-3979000.0	12644.0
10.21	-9003.9	-10188.0	-28929.6	16380000.0	13470000.0	10034.0
10.22	-8618.7	-9662.5	-32967.7	15970000.0	12900000.0	10574.0
10.23	9546.2	15122.3	-25051.0	-20180000.0	-14200000.0	-8148.0
10.24	9931.5	15647.8	-29089.2	-20600000.0	-14770000.0	-7608.0
10.25	-1760.6	14034.8	-36409.7	-18790000.0	2676000.0	-10217.0
10.26	-1375.4	14560.3	-40447.9	-19210000.0	2103000.0	-9678.0
10.27	3131.6	-8912.6	-17285.8	14730000.0	-4641000.0	10176.0
10.28	3516.8	-8387.2	-21324.0	14310000.0	-5215000.0	10715.0
10.29	-6656.8	-9607.9	-26841.6	15530000.0	9968000.0	7117.0
10.30	-6271.6	-9082.4	-30879.8	15110000.0	9395000.0	7657.0
10.31	7199.2	14542.2	-27139.0	-19330000.0	-10700000.0	-5231.0
10.32	7584.4	15067.7	-31177.2	-19740000.0	-11270000.0	-4691.0
10.33	-2589.2	13846.9	-36694.8	-18520000.0	3912000.0	-8289.0
10.34	-2204.0	14372.4	-40733.0	-18940000.0	3338000.0	-7749.0
10.35	3890.8	-8716.5	-16384.4	14440000.0	-5774000.0	9681.0
10.36	4276.0	-8191.1	-20422.5	14020000.0	-6348000.0	10221.0
10.37	-7416.0	-9804.0	-27743.0	15830000.0	11100000.0	7612.0
10.38	-7030.8	-9278.6	-31781.2	15410000.0	10530000.0	8151.0
10.39	7958.4	14738.3	-26237.6	-19620000.0	-11830000.0	-5725.0
10.40	8343.6	15263.8	-30275.7	-20040000.0	-12400000.0	-5185.0
10.41	-3348.4	13650.8	-37596.2	-18230000.0	5045000.0	-7795.0
10.42	-2963.2	14176.3	-41634.4	-18650000.0	4472000.0	-7255.0
10.43	15498.7	-7.5	-9942.0	2041000.0	-23090000.0	9078.0
10.44	15883.9	517.9	-13980.1	1624000.0	-23670000.0	9618.0
10.45	-17129.3	-2325.0	-41794.6	4716000.0	25600000.0	-1116.0

10.46	-16744.1	-1799.6	-45832.7	4299000.0	25030000.0	-577.0
10.47	17671.7	7259.3	-12186.0	-8511000.0	-26330000.0	3003.0
10.48	18056.9	7784.8	-16224.2	-8928000.0	-26910000.0	3542.0
10.49	-14956.3	4941.8	-44038.6	-5836000.0	22360000.0	-7192.0
10.50	-14571.1	5467.3	-48076.8	-6253000.0	21790000.0	-6652.0
10.51	15975.0	107.7	-9586.0	1873000.0	-23800000.0	8351.0
10.52	16360.2	633.1	-13624.2	1456000.0	-24380000.0	8891.0
10.53	-16652.9	-2209.8	-41438.6	4548000.0	24890000.0	-1843.0
10.54	-16267.7	-1684.4	-45476.8	4131000.0	24320000.0	-1303.0
10.55	17195.3	7144.1	-12542.0	-8343000.0	-25620000.0	3729.0
10.56	17580.5	7669.6	-16580.2	-8761000.0	-26200000.0	4269.0
10.57	-15432.7	4826.6	-44394.6	-5669000.0	23080000.0	-6465.0
10.58	-15047.4	5352.1	-48432.7	-6086000.0	22500000.0	-5925.0
10.59	18029.4	646.2	-6937.2	1060000.0	-26870000.0	7431.0
10.60	18414.6	1171.6	-10975.3	642859.0	-27450000.0	7970.0
10.61	-19660.0	-2978.7	-44799.4	5697000.0	29380000.0	531.0
10.62	-19274.8	-2453.3	-48837.6	5280000.0	28810000.0	1071.0
10.63	20202.4	7913.0	-9181.2	-9492000.0	-30110000.0	1355.0
10.64	20587.6	8438.5	-13219.4	-9909000.0	-30680000.0	1895.0
10.65	-17487.0	4288.1	-47043.4	-4855000.0	26140000.0	-5544.0
10.66	-17101.8	4813.6	-51081.6	-5272000.0	25570000.0	-5005.0
10.67	18505.8	761.4	-6581.2	892404.0	-27580000.0	6704.0
10.68	18891.0	1286.8	-10619.4	475275.0	-28160000.0	7244.0
10.69	-19183.7	-2863.5	-44443.4	5529000.0	28670000.0	-196.0
10.70	-18798.5	-2338.1	-48481.6	5112000.0	28100000.0	344.0
10.71	19726.0	7797.8	-9537.2	-9324000.0	-29400000.0	2082.0
10.72	20111.3	8323.3	-13575.3	-9742000.0	-29970000.0	2622.0
10.73	-17963.4	4172.9	-47399.4	-4688000.0	26850000.0	-4817.0
10.74	-17578.2	4698.4	-51437.6	-5105000.0	26280000.0	-4278.0
10.107	3629.5	-1431.7	-16379.2	3464000.0	-5381000.0	4881.0
10.108	4913.5	319.8	-29839.8	2073000.0	-7293000.0	6679.0
10.109	-6158.9	-2126.9	-25935.0	4266000.0	9228000.0	1823.0
10.110	-4874.9	-375.4	-39395.5	2876000.0	7317000.0	3621.0
10.111	5802.5	5835.2	-18623.2	-7088000.0	-8619000.0	-1195.0
10.112	7086.5	7586.7	-32083.8	-8479000.0	-10530000.0	604.0
10.113	-3985.9	5139.9	-28179.0	-6286000.0	5990000.0	-4253.0
10.114	-2701.9	6891.4	-41639.6	-7676000.0	4078000.0	-2455.0
10.115	4388.7	-1235.6	-15477.8	3170000.0	-6515000.0	4387.0
10.116	5672.7	516.0	-28938.3	1779000.0	-8426000.0	6185.0
10.117	-6918.1	-2323.0	-26836.4	4561000.0	10360000.0	2317.0
10.118	-5634.1	-571.5	-40297.0	3170000.0	8450000.0	4115.0
10.119	6561.7	6031.3	-17721.8	-7383000.0	-9753000.0	-1689.0
10.120	7845.7	7782.8	-31182.4	-8773000.0	-11660000.0	109.0
10.121	-4745.1	4943.8	-29080.5	-5991000.0	7123000.0	-3759.0
10.122	-3461.1	6695.3	-42541.0	-7382000.0	5212000.0	-1960.0
10.123	4105.8	-1316.5	-16023.2	3296000.0	-6092000.0	4154.0
10.124	5389.9	435.0	-29483.8	1906000.0	-8003000.0	5952.0
10.125	-5682.6	-2011.7	-25579.0	4099000.0	8517000.0	1096.0
10.126	-4398.5	-260.2	-39039.6	2708000.0	6606000.0	2894.0
10.127	5326.1	5720.0	-18979.2	-6921000.0	-7909000.0	-468.0
10.128	6610.2	7471.5	-32439.8	-8311000.0	-9820000.0	1330.0
10.129	-4462.3	5024.7	-28535.0	-6118000.0	6700000.0	-3526.0
10.130	-3178.2	6776.2	-41995.5	-7509000.0	4789000.0	-1728.0
10.131	4865.0	-1120.4	-15121.8	3002000.0	-7225000.0	3660.0
10.132	6149.1	631.2	-28582.4	1612000.0	-9137000.0	5458.0
10.133	-6441.8	-2207.8	-26480.5	4393000.0	9651000.0	1590.0
10.134	-5157.7	-456.3	-39941.0	3003000.0	7739000.0	3388.0
10.135	6085.3	5916.1	-18077.8	-7215000.0	-9042000.0	-962.0

10.136	7369.4	7667.6	-31538.3	-8605000.0	-10950000.0	836.0
10.137	-5221.5	4828.6	-29436.4	-5824000.0	7834000.0	-3032.0
10.138	-3937.5	6580.1	-42897.0	-7214000.0	5922000.0	-1234.0

### Calcolo resistenze

Resistenza a trazione dei bulloni  $F_{tb,Rd} = 0.9 \cdot f_{tb} \cdot A_{res} / \gamma_{M2} = 90333.1 \text{ N}$

Resistenza a punzonamento flangia  $B_{pf,Rd} = 0.6 \cdot \pi \cdot d_m \cdot t_f \cdot f_{tk} / \gamma_{M2} = 233432.9 \text{ N}$

Bull.	$F_{f,Rd} \text{ [N]}$	$F_{t,Rd} \text{ [N]}$
1	48998.7	48998.7
2	42524.6	42524.6
3	48998.7	48998.7
4	41985.4	41985.4
5	41985.4	41985.4
6	48998.7	48998.7
7	42524.6	42524.6
8	48998.7	48998.7

### Legenda

$F_{f,Rd} = M_{res,m} / (B_m \cdot R_m)$  resistenza a flessione flangia

$F_{t,Rd} = \min [F_{tb,Rd}, B_{pf,Rd}, F_{f,Rd}]$  resistenza a trazione di progetto

Resistenza a taglio dei bulloni  $F_{vb,Rd} = 0.6 \cdot f_{tb} \cdot A_{res} / \gamma_{M2} = 60222.1 \text{ N}$

Bull.	$F_{bf,x,Rd} \text{ [N]}$	$F_{v,x,Rd} \text{ [N]}$	$F_{bf,y,Rd} \text{ [N]}$	$F_{v,y,Rd} \text{ [N]}$
1	141647.1	60222.1	141647.1	60222.1
2	141647.1	60222.1	206400.0	60222.1
3	141647.1	60222.1	141647.1	60222.1
4	206400.0	60222.1	141647.1	60222.1
5	206400.0	60222.1	141647.1	60222.1
6	141647.1	60222.1	141647.1	60222.1
7	141647.1	60222.1	206400.0	60222.1
8	141647.1	60222.1	141647.1	60222.1

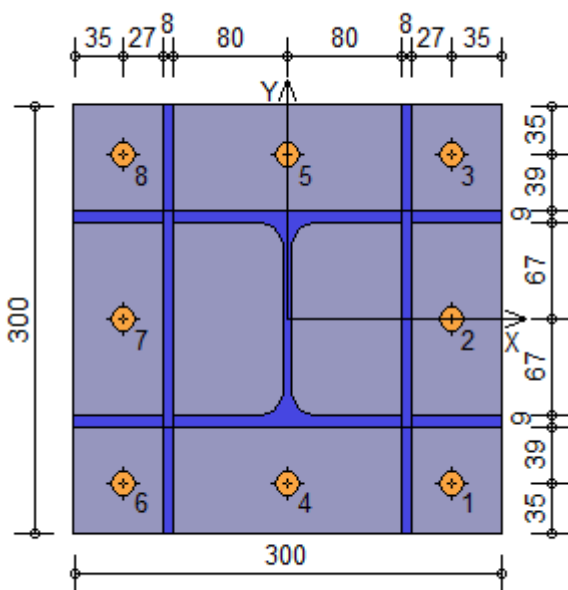
### Legenda

$F_{bf,x,Rd} = k \cdot \alpha \cdot f_{tk} \cdot \emptyset \cdot t_f / \gamma_{M2}$  resistenza a rifollamento flangia in direzione x

$F_{v,x,Rd} = \min [F_{vb,Rd}, F_{bf,x,Rd}]$  resistenza a taglio di progetto in direzione x

$F_{bf,y,Rd} = k \cdot \alpha \cdot f_{tk} \cdot \emptyset \cdot t_f / \gamma_{M2}$  resistenza a rifollamento flangia in direzione y

$F_{v,y,Rd} = \min [F_{vb,Rd}, F_{bf,y,Rd}]$  resistenza a taglio di progetto in direzione y





## Verifiche sui bulloni

### 1-Taglio e trazione (Nodo n. 10, CMB n. 64)

Bull.	X [mm]	Y [mm]	$F_{v,Ed}$ [N]	$F_{v,Rd}$ [N]	$F_{t,Ed}$ [N]	$F_{t,Rd}$ [N]	FV <sub>1</sub>	VER
1	115.00	-115.00	2780.5	60222.1	0.0	48998.7	0.046171	Ok
2	115.00	0.00	2780.0	60222.1	4070.7	42524.6	0.114538	Ok
3	115.00	115.00	2779.4	60222.1	30967.9	48998.7	0.497593	Ok
4	0.00	-115.00	2781.8	60222.1	0.0	41985.4	0.046192	Ok
5	0.00	115.00	2780.7	60222.1	38770.1	41985.4	0.705759	Ok
6	-115.00	-115.00	2783.0	60222.1	0.0	48998.7	0.046213	Ok
7	-115.00	0.00	2782.5	60222.1	19675.1	42524.6	0.376687	Ok
8	-115.00	115.00	2782.0	60222.1	46572.3	48998.7	0.725111	Ok

### 2-Trazione (Nodo n. 7, CMB n. 62)

Bull.	X [mm]	Y [mm]	$F_{t,Ed}$ [N]	$F_{t,Rd}$ [N]	FV <sub>2</sub>	VER
1	115.00	-115.00	39565.5	48998.7	0.807482	Ok
2	115.00	0.00	12481.6	42524.6	0.293515	Ok
3	115.00	115.00	0.0	48998.7	0.000000	Ok
4	0.00	-115.00	40150.0	41985.4	0.956284	Ok
5	0.00	115.00	0.0	41985.4	0.000000	Ok
6	-115.00	-115.00	40734.4	48998.7	0.831338	Ok
7	-115.00	0.00	13650.5	42524.6	0.321003	Ok
8	-115.00	115.00	0.0	48998.7	0.000000	Ok

### Legenda

$F_{v,Ed}$  forza di taglio agente sul bullone

$F_{v,Rd}$  resistenza a taglio di progetto del bullone

$F_{t,Ed}$  forza di trazione agente sul bullone

$F_{t,Rd}$  resistenza a trazione di progetto del bullone

$FV_1 = F_{v,Ed} / F_{v,Rd} + F_{t,Ed} / (1.4 \cdot F_{t,Rd})$

$FV_2 = F_{t,Ed} / F_{t,Rd}$

VER  $\rightarrow FV_i \leq 1$

## Verifiche sulle saldature profilo-flangia (versione beta)

Si considera la sezione di gola (avente altezza  $a = s_c / 2^{0.5} = 3.536$ ) in posizione ribaltata: vengono considerate positive le tensioni normali di trazione e le tensioni tangenziali agenti verso destra e verso il basso. Tutte le tensioni sono espresse in N/mm<sup>2</sup>.

### Verifica formula (4.2.84) (Nodo n. 10, CMB n. 64)

Cordoni	$n_{\perp}$	$t_{\perp}$	$\tau_{\parallel}$	FV <sub>1</sub>	VER <sub>1</sub>
Nerv. verticale lato destro esterno	-109.15	0.00	4.37	109.24	Ok
Nerv. vert. lato destro interno zona inferiore	-107.16	0.00	4.37	107.25	Ok
Nerv. vert. lato sinistro interno zona inferiore	-80.19	0.00	4.37	80.31	Ok
Nerv. verticale lato sinistro esterno	105.98	0.00	4.37	106.07	Ok
Nerv. orizz. inferiore lato destro esterno	-74.89	0.00	2.33	74.92	Ok
Ala inferiore esterno	-49.33	0.00	2.33	49.39	Ok
Nerv. orizz. inferiore lato sinistro esterno	-32.99	0.00	2.33	33.07	Ok
Nerv. orizz. inferiore lato destro interno	-67.80	0.00	2.33	67.84	Ok
Ala inferiore interno lato destro	-55.43	0.00	2.33	55.48	Ok
Ala inferiore interno lato sinistro	-38.53	0.00	2.33	38.60	Ok
Nerv. orizz. inferiore lato sinistro interno	-25.91	0.00	2.33	26.01	Ok
Nerv. vert. lato destro interno zona centrale	-53.14	0.00	4.37	53.32	Ok
Anima lato destro	-33.51	0.00	4.37	33.79	Ok
Anima lato sinistro	-33.51	0.00	4.37	33.79	Ok
Nerv. vert. lato sinistro interno zona centrale	49.96	0.00	4.37	50.16	Ok
Nerv. orizz. superiore lato destro interno	22.73	0.00	2.33	22.85	Ok
Ala superiore interno lato destro	35.36	0.00	2.33	35.43	Ok
Ala superiore interno lato sinistro	52.25	0.00	2.33	52.31	Ok
Nerv. orizz. superiore lato sinistro interno	64.63	0.00	2.33	64.67	Ok
Nerv. orizz. superiore lato destro esterno	29.82	0.00	2.33	29.91	Ok
Ala superiore esterno	59.95	0.00	2.33	59.99	Ok
Nerv. orizz. superiore lato sinistro esterno	71.71	0.00	2.33	71.75	Ok
Nerv. vert. lato destro interno zona superiore	77.01	0.00	4.37	77.14	Ok

Nerv. vert. lato sinistro interno zona superiore	103.99	0.00	4.37	104.08	Ok
<u>Verifica formula (4.2.85) (Nodo n. 10, CMB n. 64)</u>					
Cordoni	$n_{\perp}$	$t_{\perp}$	$\tau_{\parallel}$	$FV_2$	$VER_2$
Nerv. verticale lato destro esterno	-109.15	0.00	4.37	109.15	Ok
Nerv. vert. lato destro interno zona inferiore	-107.16	0.00	4.37	107.16	Ok
Nerv. vert. lato sinistro interno zona inferiore	-80.19	0.00	4.37	80.19	Ok
Nerv. verticale lato sinistro esterno	105.98	0.00	4.37	105.98	Ok
Nerv. orizz. inferiore lato destro esterno	-74.89	0.00	2.33	74.89	Ok
Ala inferiore esterno	-49.33	0.00	2.33	49.33	Ok
Nerv. orizz. inferiore lato sinistro esterno	-32.99	0.00	2.33	32.99	Ok
Nerv. orizz. inferiore lato destro interno	-67.80	0.00	2.33	67.80	Ok
Ala inferiore interno lato destro	-55.43	0.00	2.33	55.43	Ok
Ala inferiore interno lato sinistro	-38.53	0.00	2.33	38.53	Ok
Nerv. orizz. inferiore lato sinistro interno	-25.91	0.00	2.33	25.91	Ok
Nerv. vert. lato destro interno zona centrale	-53.14	0.00	4.37	53.14	Ok
Anima lato destro	-33.51	0.00	4.37	33.51	Ok
Anima lato sinistro	-33.51	0.00	4.37	33.51	Ok
Nerv. vert. lato sinistro interno zona centrale	49.96	0.00	4.37	49.96	Ok
Nerv. orizz. superiore lato destro interno	22.73	0.00	2.33	22.73	Ok
Ala superiore interno lato destro	35.36	0.00	2.33	35.36	Ok
Ala superiore interno lato sinistro	52.25	0.00	2.33	52.25	Ok
Nerv. orizz. superiore lato sinistro interno	64.63	0.00	2.33	64.63	Ok
Nerv. orizz. superiore lato destro esterno	29.82	0.00	2.33	29.82	Ok
Ala superiore esterno	59.95	0.00	2.33	59.95	Ok
Nerv. orizz. superiore lato sinistro esterno	71.71	0.00	2.33	71.71	Ok
Nerv. vert. lato destro interno zona superiore	77.01	0.00	4.37	77.01	Ok
Nerv. vert. lato sinistro interno zona superiore	103.99	0.00	4.37	103.99	Ok

#### Legenda

$n_{\perp}$  tensione normale perpendicolare all'asse del cordone

$t_{\perp}$  tensione tangenziale perpendicolare all'asse del cordone

$\tau_{\parallel}$  tensione tangenziale parallela all'asse del cordone

$$FV_1 = (n_{\perp}^2 + t_{\perp}^2 + \tau_{\parallel}^2)^{0.5}$$

$$FV_2 = |n_{\perp}| + |t_{\perp}|$$

$$VER_i \rightarrow FV_i \leq \beta_i \cdot f_{yk} \quad (\beta_1 \cdot f_{yk} = 192.50 \text{ N/mm}^2 \quad \beta_2 \cdot f_{yk} = 233.75 \text{ N/mm}^2)$$

#### **Verifiche a flessione piastra in zona compressa**

Sezione parallela a X a filo della colonna (Nodo n. 7, CMB n. 63)

Pressione media a bordo piastra	$p_{med} = 10.19 \text{ N/mm}^2$
Carico lineare sbalzo	$q_{lin} = 3057.48 \text{ N/mm}$
Lunghezza sbalzo	$L_s = 74.0 \text{ mm}$
Modulo di resistenza minimo	$W_{min} = 118300.6 \text{ mm}^3$
Momento resistente	$M_{p,Rd} = 30983500.0 \text{ N mm}$
Momento massimo	$M_{p,Ed} = 8371369.0 \text{ N mm}$
$M_{p,Ed} / M_{p,Rd} = 0.270188 \quad \text{Ok}$	

Sezione parallela a Y a filo della nervatura verticale (Nodo n. 9, CMB n. 22)

Pressione media a bordo piastra	$p_{med} = 7.42 \text{ N/mm}^2$
Carico lineare sbalzo	$q_{lin} = 2225.80 \text{ N/mm}$
Lunghezza sbalzo	$L_s = 62.0 \text{ mm}$
Modulo di resistenza minimo	$W_{min} = 118300.6 \text{ mm}^3$
Momento resistente	$M_{p,Rd} = 30983500.0 \text{ N mm}$
Momento massimo	$M_{p,Ed} = 4277981.0 \text{ N mm}$
$M_{p,Ed} / M_{p,Rd} = 0.138073 \quad \text{Ok}$	

#### **Verifica del momento di progetto del giunto** (Nodo n. 7, CMB n. 62)

Momento resistente del giunto	$M_{j,Rd} = 42757220.0 \text{ N mm}$
Momento di progetto	$M_{j,Ed} = 31226860.0 \text{ N mm}$
$M_{j,Ed} / M_{j,Rd} = 0.730329 \quad \text{Ok}$	



## **Ancoraggio**

### **Tirafondi con rosette saldate**

Lunghezza tirafondi	$L_t =$	250 mm
Lunghezza di aderenza	$L_a =$	205 mm
Materiale rosette		Acciaio S235
Spessore rosette	$s_r =$	15 mm
Diametro rosette	$\varnothing_r =$	100 mm

Lunghezza minima tirafondi: 40 diametri (640 mm)

### **Calcestruzzo**

Resistenza cubica caratteristica a compressione	$R_{ck} =$	35.00 N/mm <sup>2</sup>
Resistenza cilindrica caratteristica a compressione	$f_{ck} = 0.83 \cdot R_{ck} =$	29.05 N/mm <sup>2</sup>
Resistenza di calcolo a compressione	$f_{cd} = \alpha_{cc} \cdot f_{ck} / \gamma_c =$	16.46 N/mm <sup>2</sup>
Resistenza caratteristica a trazione	$f_{ctk} = 0.7 \cdot 0.30 \cdot f_{ck}^{2/3} =$	1.98 N/mm <sup>2</sup>
Resistenza tangenziale di aderenza di calcolo	$f_{bd} = 2.25 \cdot \eta_1 \cdot \eta_2 \cdot f_{ctk} / \gamma_c =$	2.98 N/mm <sup>2</sup>

### **Compressione massima calcestruzzo (Nodo n. 10, CMB n. 64)**

$$p_{\max} = 14.19 \text{ N/mm}^2 < f_{cd} \text{ Ok}$$

### **Verifica ancoraggio**

Si considera la massima sollecitazione di trazione agente nei tirafondi (Nodo n. 10, CMB n. 64)

$$\text{Trazione di progetto dell'ancoraggio} \quad F_{t,an,Ed} = \max [ F_{t,Ed} ] = 46572.3 \text{ N}$$

Si considera il contributo di aderenza fornito dai tirafondi ( $L_a = 205 \text{ mm}$ )

$$\text{Resistenza a trazione per aderenza} \quad F_{t,ad,Rd} = L_a \cdot \pi \cdot \varnothing \cdot f_{bd} = 30673.6 \text{ N}$$

$$\text{Trazione di progetto residua} \quad F_{t,re,Ed} = F_{t,an,Ed} - F_{t,ad,Rd} = 15898.7 \text{ N}$$

### **Verifica della rosetta**

$$\text{Pressione uniforme agente} \quad p_{cls} = 2.08 \text{ N/mm}^2$$

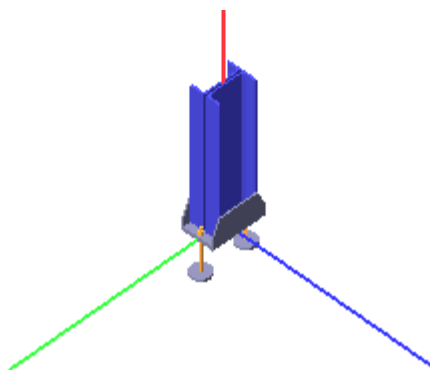
$$p_{cls} < f_{cd} \text{ Ok}$$

$$\text{Momento di calcolo} \quad M_{Ed} = 189683.2 \text{ N mm}$$

$$\text{Resistenza a flessione} \quad M_{c,Rd} = 421871.0 \text{ N mm}$$

$$M_{Ed} / M_{c,Rd} = 0.449624 \text{ Ok}$$

## Verifica secondo il D.M. 17/01/2018 dei nodi: 1, 2



### Coefficienti di sicurezza utilizzati

$$\gamma_{M0} = 1.05$$

$$\gamma_{M1} = 1.10$$

$$\gamma_{M2} = 1.25$$

### Colonna

Tipo di profilo: UNP 240

Materiale: Acciaio S275  $f_y = 275 \text{ N/mm}^2$   $f_t = 430 \text{ N/mm}^2$   $\gamma_{ov} = 1.25$

Classe sezione: 0

### Flangia:

Materiale: Acciaio S275  $f_y = 275 \text{ N/mm}^2$   $f_t = 430 \text{ N/mm}^2$   $\gamma_{ov} = 1.25$

Dimensioni (B x H x Sp): 99.0 x 328.8 x 20.0 mm

Spessore nervature verticali: 10.0 mm

Spessore nervature orizzontali: 10.0 mm

### Bullonature:

Viti cl. 8.8 Dadi 8 o 10 ( $f_{yb} = 640 \text{ N/mm}^2$ ,  $f_{tb} = 800 \text{ N/mm}^2$ )

Diametro gambo  $\varnothing = 16 \text{ mm}$   $A_{res} = 156.8 \text{ mm}^2$  (ridotta per filettatura)

Diametro dado/testa  $d_m = 24 \text{ mm}$

Diametro foro  $\varnothing_0 = 17 \text{ mm}$

### Saldature:

Materiale: Acciaio S275  $f_y = 275 \text{ N/mm}^2$   $f_t = 430 \text{ N/mm}^2$   $\beta_1 = 0.70$   $\beta_2 = 0.85$

Spessore cordoni d'angolo  $s_c = 7 \text{ mm}$

### Sollecitazioni:

Nodo.CMB	V2 [N]	V3 [N]	N [N]	M2 [N mm]	M3 [N mm]	T [N mm]
1.1	0.0	-7.9	-2600.7	21523.0	108745.0	30363.0
1.2	0.0	-31.3	-17193.9	85399.0	-787899.0	123550.0
1.3	0.0	-6.1	-2000.5	16556.0	83650.0	23356.0
1.4	0.0	-29.5	-16593.8	80432.0	-812994.0	116543.0
1.11	0.0	3529.6	-6573.3	-349452.0	-1180000.0	-134343.0
1.12	0.0	3344.3	-9718.2	-338519.0	-1867000.0	-108833.0
1.13	0.0	3506.4	-7285.5	-335267.0	2923000.0	-120176.0
1.14	0.0	3321.1	-10430.5	-324334.0	2236000.0	-94667.0
1.15	0.0	-3352.0	-5245.2	408547.0	-2786000.0	215928.0
1.16	0.0	-3537.3	-8390.1	419480.0	-3473000.0	241438.0
1.17	0.0	-3375.2	-5957.5	422731.0	1317000.0	230095.0
1.18	0.0	-3560.5	-9102.4	433665.0	630181.0	255604.0
1.19	0.0	3530.1	-6607.0	-348932.0	-1394000.0	-120130.0
1.20	0.0	3344.8	-9751.9	-337999.0	-2081000.0	-94620.0

1.21	0.0	3506.0	-7251.8	-335787.0	3137000.0	-134389.0
1.22	0.0	3320.7	-10396.7	-324854.0	2450000.0	-108880.0
1.23	0.0	-3351.6	-5278.9	409067.0	-3000000.0	230141.0
1.24	0.0	-3536.9	-8423.8	420000.0	-3687000.0	255651.0
1.25	0.0	-3375.7	-5923.7	422212.0	1531000.0	215882.0
1.26	0.0	-3561.0	-9068.6	433145.0	843634.9	241391.0
1.27	0.0	3528.9	-6531.6	-345734.0	-1259000.0	-129678.0
1.28	0.0	3343.6	-9676.5	-334801.0	-1946000.0	-104169.0
1.29	0.0	3505.7	-7243.8	-331549.0	2844000.0	-115512.0
1.30	0.0	3320.4	-10388.8	-320616.0	2157000.0	-90002.0
1.31	0.0	-3351.3	-5286.9	404829.0	-2707000.0	211264.0
1.32	0.0	-3536.6	-8431.8	415762.0	-3394000.0	236773.0
1.33	0.0	-3374.5	-5999.1	419014.0	1396000.0	225430.0
1.34	0.0	-3559.8	-9144.1	429947.0	709255.0	250940.0
1.35	0.0	3529.4	-6565.3	-345214.0	-1473000.0	-115466.0
1.36	0.0	3344.1	-9710.2	-334281.0	-2160000.0	-89956.0
1.37	0.0	3505.3	-7210.1	-332069.0	3057000.0	-129725.0
1.38	0.0	3320.0	-10355.0	-321136.0	2371000.0	-104215.0
1.39	0.0	-3350.9	-5320.6	405349.0	-2921000.0	225477.0
1.40	0.0	-3536.2	-8465.5	416282.0	-3608000.0	250986.0
1.41	0.0	-3375.0	-5965.4	418494.0	1610000.0	211217.0
1.42	0.0	-3560.3	-9110.3	429427.0	922708.0	236727.0
1.43	0.0	1148.1	-5277.4	-100700.0	-6529000.0	-28275.0
1.44	0.0	962.8	-8422.4	-89767.0	-7216000.0	-2766.0
1.45	0.0	1070.8	-7651.7	-53419.0	7148000.0	18946.0
1.46	0.0	885.5	-10796.6	-42486.0	6461000.0	44456.0
1.47	0.0	-916.4	-4879.0	126699.0	-7011000.0	76806.0
1.48	0.0	-1101.7	-8023.9	137632.0	-7698000.0	102316.0
1.49	0.0	-993.7	-7253.3	173980.0	6666000.0	124027.0
1.50	0.0	-1179.0	-10398.2	184913.0	5979000.0	149537.0
1.51	0.0	1147.9	-5264.9	-99585.0	-6553000.0	-26876.0
1.52	0.0	962.6	-8409.9	-88652.0	-7240000.0	-1367.0
1.53	0.0	1070.6	-7639.2	-52304.0	7124000.0	20345.0
1.54	0.0	885.3	-10784.1	-41371.0	6438000.0	45855.0
1.55	0.0	-916.2	-4891.5	125584.0	-6988000.0	75407.0
1.56	0.0	-1101.5	-8036.5	136517.0	-7674000.0	100916.0
1.57	0.0	-993.5	-7265.8	172865.0	6690000.0	122628.0
1.58	0.0	-1178.8	-10410.7	183798.0	6003000.0	148138.0
1.59	0.0	1149.5	-5389.9	-98969.0	-7241000.0	19101.0
1.60	0.0	964.2	-8534.8	-88036.0	-7928000.0	44610.0
1.61	0.0	1069.4	-7539.2	-55151.0	7860000.0	-28430.0
1.62	0.0	884.1	-10684.2	-44218.0	7173000.0	-2921.0
1.63	0.0	-915.0	-4991.5	128431.0	-7723000.0	124182.0
1.64	0.0	-1100.3	-8136.4	139364.0	-8410000.0	149692.0
1.65	0.0	-995.1	-7140.8	172249.0	7378000.0	76651.0
1.66	0.0	-1180.4	-10285.7	183182.0	6691000.0	102161.0
1.67	0.0	1149.3	-5377.4	-97853.0	-7265000.0	20500.0
1.68	0.0	964.0	-8522.3	-86920.0	-7952000.0	46010.0
1.69	0.0	1069.1	-7526.7	-54036.0	7836000.0	-27031.0
1.70	0.0	883.9	-10671.6	-43103.0	7149000.0	-1521.0
1.71	0.0	-914.8	-5004.0	127315.0	-7699000.0	122783.0
1.72	0.0	-1100.1	-8148.9	138249.0	-8386000.0	148292.0
1.73	0.0	-994.9	-7153.3	171133.0	7402000.0	75252.0
1.74	0.0	-1180.2	-10298.2	182066.0	6715000.0	100761.0
1.107	0.0	1337.2	-2439.4	-96908.0	-940904.0	-41509.0
1.108	0.0	719.6	-12922.4	-60464.0	-3231000.0	43523.0
1.109	0.0	1314.0	-3151.6	-82723.0	3162000.0	-27343.0
1.110	0.0	696.4	-13634.7	-46279.0	872693.0	57689.0
1.111	0.0	-727.3	-2040.9	130492.0	-1423000.0	63572.0

1.112	0.0	-1344.9	-12524.0	166936.0	-3712000.0	148604.0
1.113	0.0	-750.5	-2753.2	144676.0	2681000.0	77739.0
1.114	0.0	-1368.1	-13236.3	181120.0	390888.0	162771.0
1.115	0.0	1337.7	-2473.1	-96388.0	-1154000.0	-27296.0
1.116	0.0	720.0	-12956.2	-59944.0	-3444000.0	57736.0
1.117	0.0	1313.6	-3117.9	-83243.0	3376000.0	-41556.0
1.118	0.0	695.9	-13601.0	-46799.0	1086000.0	43476.0
1.119	0.0	-726.8	-2074.7	131012.0	-1636000.0	77785.0
1.120	0.0	-1344.5	-12557.7	167456.0	-3926000.0	162817.0
1.121	0.0	-750.9	-2719.5	144157.0	2894000.0	63526.0
1.122	0.0	-1368.6	-13202.5	180601.0	604342.0	148558.0
1.123	0.0	1337.0	-2426.8	-95792.0	-964626.0	-40110.0
1.124	0.0	719.4	-12909.9	-59348.0	-3254000.0	44922.0
1.125	0.0	1313.8	-3139.1	-81608.0	3139000.0	-25943.0
1.126	0.0	696.2	-13622.2	-45164.0	848971.0	59089.0
1.127	0.0	-727.1	-2053.4	129377.0	-1399000.0	62173.0
1.128	0.0	-1344.7	-12536.5	165821.0	-3689000.0	147205.0
1.129	0.0	-750.3	-2765.7	143561.0	2704000.0	76339.0
1.130	0.0	-1367.9	-13248.8	180005.0	414610.0	161371.0
1.131	0.0	1337.4	-2460.6	-95273.0	-1178000.0	-25897.0
1.132	0.0	719.8	-12943.7	-58829.0	-3468000.0	59135.0
1.133	0.0	1313.4	-3105.4	-82127.0	3352000.0	-40156.0
1.134	0.0	695.7	-13588.5	-45683.0	1062000.0	44876.0
1.135	0.0	-726.6	-2087.2	129896.0	-1612000.0	76386.0
1.136	0.0	-1344.3	-12570.3	166340.0	-3902000.0	161418.0
1.137	0.0	-750.7	-2732.0	143042.0	2918000.0	62126.0
1.138	0.0	-1368.3	-13215.0	179486.0	628064.0	147158.0
2.1	0.0	8.2	-3505.2	-22474.0	-1647000.0	31630.0
2.2	0.0	33.5	-25285.6	-91227.0	-14230000.0	130888.0
2.3	0.0	6.3	-2696.3	-17288.0	-1267000.0	24331.0
2.4	0.0	31.6	-24476.7	-86041.0	-13850000.0	123588.0
2.11	0.0	-2874.6	-10599.4	296840.0	-4533000.0	-181098.0
2.12	0.0	-2693.9	-13151.7	285583.0	-6057000.0	-154581.0
2.13	0.0	-2858.9	-8409.1	291311.0	-5833000.0	-172416.0
2.14	0.0	-2678.2	-10961.4	280054.0	-7357000.0	-145899.0
2.15	0.0	2711.0	-11855.6	-369632.0	-5243000.0	273967.0
2.16	0.0	2891.7	-14407.9	-380889.0	-6767000.0	300484.0
2.17	0.0	2726.7	-9665.2	-375161.0	-6543000.0	282649.0
2.18	0.0	2907.5	-12217.5	-386418.0	-8067000.0	309166.0
2.19	0.0	-2857.0	-10346.4	287948.0	-4661000.0	-168382.0
2.20	0.0	-2676.3	-12898.7	276691.0	-6185000.0	-141865.0
2.21	0.0	-2876.5	-8662.1	300204.0	-5705000.0	-185131.0
2.22	0.0	-2695.8	-11214.4	288947.0	-7229000.0	-158614.0
2.23	0.0	2728.6	-11602.5	-378525.0	-5371000.0	286682.0
2.24	0.0	2909.3	-14154.8	-389782.0	-6895000.0	313199.0
2.25	0.0	2709.1	-9918.2	-366269.0	-6415000.0	269933.0
2.26	0.0	2889.8	-12470.5	-377526.0	-7939000.0	296450.0
2.27	0.0	-2873.1	-10644.4	295751.0	-4568000.0	-186387.0
2.28	0.0	-2692.4	-13196.7	284495.0	-6092000.0	-159870.0
2.29	0.0	-2857.4	-8454.0	290222.0	-5868000.0	-177705.0
2.30	0.0	-2676.7	-11006.3	278966.0	-7392000.0	-151188.0
2.31	0.0	2709.6	-11810.6	-368544.0	-5209000.0	279256.0
2.32	0.0	2890.3	-14362.9	-379801.0	-6733000.0	305773.0
2.33	0.0	2725.3	-9620.3	-374073.0	-6509000.0	287938.0
2.34	0.0	2906.0	-12172.5	-385330.0	-8033000.0	314454.0
2.35	0.0	-2855.5	-10391.3	286859.0	-4696000.0	-173671.0
2.36	0.0	-2674.8	-12943.6	275602.0	-6220000.0	-147154.0
2.37	0.0	-2875.0	-8707.1	299115.0	-5740000.0	-190420.0
2.38	0.0	-2694.3	-11259.3	287858.0	-7264000.0	-163903.0

2.39	0.0	2727.2	-11557.6	-377436.0	-5337000.0	291971.0
2.40	0.0	2907.9	-14109.9	-388693.0	-6861000.0	318488.0
2.41	0.0	2707.7	-9873.3	-365180.0	-6381000.0	275222.0
2.42	0.0	2888.4	-12425.6	-376437.0	-7905000.0	301739.0
2.43	0.0	-937.9	-13594.5	70025.0	-3265000.0	-31954.0
2.44	0.0	-757.2	-16146.8	58768.0	-4789000.0	-5437.0
2.45	0.0	-885.6	-6293.3	51595.0	-7598000.0	-3015.0
2.46	0.0	-704.9	-8845.6	40338.0	-9123000.0	23502.0
2.47	0.0	737.7	-13971.4	-129917.0	-3478000.0	104565.0
2.48	0.0	918.4	-16523.6	-141173.0	-5002000.0	131082.0
2.49	0.0	790.1	-6670.1	-148346.0	-7811000.0	133505.0
2.50	0.0	970.8	-9222.4	-159603.0	-9336000.0	160022.0
2.51	0.0	-937.5	-13608.0	69699.0	-3275000.0	-33541.0
2.52	0.0	-756.8	-16160.3	58442.0	-4800000.0	-7024.0
2.53	0.0	-885.1	-6306.8	51269.0	-7609000.0	-4601.0
2.54	0.0	-704.4	-8859.1	40012.0	-9133000.0	21916.0
2.55	0.0	737.3	-13957.9	-129590.0	-3468000.0	106152.0
2.56	0.0	918.0	-16510.2	-140847.0	-4992000.0	132669.0
2.57	0.0	789.7	-6656.6	-148020.0	-7801000.0	135092.0
2.58	0.0	970.4	-9208.9	-159277.0	-9325000.0	161608.0
2.59	0.0	-879.2	-12751.0	40383.0	-3692000.0	10431.0
2.60	0.0	-698.5	-15303.3	29126.0	-5216000.0	36947.0
2.61	0.0	-944.3	-7136.8	81237.0	-7172000.0	-45399.0
2.62	0.0	-763.6	-9689.1	69980.0	-8696000.0	-18882.0
2.63	0.0	796.4	-13127.9	-159559.0	-3905000.0	146950.0
2.64	0.0	977.1	-15680.2	-170815.0	-5429000.0	173467.0
2.65	0.0	731.4	-7513.6	-118704.0	-7385000.0	91120.0
2.66	0.0	912.1	-10065.9	-129961.0	-8909000.0	117637.0
2.67	0.0	-878.8	-12764.5	40057.0	-3702000.0	8844.0
2.68	0.0	-698.1	-15316.8	28800.0	-5226000.0	35361.0
2.69	0.0	-943.8	-7150.3	80911.0	-7182000.0	-46986.0
2.70	0.0	-763.1	-9702.5	69654.0	-8706000.0	-20469.0
2.71	0.0	796.0	-13114.4	-159232.0	-3895000.0	148537.0
2.72	0.0	976.7	-15666.7	-170489.0	-5419000.0	175054.0
2.73	0.0	731.0	-7500.1	-118378.0	-7374000.0	92707.0
2.74	0.0	911.7	-10052.4	-129635.0	-8898000.0	119224.0
2.107	0.0	-1130.4	-8061.4	76708.0	-3004000.0	-52762.0
2.108	0.0	-528.1	-16569.0	39185.0	-8084000.0	35628.0
2.109	0.0	-1114.7	-5871.0	71179.0	-4304000.0	-44080.0
2.110	0.0	-512.4	-14378.7	33656.0	-9384000.0	44310.0
2.111	0.0	545.2	-8438.2	-123234.0	-3217000.0	83758.0
2.112	0.0	1147.6	-16945.9	-160757.0	-8297000.0	172148.0
2.113	0.0	561.0	-6247.9	-128763.0	-4517000.0	92440.0
2.114	0.0	1163.3	-14755.5	-166286.0	-9597000.0	180829.0
2.115	0.0	-1112.8	-7808.4	67815.0	-3132000.0	-40046.0
2.116	0.0	-510.5	-16316.0	30292.0	-8212000.0	48344.0
2.117	0.0	-1132.3	-6124.1	80071.0	-4175000.0	-56795.0
2.118	0.0	-530.0	-14631.7	42548.0	-9256000.0	31595.0
2.119	0.0	562.9	-8185.2	-132127.0	-3345000.0	96473.0
2.120	0.0	1165.2	-16692.8	-169650.0	-8425000.0	184863.0
2.121	0.0	543.3	-6500.9	-119870.0	-4388000.0	79724.0
2.122	0.0	1145.7	-15008.6	-157393.0	-9469000.0	168114.0
2.123	0.0	-1130.0	-8074.9	76381.0	-3014000.0	-54348.0
2.124	0.0	-527.6	-16582.5	38858.0	-8094000.0	34042.0
2.125	0.0	-1114.3	-5884.5	70852.0	-4314000.0	-45666.0
2.126	0.0	-511.9	-14392.2	33329.0	-9394000.0	42723.0
2.127	0.0	544.8	-8424.8	-122907.0	-3206000.0	85345.0
2.128	0.0	1147.2	-16932.4	-160430.0	-8287000.0	173734.0
2.129	0.0	560.5	-6234.4	-128436.0	-4506000.0	94026.0

2.130	0.0	1162.9	-14742.0	-165959.0	-9587000.0	182416.0
2.131	0.0	-1112.4	-7821.8	67489.0	-3142000.0	-41633.0
2.132	0.0	-510.0	-16329.5	29966.0	-8222000.0	46757.0
2.133	0.0	-1131.9	-6137.6	79745.0	-4186000.0	-58382.0
2.134	0.0	-529.5	-14645.2	42222.0	-9266000.0	30008.0
2.135	0.0	562.4	-8171.7	-131800.0	-3334000.0	98060.0
2.136	0.0	1164.8	-16679.4	-169323.0	-8415000.0	186450.0
2.137	0.0	542.9	-6487.4	-119544.0	-4378000.0	81311.0
2.138	0.0	1145.3	-14995.1	-157067.0	-9459000.0	169701.0

### Calcolo resistenze

Resistenza a trazione dei bulloni  $F_{tb,Rd} = 0.9 \cdot f_{tb} \cdot A_{res} / \gamma_{M2} = 90333.1 \text{ N}$

Resistenza a punzonamento flangia  $B_{pf,Rd} = 0.6 \cdot \pi \cdot d_m \cdot t_f \cdot f_{tk} / \gamma_{M2} = 311243.9 \text{ N}$

Bull.	$F_{f,Rd} \text{ [N]}$	$F_{t,Rd} \text{ [N]}$
1	71736.7	71736.7
2	71736.7	71736.7

#### Legenda

$F_{f,Rd} = M_{res,m} / (B_m \cdot R_m)$  resistenza a flessione flangia

$F_{t,Rd} = \min [F_{tb,Rd}, B_{pf,Rd}, F_{f,Rd}]$  resistenza a trazione di progetto

Resistenza a taglio dei bulloni  $F_{vb,Rd} = 0.6 \cdot f_{tb} \cdot A_{res} / \gamma_{M2} = 60222.1 \text{ N}$

Bull.	$F_{bf,x,Rd} \text{ [N]}$	$F_{v,x,Rd} \text{ [N]}$	$F_{bf,y,Rd} \text{ [N]}$	$F_{v,y,Rd} \text{ [N]}$
1	184545.9	60222.1	110619.6	60222.1
2	184545.9	60222.1	110619.6	60222.1

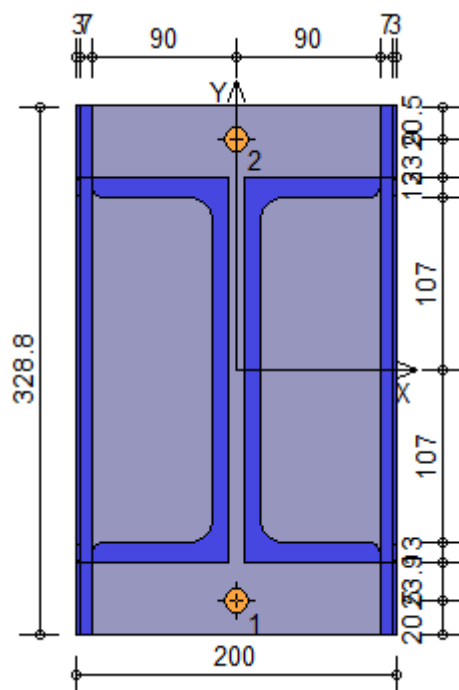
#### Legenda

$F_{bf,x,Rd} = k \cdot \alpha \cdot f_{tk} \cdot \varnothing \cdot t_f / \gamma_{M2}$  resistenza a rifollamento flangia in direzione x

$F_{v,x,Rd} = \min [F_{vb,Rd}, F_{bf,x,Rd}]$  resistenza a taglio di progetto in direzione x

$F_{bf,y,Rd} = k \cdot \alpha \cdot f_{tk} \cdot \varnothing \cdot t_f / \gamma_{M2}$  resistenza a rifollamento flangia in direzione y

$F_{v,y,Rd} = \min [F_{vb,Rd}, F_{bf,y,Rd}]$  resistenza a taglio di progetto in direzione y



### Verifiche sui bulloni

#### 1-Taglio e trazione (Nodo n. 2, CMB n. 2)

Bull.	X [mm]	Y [mm]	$F_{v,Ed} \text{ [N]}$	$F_{v,Rd} \text{ [N]}$	$F_{t,Ed} \text{ [N]}$	$F_{t,Rd} \text{ [N]}$	FV1	VER
1	0.00	-143.90	471.5	60222.1	0.0	71736.7	0.007830	Ok
2	0.00	143.90	438.0	60222.1	41515.4	71736.7	0.420645	Ok

#### 2-Trazione (Nodo n. 2, CMB n. 2)

Bull.	X [mm]	Y [mm]	$F_{t,Ed}$ [N]	$F_{t,Rd}$ [N]	$FV_2$	VER
1	0.00	-143.90	0.0	71736.7	0.000000	Ok
2	0.00	143.90	41515.4	71736.7	0.578720	Ok

#### Legenda

$F_{v,Ed}$  forza di taglio agente sul bullone  
 $F_{v,Rd}$  resistenza a taglio di progetto del bullone  
 $F_{t,Ed}$  forza di trazione agente sul bullone  
 $F_{t,Rd}$  resistenza a trazione di progetto del bullone  
 $FV_1 = F_{v,Ed} / F_{v,Rd} + F_{t,Ed} / (1.4 \cdot F_{t,Rd})$   
 $FV_2 = F_{t,Ed} / F_{t,Rd}$   
 VER  $\rightarrow FV_i \leq 1$

#### **Verifiche a flessione piastra in zona compressa**

##### Sezione parallela a X a filo della colonna (Nodo n. 2, CMB n. 2)

Pressione media a bordo piastra  $p_{med} = 11.40 \text{ N/mm}^2$   
 Carico lineare sbalzo  $q_{lin} = 1128.31 \text{ N/mm}$   
 Lunghezza sbalzo  $L_s = 44.4 \text{ mm}$   
 Modulo di resistenza minimo  $W_{min} = 131520.3 \text{ mm}^3$   
 Momento resistente  $M_{p,Rd} = 34445780.0 \text{ N mm}$   
 Momento massimo  $M_{p,Ed} = 1112150.0 \text{ N mm}$   
 $M_{p,Ed} / M_{p,Rd} = 0.032287 \text{ Ok}$

##### Sezione parallela a Y a filo della colonna (Nodo n. 2, CMB n. 2)

Pressione media a bordo piastra  $p_{med} = 5.93 \text{ N/mm}^2$   
 Carico lineare sbalzo  $q_{lin} = 1949.57 \text{ N/mm}$   
 Lunghezza sbalzo  $L_s = 7.0 \text{ mm}$   
 Modulo di resistenza minimo  $W_{min} = 155422.1 \text{ mm}^3$   
 Momento resistente  $M_{p,Rd} = 40705780.0 \text{ N mm}$   
 Momento massimo  $M_{p,Ed} = 47764.5 \text{ N mm}$   
 $M_{p,Ed} / M_{p,Rd} = 0.001173 \text{ Ok}$

#### **Verifica del momento di progetto del giunto** (Nodo n. 2, CMB n. 2)

Momento resistente del giunto  $M_{j,Rd} = 19220480.0 \text{ N mm}$   
 Momento di progetto  $M_{j,Ed} = 11093800.0 \text{ N mm}$   
 $M_{j,Ed} / M_{j,Rd} = 0.577187 \text{ Ok}$

#### **Ancoraggio**

##### Tirafondi con rosette saldate

Lunghezza tirafondi  $L_t = 250 \text{ mm}$   
 Lunghezza di aderenza  $L_a = 205 \text{ mm}$   
 Materiale rosette Acciaio S235  
 Spessore rosette  $s_r = 15 \text{ mm}$   
 Diametro rosette  $\varnothing_r = 120 \text{ mm}$

Lunghezza minima tirafondi: 40 diametri (640 mm)

##### Calcestruzzo

Resistenza cubica caratteristica a compressione  $R_{ck} = 30.00 \text{ N/mm}^2$   
 Resistenza cilindrica caratteristica a compressione  $f_{ck} = 0.83 \cdot R_{ck} = 24.90 \text{ N/mm}^2$   
 Resistenza di calcolo a compressione  $f_{cd} = \alpha_{cc} \cdot f_{ck} / \gamma_c = 14.11 \text{ N/mm}^2$   
 Resistenza caratteristica a trazione  $f_{ctk} = 0.7 \cdot 0.30 \cdot f_{ck}^{2/3} = 1.79 \text{ N/mm}^2$   
 Resistenza tangenziale di aderenza di calcolo  $f_{bd} = 2.25 \cdot \eta_1 \cdot \eta_2 \cdot f_{ctk} / \gamma_c = 2.69 \text{ N/mm}^2$

#### **Compressione massima calcestruzzo** (Nodo n. 2, CMB n. 2)

$p_{max} = 11.86 \text{ N/mm}^2 < f_{cd} \text{ Ok}$

#### **Verifica ancoraggio**

Si considera la massima sollecitazione di trazione agente nei tirafondi (Nodo n. 2, CMB n. 2)

Trazione di progetto dell'ancoraggio  $F_{t,an,Ed} = \max [ F_{t,Ed} ] = 41515.4 \text{ N}$

---

Si considera il contributo di aderenza fornito dai tirafondi ( $L_a = 205 \text{ mm}$ )

Resistenza a trazione per aderenza	$F_{t,ad,Rd} = L_a \cdot \pi \cdot \varnothing \cdot f_{bd} =$	27678.0 N
Trazione di progetto residua	$F_{t,re,Ed} = F_{t,an,Ed} - F_{t,ad,Rd} =$	13837.5 N

Verifica della rosetta

Pressione uniforme agente	$p_{cls} =$	1.25 N/mm <sup>2</sup>
$p_{cls} < f_{cd} \quad \text{Ok}$		
Momento di calcolo	$M_{Ed} =$	184606.3 N mm
Resistenza a flessione	$M_{c,Rd} =$	421871.0 N mm
$M_{Ed} / M_{c,Rd} = 0.437590 \quad \text{Ok}$		



### 3. RELAZIONE DI CALCOLO SCALA RAMPA SEMPLICE

#### Descrizione generale dell'opera

Descrizione generale dell'opera	
Ubicazione	Comune di MODENA (MO) (Regione EMILIA-ROMAGNA)
	Località MODENA (MO)
	Longitudine 10.925, Latitudine 44.647

Parametri della struttura			
Classe d'uso	Vita Vn [anni]	Coeff. Uso	Periodo Vr [anni]
III	50.0	1.5	75.0

#### Quadro normativo di riferimento adottato

Le norme ed i documenti assunti quale riferimento per la progettazione strutturale vengono indicati di seguito. Nel capitolo "normativa di riferimento" è comunque presente l'elenco completo delle normative disponibili.

Progetto-verifica degli elementi	
Progetto cemento armato	D.M. 17-01-2018
Progetto acciaio	D.M. 17-01-2018
Progetto legno	D.M. 17-01-2018
Progetto muratura	D.M. 17-01-2018
Azione sismica	
Norma applicata per l'azione sismica	D.M. 17-01-2018

#### Azioni di progetto sulla costruzione

Nei capitoli "modellazione delle azioni" e "schematizzazione dei casi di carico" sono indicate le azioni sulla costruzioni.

Nel prosieguo si indicano tipo di analisi strutturale condotta (statico, dinamico, lineare o non lineare) e il metodo adottato per la risoluzione del problema strutturale nonché le metodologie seguite per la verifica o per il progetto-verifica delle sezioni. Si riportano le combinazioni di carico adottate e, nel caso di calcoli non lineari, i percorsi di carico seguiti; le configurazioni studiate per la struttura in esame *sono risultate effettivamente esaustive per la progettazione-verifica*.

La verifica della sicurezza degli elementi strutturali avviene con i metodi della scienza delle costruzioni. L'analisi strutturale è condotta con il metodo degli spostamenti per la valutazione dello stato tensodeformativo indotto da carichi statici. L'analisi strutturale è condotta con il metodo dell'analisi modale e dello spettro di risposta in termini di accelerazione per la valutazione dello stato tensodeformativo indotto da carichi dinamici (tra cui quelli di tipo sismico).

L'analisi strutturale viene effettuata con il metodo degli elementi finiti. Il metodo sopraindicato si basa sulla schematizzazione della struttura in elementi connessi solo in corrispondenza di un numero prefissato di punti denominati nodi. I nodi sono definiti dalle tre coordinate cartesiane in un sistema di riferimento globale. Le incognite del problema (nell'ambito del metodo degli spostamenti) sono le componenti di spostamento dei nodi riferite al sistema di riferimento globale (traslazioni secondo X, Y, Z, rotazioni attorno X, Y, Z). La soluzione del problema si ottiene con un sistema di equazioni algebriche lineari i cui termini noti sono costituiti dai carichi agenti sulla struttura opportunamente concentrati ai nodi:

$K \cdot u = F$  dove  
 $K$  = matrice di rigidezza  
 $u$  = vettore spostamenti nodali  
 $F$  = vettore forze nodali

Dagli spostamenti ottenuti con la risoluzione del sistema vengono quindi dedotte le sollecitazioni e/o le tensioni di ogni elemento, riferite generalmente ad una terna locale all'elemento stesso.

Il sistema di riferimento utilizzato è costituito da una terna cartesiana destrorsa XYZ. Si assume l'asse Z verticale ed orientato verso l'alto. Gli elementi utilizzati per la modellazione dello schema statico della struttura sono i seguenti:

Elemento tipo <b>TRUSS</b>	(biella-D2)
Elemento tipo <b>BEAM</b>	(trave-D2)
Elemento tipo <b>MEMBRANE</b>	(membrana-D3)
Elemento tipo <b>PLATE</b>	(piastra-guscio-D3)
Elemento tipo <b>BOUNDARY</b>	(molla)
Elemento tipo <b>STIFFNESS</b>	(matrice di rigidezza)
Elemento tipo <b>BRICK</b>	(elemento solido)
Elemento tipo <b>SOLAIO</b>	(macro elemento composto da più membrane)

## Modello numerico

In questa parte viene descritto il modello numerico utilizzato (o i modelli numerici utilizzati) per l'analisi della struttura. La presentazione delle informazioni deve essere, coerentemente con le prescrizioni del paragrafo 10.2 e relativi sottoparagrafi delle NTC-18, tale da garantirne la leggibilità, la corretta interpretazione e la riproducibilità

Tipo di analisi strutturale	
Carichi verticali	SI
Sismica statica lineare	NO
Sismica dinamica lineare	SI
Sismica statica non lineare (prop. masse)	NO
Sismica statica non lineare (prop. modo)	NO
Sismica statica non lineare (triangolare)	NO
Non linearità geometriche (fattore P delta)	NO

Di seguito si indicano l'origine e le caratteristiche dei codici di calcolo utilizzati riportando titolo, produttore e distributore, versione, estremi della licenza d'uso:

Informazioni sul codice di calcolo	
Titolo:	PRO_SAP PROfessional Structural Analysis Program
Versione:	PROFESSIONAL (build 2020-12-191)
Produttore-Distributore:	2S.I. Software e Servizi per l'Ingegneria s.r.l., Ferrara
Codice Licenza:	Licenza dsi4792

Un attento esame preliminare della documentazione a corredo del software **ha consentito di valutarne l'affidabilità e soprattutto l'idoneità al caso specifico**. La documentazione, fornita dal produttore e distributore del software, contiene una esauriente descrizione delle basi teoriche e degli algoritmi impiegati, l'individuazione dei campi d'impiego, nonché casi prova interamente risolti e commentati, corredati dei file di input necessari a riprodurre l'elaborazione:

Affidabilità dei codici utilizzati
2S.I. ha verificato l'affidabilità e la robustezza del codice di calcolo attraverso un numero significativo di casi prova in cui i risultati dell'analisi numerica sono stati confrontati con soluzioni teoriche. E' possibile reperire la documentazione contenente alcuni dei più significativi casi trattati al seguente link: <a href="https://www.2si.it/it/prodotti/affidabilita/">https://www.2si.it/it/prodotti/affidabilita/</a>

Modellazione della geometria e proprietà meccaniche:	
nodi	46
elementi D2 (per aste, travi, pilastri...)	26
elementi D3 (per pareti, platee, gusci...)	16
elementi solaio	4
elementi solidi	0
Dimensione del modello strutturale [cm]:	
X min =	-52.00
Xmax =	1140.00
Ymin =	-62.50
Ymax =	121.00
Zmin =	0.00
Zmax =	555.00
Strutture verticali:	
Elementi di tipo asta	NO
Pilastri	SI
Pareti	NO
Setti (a comportamento membranale)	NO
Strutture non verticali:	
Elementi di tipo asta	NO
Travi	SI

Gusci	NO
Membrane	NO
<b>Orizzontamenti:</b>	
Solai con la proprietà piano rigido	NO
Solai senza la proprietà piano rigido	SI
<b>Tipo di vincoli:</b>	
Nodi vincolati rigidamente	SI
Nodi vincolati elasticamente	NO
Nodi con isolatori sismici	NO
Fondazioni puntuali (plinti/plinti su palo)	NO
Fondazioni di tipo trave	NO
Fondazioni di tipo platea	SI
Fondazioni con elementi solidi	NO

## Modellazione delle azioni

Si veda il capitolo “**Schematizzazione dei casi di carico**” per le informazioni necessarie alla comprensione ed alla ricostruzione delle azioni applicate al modello numerico, coerentemente con quanto indicato nella parte “2.6. Azioni di progetto sulla costruzione”.

## Combinazioni e/o percorsi di carico

Si veda il capitolo “**Definizione delle combinazioni**” in cui sono indicate le combinazioni di carico adottate e, nel caso di calcoli non lineari, i percorsi di carico seguiti.

Combinazioni dei casi di carico	
APPROCCIO PROGETTUALE	Approccio 2
Tensioni ammissibili	NO
SLU	SI
SLV (SLU con sisma)	SI
SLC	NO
SLD	SI
SLO	SI
SLU GEO A2 (per approccio 1)	NO
SLU EQU	NO
Combinazione caratteristica (rara)	SI
Combinazione frequente	SI
Combinazione quasi permanente (SLE)	SI
SLA (accidentale quale incendio)	NO

## Verifiche agli stati limite ultimi

Nel capitolo relativo alla progettazione degli elementi strutturali agli SLU vengono indicate, con riferimento alla normativa adottata, le modalità ed i criteri seguiti per valutare la sicurezza della struttura nei confronti delle possibili situazioni di crisi ed i risultati delle valutazioni svolte. In via generale, oltre alle verifiche di resistenza e di spostamento, devono essere prese in considerazione verifiche nei confronti dei fenomeni di instabilità, locale e globale, di fatica, di duttilità, di degrado.

## Verifiche agli stati limite di esercizio

Nel capitolo relativo alla progettazione degli elementi strutturali agli SLE vengono indicate, con riferimento alla normativa adottata, le modalità seguite per valutare l'affidabilità della struttura nei confronti delle possibili situazioni di perdita di funzionalità (per eccessive deformazioni, fessurazioni, vibrazioni, etc.) ed i risultati delle valutazioni svolte.

## RELAZIONE SUI MATERIALI

Il capitolo Materiali riporta informazioni esaustive relative all'elenco dei materiali impiegati e loro modalità di posa in opera e ai valori di calcolo.

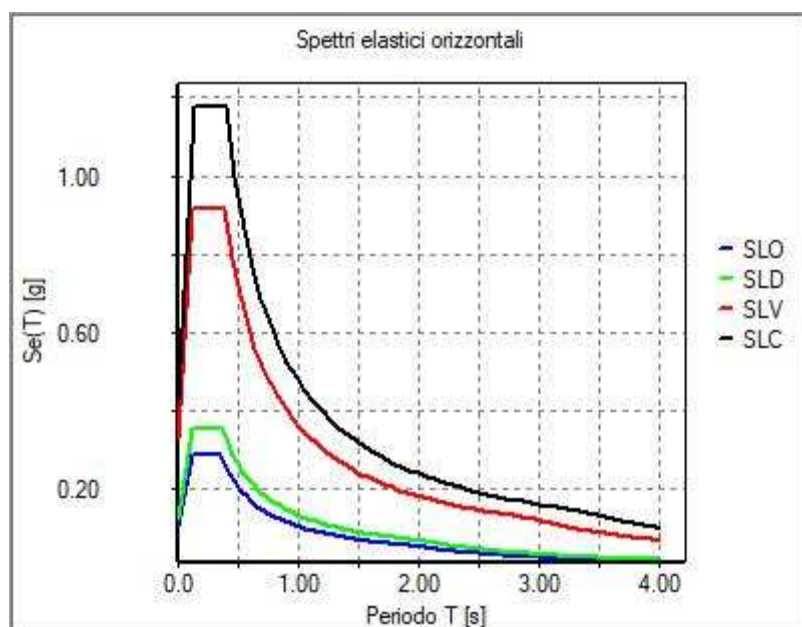
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# NORMATIVA DI RIFERIMENTO

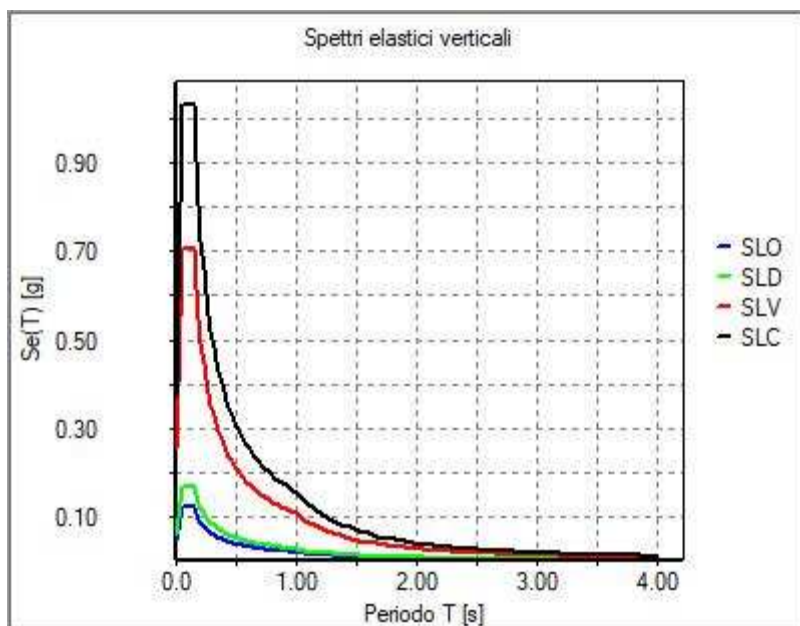
35. D.Min. Infrastrutture Min. Interni e Prot. Civile 17 Gennaio 2018 e allegate "Norme tecniche per le costruzioni".
36. Circolare 21/01/19, n. 7 C.S.LL.PP. "Istruzioni per l'applicazione dell'aggiornamento delle Norme Tecniche delle Costruzioni di cui al decreto ministeriale 17 gennaio 2018"
37. D.Min. Infrastrutture e trasporti 14 Settembre 2005 e allegate "Norme tecniche per le costruzioni".
38. D.M. LL.PP. 9 Gennaio 1996 "Norme tecniche per il calcolo, l'esecuzione ed il collaudo delle strutture in cemento armato, normale e precompresso e per le strutture metalliche".
39. D.M. LL.PP. 16 Gennaio 1996 "Norme tecniche relative ai <<Criteri generali per la verifica di sicurezza delle costruzioni e dei carichi e sovraccarichi>>".
40. D.M. LL.PP. 16 Gennaio 1996 "Norme tecniche per le costruzioni in zone sismiche".
41. Circolare 4/07/96, n.156AA.GG./STC. istruzioni per l'applicazione delle "Norme tecniche relative ai <<Criteri generali per la verifica di sicurezza delle costruzioni e dei carichi e sovraccarichi>>" di cui al D.M. 16/01/96.
42. Circolare 10/04/97, n.65AA.GG. istruzioni per l'applicazione delle "Norme tecniche per le costruzioni in zone sismiche" di cui al D.M. 16/01/96.
43. D.M. LL.PP. 20 Novembre 1987 "Norme tecniche per la progettazione, esecuzione e collaudo degli edifici in muratura e per il loro consolidamento".
44. Circolare 4 Gennaio 1989 n. 30787 "Istruzioni in merito alle norme tecniche per la progettazione, esecuzione e collaudo degli edifici in muratura e per il loro consolidamento".
45. D.M. LL.PP. 11 Marzo 1988 "Norme tecniche riguardanti le indagini sui terreni e sulle rocce, la stabilità dei pendii naturali e delle scarpate, i criteri generali e le prescrizioni per la progettazione, l'esecuzione e il collaudo delle opere di sostegno delle terre e delle opere di fondazione".
46. D.M. LL.PP. 3 Dicembre 1987 "Norme tecniche per la progettazione, esecuzione e collaudo delle costruzioni prefabbricate".
47. UNI 9502 - Procedimento analitico per valutare la resistenza al fuoco degli elementi costruttivi di conglomerato cementizio armato, normale e precompresso - edizione maggio 2001
48. Ordinanza del Presidente del Consiglio dei Ministri n. 3274 del 20 marzo 2003 "Primi elementi in materia di criteri generali per la classificazione sismica del territorio nazionale e di normative tecniche per le costruzioni in zona sismica" e successive modificazioni e integrazioni.
49. UNI EN 1990:2006 13/04/2006 Eurocodice 0 - Criteri generali di progettazione strutturale.
50. UNI EN 1991-1-1:2004 01/08/2004 Eurocodice 1 - Azioni sulle strutture - Parte 1-1: Azioni in generale - Pesi per unità di volume, pesi propri e sovraccarichi per gli edifici.
51. UNI EN 1991-2:2005 01/03/2005 Eurocodice 1 - Azioni sulle strutture - Parte 2: Carichi da traffico sui ponti.
52. UNI EN 1991-1-3:2004 01/10/2004 Eurocodice 1 - Azioni sulle strutture - Parte 1-3: Azioni in generale - Carichi da neve.
53. UNI EN 1991-1-4:2005 01/07/2005 Eurocodice 1 - Azioni sulle strutture - Parte 1-4: Azioni in generale - Azioni del vento.
54. UNI EN 1991-1-5:2004 01/10/2004 Eurocodice 1 - Azioni sulle strutture - Parte 1-5: Azioni in generale - Azioni termiche.
55. UNI EN 1992-1-1:2005 24/11/2005 Eurocodice 2 - Progettazione delle strutture di calcestruzzo - Parte 1-1: Regole generali e regole per gli edifici.
56. UNI EN 1992-1-2:2005 01/04/2005 Eurocodice 2 - Progettazione delle strutture di calcestruzzo - Parte 1-2: Regole generali - Progettazione strutturale contro l'incendio.
57. UNI EN 1993-1-1:2005 01/08/2005 Eurocodice 3 - Progettazione delle strutture di acciaio - Parte 1-1: Regole generali e regole per gli edifici.
58. UNI EN 1993-1-8:2005 01/08/2005 Eurocodice 3 - Progettazione delle strutture di acciaio - Parte 1-8: Progettazione dei collegamenti.
59. UNI EN 1994-1-1:2005 01/03/2005 Eurocodice 4 - Progettazione delle strutture composte acciaio-calcestruzzo - Parte 1-1: Regole generali e regole per gli edifici.
60. UNI EN 1994-2:2006 12/01/2006 Eurocodice 4 - Progettazione delle strutture composte acciaio-calcestruzzo - Parte 2: Regole generali e regole per i ponti.
61. UNI EN 1995-1-1:2005 01/02/2005 Eurocodice 5 - Progettazione delle strutture di legno - Parte 1-1: Regole generali - Regole comuni e regole per gli edifici.
62. UNI EN 1995-2:2005 01/01/2005 Eurocodice 5 - Progettazione delle strutture di legno - Parte 2: Ponti.

63. UNI EN 1996-1-1:2006 26/01/2006 Eurocodice 6 - Progettazione delle strutture di muratura - Parte 1-1: Regole generali per strutture di muratura armata e non armata.
64. UNI EN 1996-3:2006 09/03/2006 Eurocodice 6 - Progettazione delle strutture di muratura - Parte 3: Metodi di calcolo semplificato per strutture di muratura non armata.
65. UNI EN 1997-1:2005 01/02/2005 Eurocodice 7 - Progettazione geotecnica - Parte 1: Regole generali.
66. UNI EN 1998-1:2005 01/03/2005 Eurocodice 8 - Progettazione delle strutture per la resistenza sismica - Parte 1: Regole generali, azioni sismiche e regole per gli edifici.
67. UNI EN 1998-3:2005 01/08/2005 Eurocodice 8 - Progettazione delle strutture per la resistenza sismica - Parte 3: Valutazione e adeguamento degli edifici.
68. UNI EN 1998-5:2005 01/01/2005 Eurocodice 8 - Progettazione delle strutture per la resistenza sismica - Parte 5: Fondazioni, strutture di contenimento ed aspetti geotecnici.

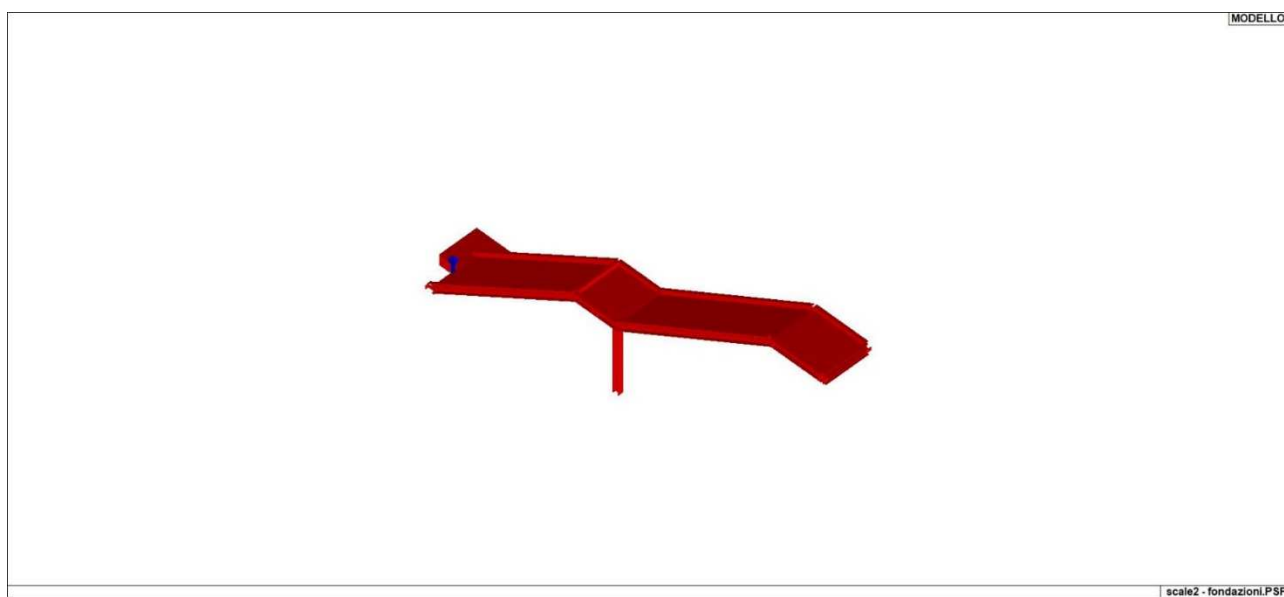
**NOTA il capitolo "normativa di riferimento": riporta l'elenco delle normative implementate nel software. Le norme utilizzate per la struttura oggetto della presente relazione sono indicate nel precedente capitolo "RELAZIONE DI CALCOLO STRUTTURALE" "ANALISI E VERIFICHE SVOLTE CON L'AUSILIO DI CODICI DI CALCOLO".** Laddove nei capitoli successivi vengano richiamate norme antecedenti al DM 17.01.18 è dovuto a progettazione simulata di edificio esistente.



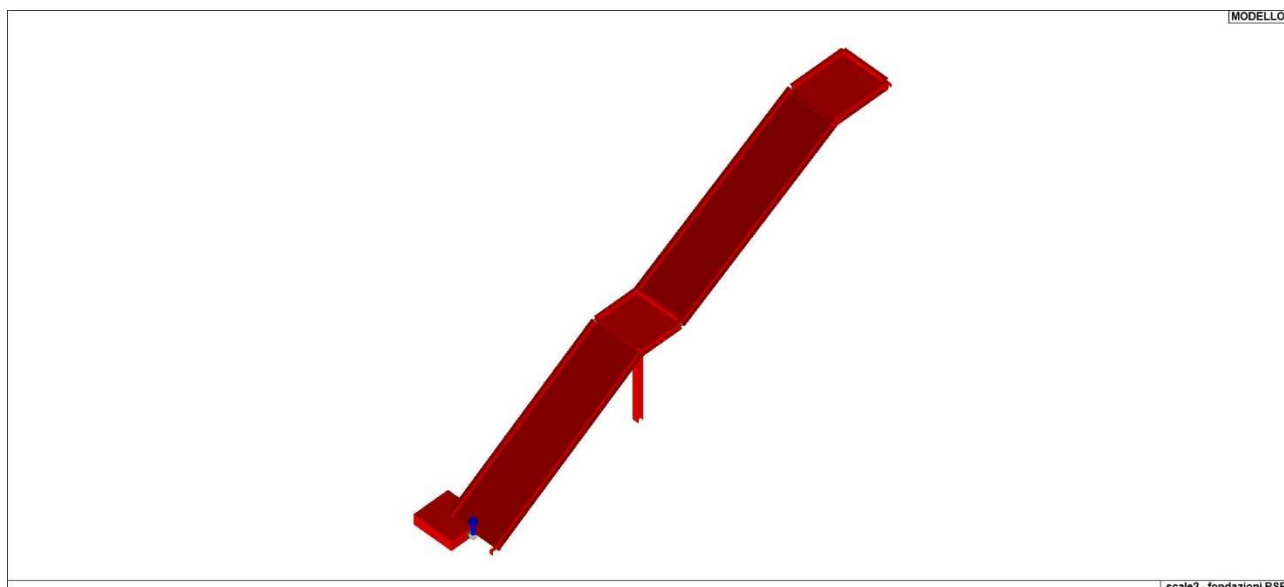
01\_INT\_SPETTRI\_ELASTICI\_O



01\_INT\_SPETTRI\_ELASTICI\_V



01\_INT\_VISTA\_SOLIDA\_001



01\_INT\_VISTA\_SOLIDA\_002

## CARATTERISTICHE MATERIALI UTILIZZATI

### LEGENDA TABELLA DATI MATERIALI

Il programma consente l'uso di materiali diversi. Sono previsti i seguenti tipi di materiale:

1	materiale tipo cemento armato
2	materiale tipo acciaio
3	materiale tipo muratura
4	materiale tipo legno
5	materiale tipo generico

I materiali utilizzati nella modellazione sono individuati da una sigla identificativa ed un codice numerico (gli elementi strutturali richiamano quest'ultimo nella propria descrizione). Per ogni materiale vengono riportati in tabella i seguenti dati:

Young	modulo di elasticità normale E
Poisson	coefficiente di contrazione trasversale $\nu$
G	modulo di elasticità tangenziale
Gamma	peso specifico
Alfa	coefficiente di dilatazione termica
Fattore di confidenza FC m	Fattore di confidenza specifico per materiale; (è riportato solo se diverso da quello globale della struttura)
Fattore di confidenza FC a	Fattore di confidenza specifico per l'armatura (è riportato solo se diverso da quello globale della struttura)
Elasto-plastico	Materiale elastico perfettamente plastico per aste non lineari
Massima compressione	Massima tensione di compressione per aste non lineari
Massima trazione	Massima tensione di trazione per aste non lineari
Fattore attrito	Coefficiente di attrito per aste non lineari
Rapporto HRDb	Rapporto di hardening a flessione
Rapporto HRDv	Rapporto di hardening a taglio

I dati soprariportati vengono utilizzati per la modellazione dello schema statico e per la determinazione dei carichi inerziali e termici. In relazione al tipo di materiale vengono riportati inoltre:

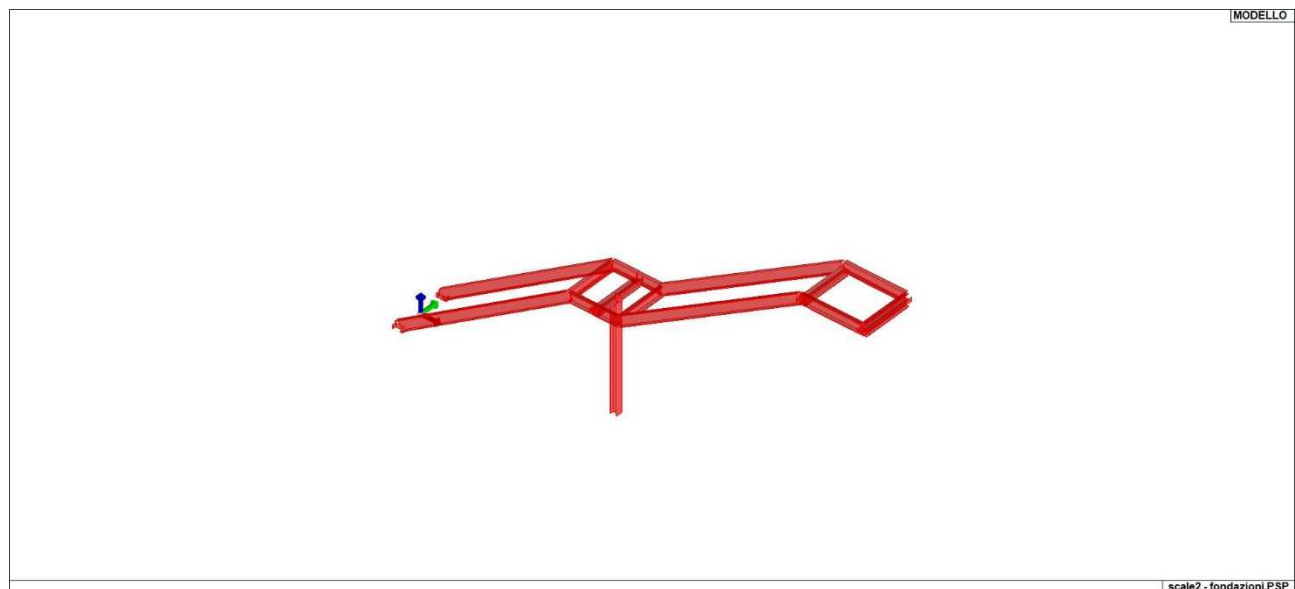
1	c.a.	Resistenza Rc Resistenza fctm Coefficiente ksb	resistenza a compressione cubica resistenza media a trazione semplice Coefficiente di riduzione della resistenza a compressione da utilizzare nello stress block
2	acciaio	Tensione ft Tensione fy Resistenza fd Resistenza fd (>40) Tensione ammissibile Tensione ammissibile(>40)	Valore della tensione di rottura Valore della tensione di snervamento Resistenza di calcolo per SL CNR-UNI 10011 Resistenza di calcolo per SL CNR-UNI 10011 per spessori > 40mm Tensione ammissibile CNR-UNI 10011 Tensione ammissibile CNR-UNI 10011 per spessori > 40mm
3	muratura	Muratura consolidata Incremento resistenza Incremento rigidezza Resistenza f Resistenza fv0 Resistenza fh Resistenza fb Resistenza fbh  Resistenza fv0h  Resistenza ft Resistenza fvlm Resistenza fbt Coefficiente mu  Coefficiente fi Coefficiente ksb	Muratura per la quale si prevedono interventi di rinforzo" Incremento conseguito in termini di resistenza  Incremento conseguito in termini di rigidezza Valore della resistenza a compressione Valore della resistenza a taglio in assenza di tensioni normali Valore della resistenza a compressione orizzontale Valore della resistenza a compressione dei blocchi Valore della resistenza a compressione dei blocchi in direzione orizzontale Valore della resistenza a taglio in assenza di tensioni normali per le travi Valore della resistenza a trazione per fessurazione diagonale Valore della massima resistenza a taglio Valore della resistenza a trazione dei blocchi Coefficiente d'attrito utilizzato per la resistenza a taglio (tipicamente 0.4) Coefficiente d'ingranamento utilizzato per la resistenza a taglio Coefficiente di riduzione della resistenza a compressione da utilizzare nello stress block
4	legno	E0,05 Resistenza fc0 Resistenza ft0 Resistenza fm Resistenza fv Resist. ft0k Resist. fmk Resist. fvk Modulo E0,05 Lamellare	Modulo di elasticità corrispondente ad un frattile del 5% Valore della resistenza a compressione parallela Valore della resistenza a trazione parallela Valore della resistenza a flessione Valore della resistenza a taglio Resistenza caratteristica (tensione amm. per REGLES) per trazione Resistenza caratteristica (tensione amm. per REGLES) per flessione Resistenza caratteristica (tensione amm. per REGLES) per taglio Modulo elastico parallelo caratteristico lamellare o massiccio

Nel tabulato si riportano sia i valori caratteristici che medi utilizzando gli uni e/o gli altri in relazione alle richieste di normativa ed alla tipologia di verifica. (Cap.7 NTC18 per materiali nuovi, Cap.8 NTC18 e relativa circolare 21/01/2019 per materiali esistenti, Linee Guida Reluis per incamiciatura CAM, CNR-DT 200 per interventi con FRP)

Vengono inoltre riportate le tabelle contenenti il riassunto delle informazioni assegnate nei criteri di progetto in uso.



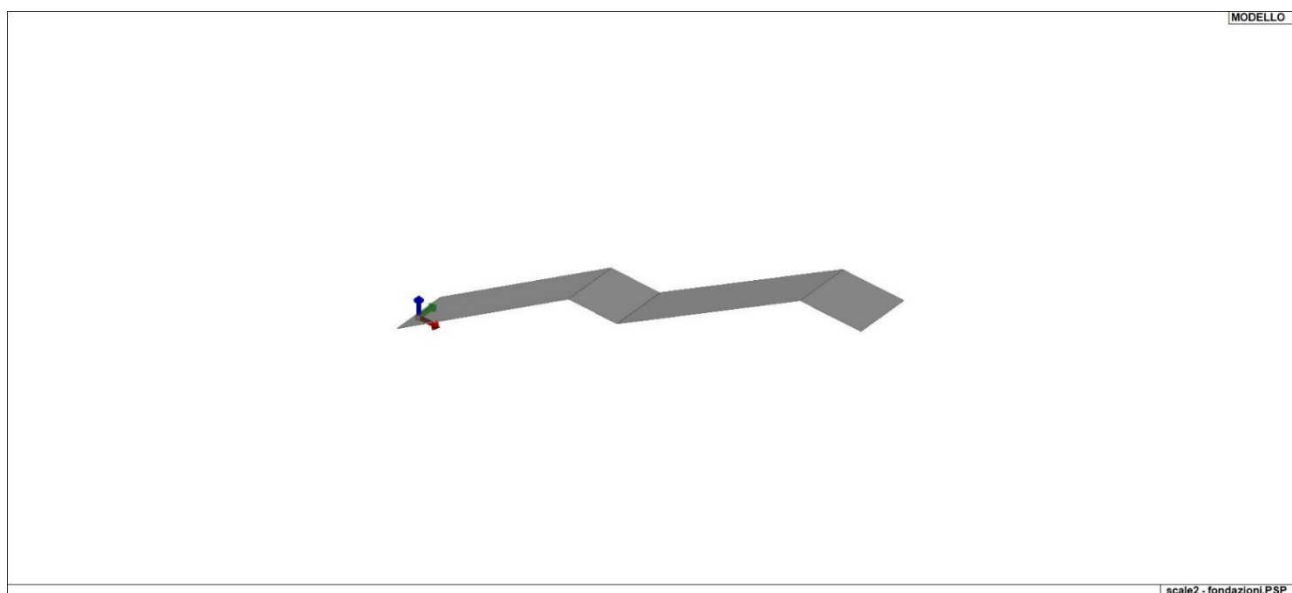
Id	Tipo / Note	V. caratt.	V. medio	Young	Poisson	G	Gamma	Alfa	Altri
		daN/cm2	daN/cm2	daN/cm2		daN/cm2	daN/cm3		
4	Calcestruzzo Classe C30/37			3.302e+05	0.20	1.376e+05	2.50e-03	1.00e-05	
	Resistenza Rc	370.0							
	Resistenza fctm		29.4						
	Rapporto Rfessurata								1.00
	Coefficiente ksb								0.85
	Rapporto HRDb								1.00e-05
	Rapporto HRDv								1.00e-05
12	Acciaio Fe430 - S275-acciaio Fe430-S275			2.100e+06	0.30	8.077e+05	7.85e-03	1.20e-05	
	Tensione ft	4300.0							
	Resistenza fd	2750.0							
	Resistenza fd (>40)	2500.0							
	Tensione ammissibile	1900.0							
	Tensione ammissibile (>40)	1700.0							
	Rapporto HRDb								1.00e-05
	Rapporto HRDv								1.00e-05
157	Materiale inf. rigido no peso E = 1.000e+09			1.000e+09	0.0	5.000e+08	0.0	1.20e-05	
	Rapporto HRDb								1.00e-05
	Rapporto HRDv								1.00e-05



11\_MOD\_MATERIALI\_D2



11\_MOD\_MATERIALI\_D3



11\_MOD\_MATERIALI\_SOLAI

Pilastrini acc.	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
<b>Lunghezze libere</b>						
Metodo di calcolo 2-2	Assegnato	Assegnato				
2-2 Beta assegnato	1.00	2.00				
2-2 Beta * L assegnato [ cm ]	0.0	0.0				
Metodo di calcolo 3-3	Assegnato	Assegnato				
3-3 Beta assegnato	1.00	2.00				
3-3 Beta * L assegnato [ cm ]	0.0	0.0				
1-1 Beta assegnato	1.00	1.00				
1-1 Beta * L assegnato [ cm ]	0.0	0.0				
<b>Generalità</b>						
Coefficiente gamma M0	1.05	1.05				
Coefficiente gamma M1	1.05	1.05				
Coefficiente gamma M2	1.25	1.25				
Effetti del 2 ordine	SI	SI				
Momenti equivalenti	SI	SI				
Usa condizioni I e II	SI	SI				

Travi acc.	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
<b>Lunghezze libere</b>						
3-3 Beta * L automatico	NO	SI				
3-3 Beta assegnato	1.00	1.00				
3-3 Beta assegnato [ cm ]	0.0	0.0				
2-2 Beta * L automatico	NO	SI				
2-2 Beta assegnato	1.00	1.00				
2-2 Beta * L assegnato [ cm ]	0.0	0.0				
1-1 Beta * L automatico	NO	SI				
1-1 Beta assegnato	1.00	1.00				
1-1 Beta * L assegnato [ cm ]	0.0	0.0				
<b>Generalità</b>						
Coefficiente gamma M0	1.05	1.05				
Coefficiente gamma M1	1.05	1.05				
Coefficiente gamma M2	1.25	1.25				
Luce di taglio per GR [ cm ]	1.00	1.00				
Usa condizioni I e II	SI	SI				
Momenti equivalenti	SI	SI				

Gusci c.a.	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
<b>Armatura</b>						
Inclinazione Ax [ gradi ]	0.0	0.0				
Angolo Ax-Ay [ gradi ]	90.00	90.00				
Minima tesa	0.31	0.0				
Massima tesa	0.78	0.78				
Maglia unica centrale	NO	NO				
Copriferro [ cm ]	2.00	4.00				
<b>Maglia x</b>						
diametro	10	10				
passo	20	20				
diametro aggiuntivi	12	12				
<b>Maglia y</b>						
diametro	10	10				
passo	20	20				
diametro aggiuntivi	12	12				
<b>Stati limite ultimi</b>						
Tensione fy [daN/cm2 ]	4500.00	4500.00				
Tipo acciaio	tipo C	tipo C				
Coefficiente gamma s	1.15	1.15				
Coefficiente gamma c	1.50	1.50				
Verifiche con N costante	SI	SI				
Applica SLU da DIN	NO	NO				
<b>Tensioni ammissibili</b>						
Tensione amm. cls [daN/cm2 ]	97.50	97.50				
Tensione amm. acciaio [daN/cm2 ]	2600.00	2600.00				
Rapporto omogeneizzazione N	15.00	15.00				
Massimo rapporto area compressa/tesa	1.00	1.00				
<b>Resistenza al fuoco</b>						
3- intradosso	NO	NO				
3+ estradosso	NO	NO				
Tempo di esposizione R	15	15				

Solai e pannelli	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
<b>Generalità</b>						
Usa tensioni ammissibili	NO	NO				
Af inf: da traliccio	SI	SI				
Consenti armatura a taglio	NO	NO				
Incrementa armatura longitudinale per taglio	SI	SI				
Af inf: da q*L*L /	20.00	20.00				
Incremento fascia piena [ cm ]	5.00	5.00				
<b>Armatura</b>						
Minima tesa	0.15	0.15				
Massima tesa	3.00	3.00				
Minima compressa	0.0	0.0				
Af/h [ cm ]	7.000e-02	7.000e-02				
<b>Stati limite ultimi</b>						
Tensione fy [daN/cm2 ]	4500.00	4500.00				
Tipo acciaio	tipo C	tipo C				
Coefficiente gamma s	1.15	1.15				

<b>Solai e pannelli</b>	<b>1/7/..</b>	<b>2/8/..</b>	<b>3/9/..</b>	<b>4/10/..</b>	<b>5/11/..</b>	<b>6/12/..</b>
Coefficiente gamma c	1.50	1.50				
Fattore di redistribuzione	0.0	0.0				
<b>Tensioni ammissibili</b>						
Tensione amm. cls [daN/cm <sup>2</sup> ]	85.00	85.00				
Tensione amm. acciaio [daN/cm <sup>2</sup> ]	2600.00	2600.00				
Rapporto omogeneizzazione N	15.00	15.00				
Massimo rapporto area compressa/tesa	1.00	1.00				
<b>Verifica freccia</b>						
Infinita	250.00	250.00				
Istantanea	500.00	500.00				
Fattore viscosità	3.00	3.00				
Usa J non fessurato	NO	NO				
<b>Elementi non strutturali</b>						
Tamponatura antiespulsione	NO	NO				
Tamponatura con armatura	NO	NO				
Fattore di struttura/comportamento	2.00	2.00				
Coefficiente gamma m	0.0	0.0				
Periodo Ta	0.0	0.0				
Altezza pannello	0.0	0.0				

## MODELLAZIONE DELLE SEZIONI

### LEGENDA TABELLA DATI SEZIONI

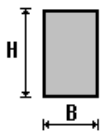
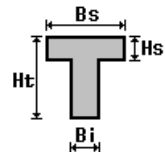
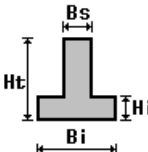
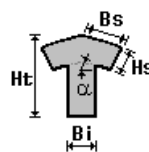
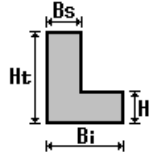
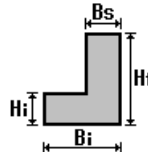
Il programma consente l'uso di sezioni diverse. Sono previsti i seguenti tipi di sezione:

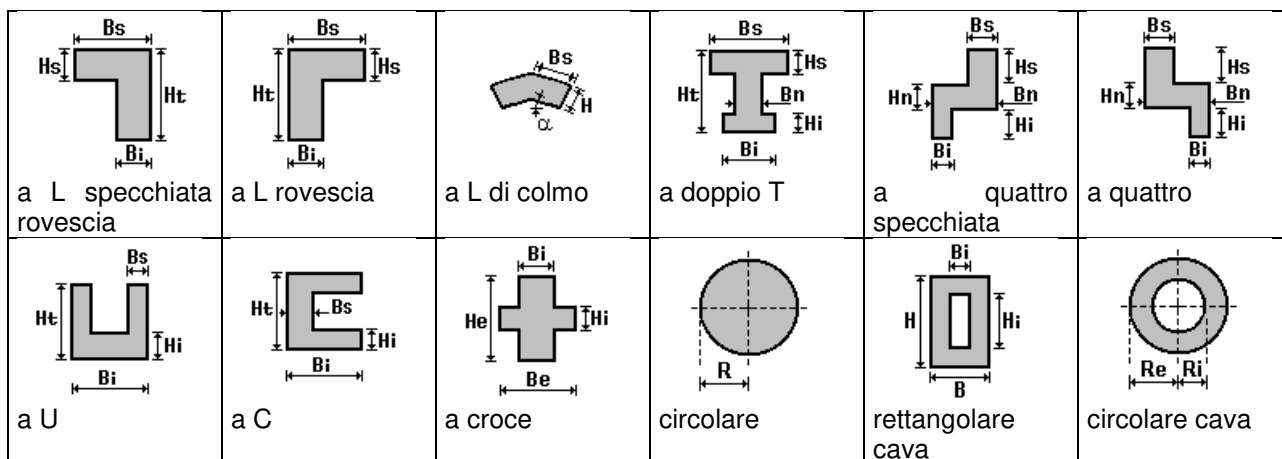
4. sezione di tipo generico
5. profilati semplici
6. profilati accoppiati e speciali

Le sezioni utilizzate nella modellazione sono individuate da una sigla identificativa ed un codice numerico (gli elementi strutturali richiamano quest'ultimo nella propria descrizione). Per ogni sezione vengono riportati in tabella i seguenti dati:

<b>Area</b>	area della sezione
<b>A V2</b>	area della sezione/fattore di taglio (per il taglio in direzione 2)
<b>A V3</b>	area della sezione/fattore di taglio (per il taglio in direzione 3)
<b>Jt</b>	fattore torsionale di rigidezza
<b>J2-2</b>	momento d'inerzia della sezione riferito all'asse 2
<b>J3-3</b>	momento d'inerzia della sezione riferito all'asse 3
<b>W2-2</b>	modulo di resistenza della sezione riferito all'asse 2
<b>W3-3</b>	modulo di resistenza della sezione riferito all'asse 3
<b>Wp2-2</b>	modulo di resistenza plastico della sezione riferito all'asse 2
<b>Wp3-3</b>	modulo di resistenza plastico della sezione riferito all'asse 3

I dati sopra riportati vengono utilizzati per la determinazione dei carichi inerziali e per la definizione delle rigidezze degli elementi strutturali; qualora il valore di Area V2 (e/o Area V3) sia nullo la deformabilità per taglio V2 (e/o V3) è trascurata. La valutazione delle caratteristiche inerziali delle sezioni è condotta nel riferimento 2-3 dell'elemento.

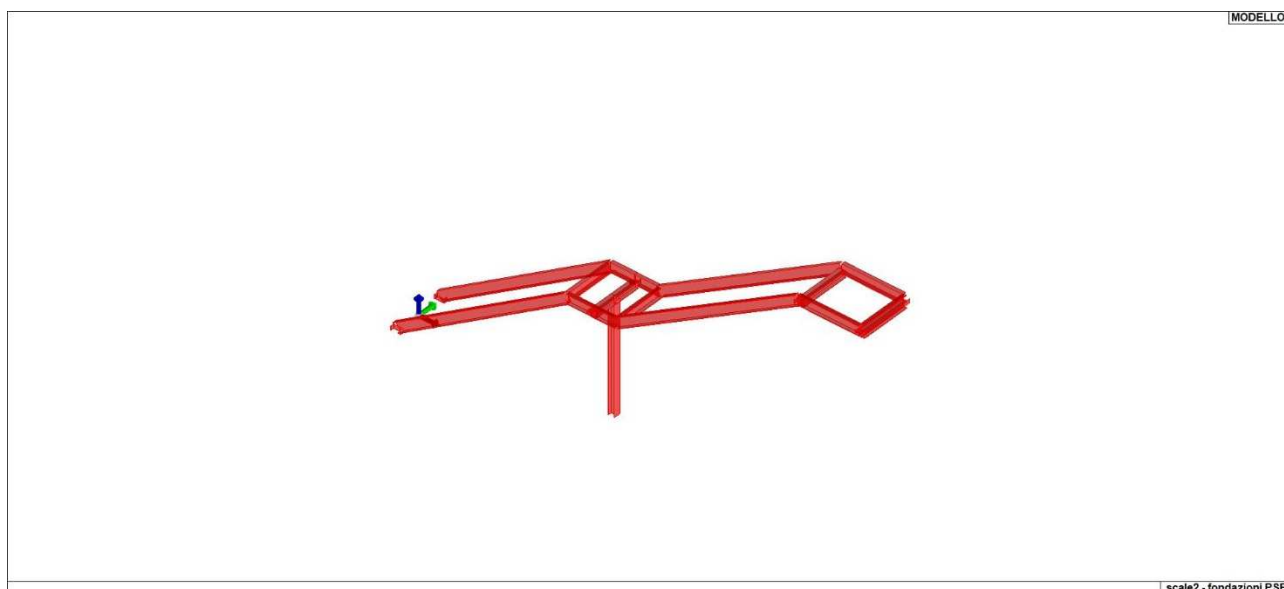
					
rettangolare	a T	a T rovescia	a T di colmo	a L	a L specchiata



Per quanto concerne i profilati semplici ed accoppiati l'asse 2 del riferimento coincide con l'asse x riportato nei più diffusi profilati.

Per quanto concerne le sezioni di tipo generico (tipo 1.):  
i valori dimensionali con prefisso B sono riferiti all'asse 2  
i valori dimensionali con prefisso H sono riferiti all'asse 3

Id	Tipo	Area	A V2	A V3	Jt	J 2-2	J 3-3	W 2-2	W 3-3	Wp 2-2	Wp 3-3
1	HEA 160	38.80	0.0	0.0	12.20	616.00	1673.00	76.90	220.10	117.60	245.10
2	HEA 160	38.80	0.0	0.0	12.20	616.00	1673.00	76.90	220.10	117.60	245.10
3	UNP 240	42.30	0.0	0.0	19.70	247.00	3599.00	39.50	300.00	75.70	358.00



13\_MOD\_SEZIONI

# MODELLAZIONE STRUTTURA: NODI

## LEGENDA TABELLA DATI NODI

Il programma utilizza per la modellazione nodi strutturali.

Ogni nodo è individuato dalle coordinate cartesiane nel sistema di riferimento globale (X Y Z).

Ad ogni nodo è eventualmente associato un codice di vincolamento rigido, un codice di fondazione speciale, ed un set di sei molle (tre per le traslazioni, tre per le rotazioni). Le tabelle sottoriportate riflettono le succitate possibilità. In particolare per ogni nodo viene indicato in tabella:

<b>Nodo</b>	numero del nodo.
<b>X</b>	valore della coordinata X
<b>Y</b>	valore della coordinata Y
<b>Z</b>	valore della coordinata Z

Per i nodi ai quali sia associato un codice di vincolamento rigido, un codice di fondazione speciale o un set di molle viene indicato in tabella:

<b>Nodo</b>	numero del nodo.
<b>X</b>	valore della coordinata X
<b>Y</b>	valore della coordinata Y
<b>Z</b>	valore della coordinata Z
<b>Note</b>	eventuale codice di vincolo (es. v=110010 sei valori relativi ai sei gradi di libertà previsti per il nodo TxTyTzRxRyRz, il valore 1 indica che lo spostamento o rotazione relativo è impedito, il valore 0 indica che lo spostamento o rotazione relativo è libero).
<b>Note</b>	(FS = 1, 2,...) eventuale codice del tipo di fondazione speciale (1, 2,... fanno riferimento alle tipologie: plinto, palo, plinto su pali,...) che è collegato al nodo. (ISO = "id SIGLA") indice e sigla identificativa dell' eventuale isolatore sismico assegnato al nodo
<b>Rig. TX</b>	valore della rigidezza dei vincoli elastici eventualmente applicati al nodo, nello specifico TX (idem per TY, TZ, RX, RY, RZ).

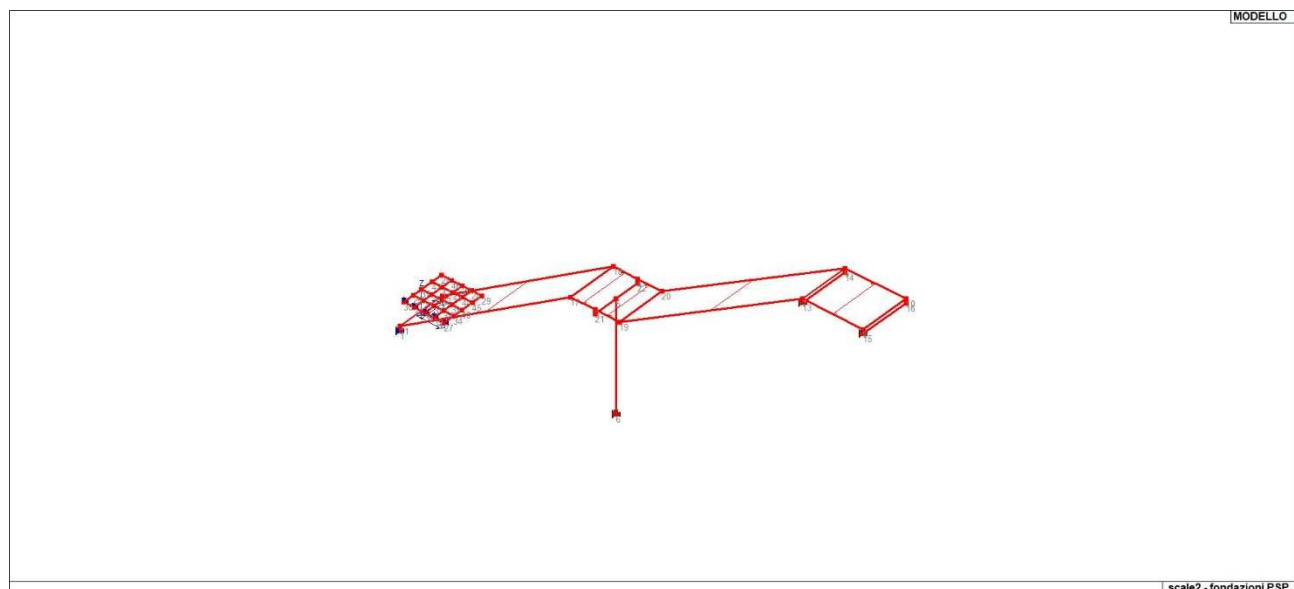
Per strutture sismicamente isolate viene inoltre inserita la tabella delle caratteristiche per gli isolatori utilizzati; le caratteristiche sono indicate in conformità al cap. 7.10 del D.M. 17/01/18

## TABELLA DATI NODI

Nodo	X	Y	Z	Nodo	X	Y	Z	Nodo	X	Y	Z
	cm	cm	cm		cm	cm	cm		cm	cm	cm
2	0.0	62.5	0.0	3	480.0	-62.5	282.5	4	480.0	62.5	282.5
5	480.0	0.0	272.5	7	990.0	-62.5	555.0	8	990.0	62.5	555.0
9	1140.0	-62.5	555.0	10	1140.0	62.5	555.0	11	0.0	-62.5	10.0
12	0.0	62.5	10.0	14	990.0	62.5	545.0	16	1140.0	62.5	545.0
17	420.0	-62.5	282.5	18	420.0	62.5	282.5	19	540.0	-62.5	282.5
20	540.0	62.5	282.5	21	480.0	-62.5	272.5	22	480.0	62.5	272.5
23	-27.0	38.5	0.0	24	23.0	121.0	0.0	25	-52.0	38.5	0.0
26	0.0	121.0	0.0	28	-52.0	121.0	0.0	29	48.0	121.0	0.0
31	0.0	38.5	0.0	33	23.0	38.5	0.0	34	48.0	38.5	0.0
35	-27.0	62.5	0.0	37	-52.0	62.5	0.0	39	23.0	62.5	0.0
40	48.0	62.5	0.0	41	-27.0	93.5	0.0	42	-52.0	93.5	0.0
43	0.0	93.5	0.0	44	23.0	93.5	0.0	45	48.0	93.5	0.0
46	-27.0	121.0	0.0								

Nodo	X	Y	Z	Note	Rig. TX	Rig. TY	Rig. TZ	Rig. RX	Rig. RY	Rig. RZ
	cm	cm	cm		daN/cm	daN/cm	daN/cm	daN cm/rad	daN cm/rad	daN cm/rad
1	0.0	-62.5	0.0	v=111000						
6	480.0	0.0	0.0	v=111111						

Nodo	X	Y	Z	Note	Rig. TX	Rig. TY	Rig. TZ	Rig. RX	Rig. RY	Rig. RZ
13	990.0	-62.5	545.0	v=111111						
15	1140.0	-62.5	545.0	v=111111						
27	48.0	11.0	0.0	v=110000			100.0			
30	-52.0	11.0	0.0	v=110000			100.0			
32	23.0	11.0	0.0	v=110000			100.0			
36	-27.0	11.0	0.0	v=110000			100.0			
38	0.0	11.0	0.0	v=110000			100.0			



14\_MOD\_NUMERAZIONE\_NODI

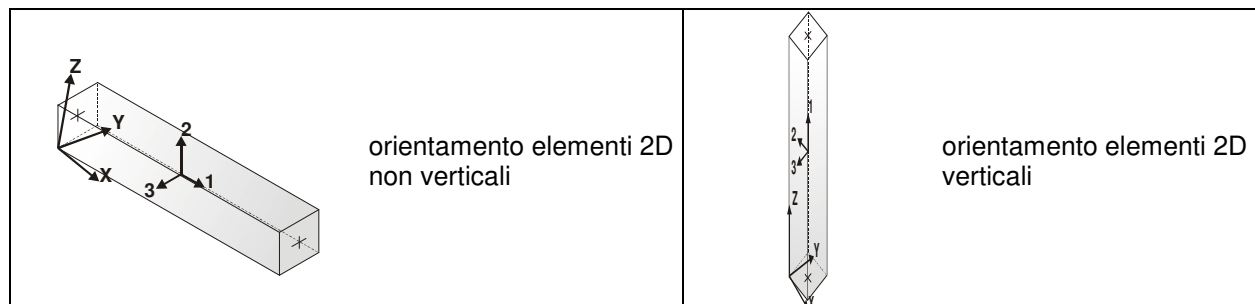
## MODELLAZIONE STRUTTURA: ELEMENTI TRAVE

### TABELLA DATI TRAVI

Il programma utilizza per la modellazione elementi a due nodi denominati in generale travi.

Ogni elemento trave è individuato dal nodo iniziale e dal nodo finale.

Ogni elemento è caratterizzato da un insieme di proprietà riportate in tabella che ne completano la modellazione.



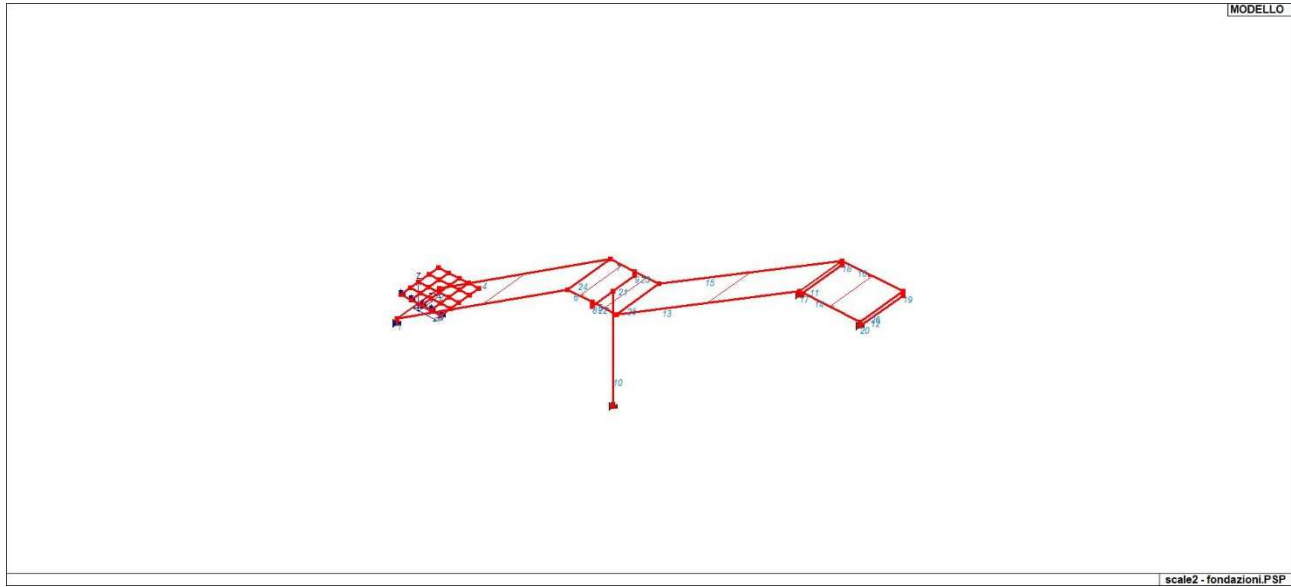
In particolare per ogni elemento viene indicato in tabella:

<b>Elem.</b>	numero dell'elemento
<b>Note</b>	codice di comportamento: trave, trave di fondazione, pilastro, asta, asta tesa, asta compressa,
<b>Nodo I (J)</b>	numero del nodo iniziale (finale)
<b>Mat.</b>	codice del materiale assegnato all'elemento

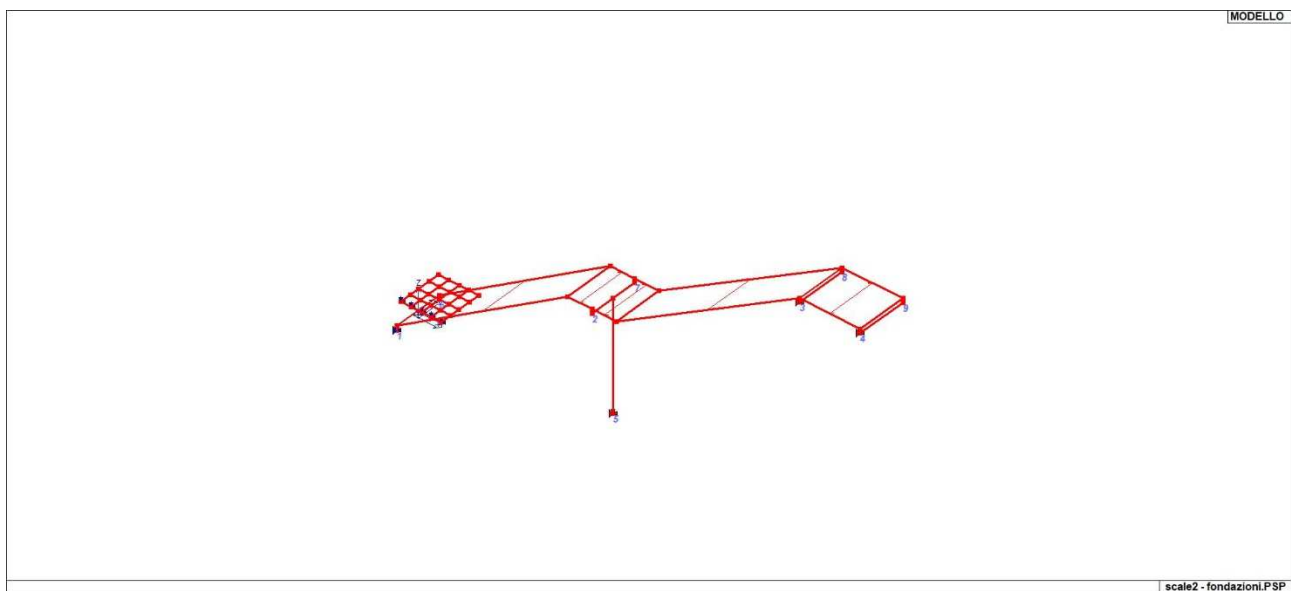
<b>Sez.</b>	codice della sezione assegnata all'elemento
<b>Rotaz.</b>	valore della rotazione dell'elemento, attorno al proprio asse, nel caso in cui l'orientamento di default non sia adottabile; l'orientamento di default prevede per gli elementi non verticali l'asse 2 contenuto nel piano verticale e l'asse 3 orizzontale, per gli elementi verticali l'asse 2 diretto secondo X negativo e l'asse 3 diretto secondo Y negativo
<b>Svincolo I (J)</b>	codici di svincolo per le azioni interne; i primi sei codici si riferiscono al nodo iniziale, i restanti sei al nodo finale (il valore 1 indica che la relativa azione interna non è attiva)
<b>Wink V</b>	costante di sottofondo (coefficiente di Winkler) per la modellazione della trave su suolo elastico
<b>Wink O</b>	costante di sottofondo (coefficiente di Winkler) per la modellazione del suolo elastico orizzontale

Elem.	Note	Nodo I	Nodo J	Mat.	Sez.	Crit.	Rotaz.	Svincolo I	Svincolo J	Wink V	Wink O
							gradi			daN/cm3	daN/cm3
1	Pilas.	1	11	12	3	1					
2	Pilas.	2	12	12	3	1	180.00				
3	Trave	11	17	12	3	1					
4	Trave	12	18	12	3	1	180.00				
5	Trave	21	5	12	1	1					
6	Trave	17	3	12	3	1					
7	Trave	18	4	12	3	1	180.00				
8	Pilas.	21	3	157	2	1					
9	Pilas.	22	4	157	2	1					
10	Pilas.	6	5	12	2	1					
11	Trave	13	14	12	1	1					
12	Trave	15	16	12	1	1					
13	Trave	19	7	12	3	1					
14	Trave	7	9	12	3	1					
15	Trave	20	8	12	3	1	180.00				
16	Trave	8	10	12	3	1	180.00				
17	Pilas.	13	7	157	2	1					
18	Pilas.	14	8	157	2	1					
19	Pilas.	16	10	157	2	1					
20	Pilas.	15	9	157	2	1					
21	Trave	5	22	12	1	1					
22	Trave	3	19	12	3	1					
23	Trave	4	20	12	3	1	180.00				
24	Trave	17	18	12	3	1	180.00				
25	Trave	19	20	12	3	1					
26	Trave	9	10	12	3	1					

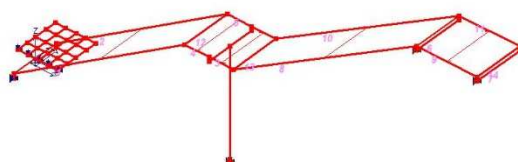




15\_MOD\_NUMERAZIONE\_D2



15\_MOD\_NUMERAZIONE\_D2\_PILASTRATE



15\_MOD\_NUMERAZIONE\_D2\_TRAVATE

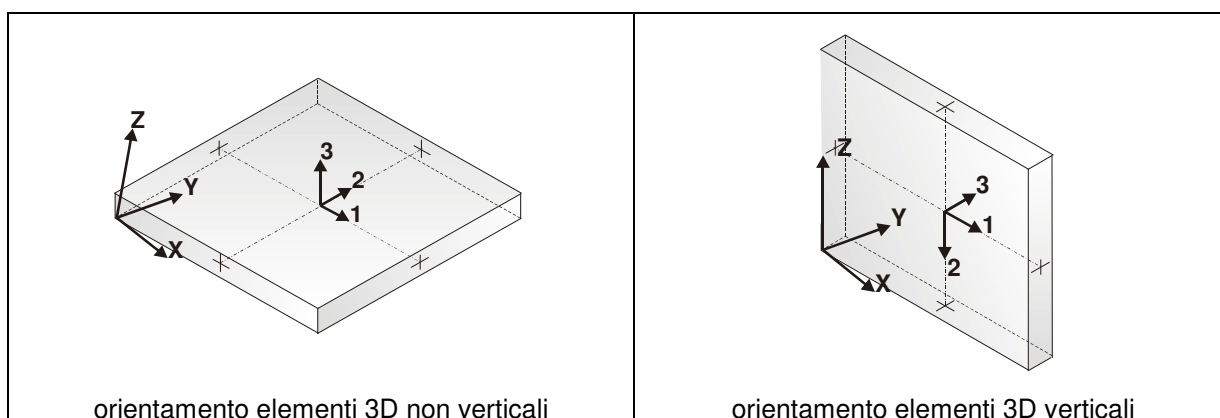
## MODELLAZIONE STRUTTURA: ELEMENTI SHELL

### LEGENDA TABELLA DATI SHELL

Il programma utilizza per la modellazione elementi a tre o quattro nodi denominati in generale shell.

Ogni elemento shell è individuato dai nodi I, J, K, L (L=I per gli elementi a tre nodi).

Ogni elemento è caratterizzato da un insieme di proprietà riportate in tabella che ne completano la modellazione.

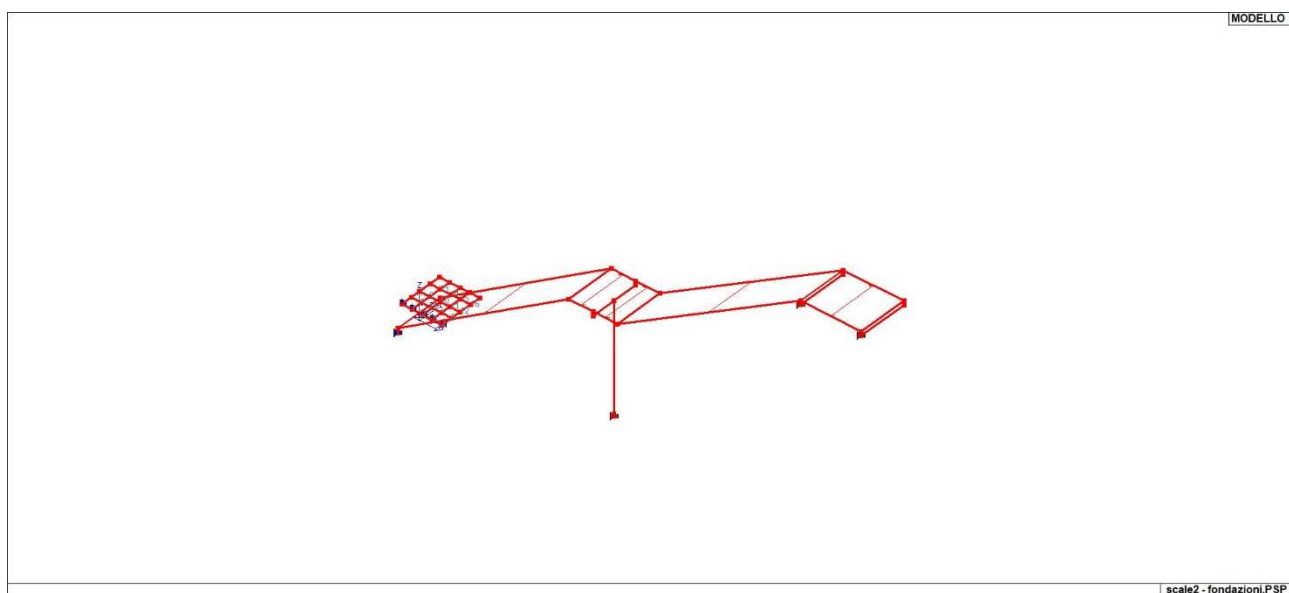


In particolare per ogni elemento viene indicato in tabella:

<b>Elem.</b>	numero dell'elemento
<b>Note</b>	codice di comportamento: <i>Guscio</i> (elemento guscio in elevazione non verticale) <i>Guscio fond.</i> (elemento guscio su suolo elastico) <i>Setto</i> (elemento guscio in elevazione verticale) <i>Membrana</i> (elemento guscio con comportamento membranale)
<b>Nodo I (J, K, L)</b>	numero del nodo I (J, K, L)
<b>Mat.</b>	codice del materiale assegnato all'elemento
<b>Spessore</b>	spessore dell'elemento (costante)
<b>Wink V</b>	costante di sottofondo (coefficiente di Winkler) per la modellazione del suolo elastico verticale

<b>Wink O</b>	costante di sottofondo (coefficiente di Winkler) per la modellazione del suolo elastico orizzontale
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Elem.	Note	Nodo I	Nodo J	Nodo K	Nodo L	Mat.	Crit.	Spessore	Svincolo	Wink V	Wink O
								cm		daN/cm3	daN/cm3
1	Guscio fond.	30	36	23	25	4	2	30.0		1.00	1.00
2	Guscio fond.	36	38	31	23	4	2	30.0		1.00	1.00
3	Guscio fond.	38	32	33	31	4	2	30.0		1.00	1.00
4	Guscio fond.	32	27	34	33	4	2	30.0		1.00	1.00
5	Guscio fond.	25	23	35	37	4	2	30.0		1.00	1.00
6	Guscio fond.	23	31	2	35	4	2	30.0		1.00	1.00
7	Guscio fond.	31	33	39	2	4	2	30.0		1.00	1.00
8	Guscio fond.	33	34	40	39	4	2	30.0		1.00	1.00
9	Guscio fond.	37	35	41	42	4	2	30.0		1.00	1.00
10	Guscio fond.	35	2	43	41	4	2	30.0		1.00	1.00
11	Guscio fond.	2	39	44	43	4	2	30.0		1.00	1.00
12	Guscio fond.	39	40	45	44	4	2	30.0		1.00	1.00
13	Guscio fond.	42	41	46	28	4	2	30.0		1.00	1.00
14	Guscio fond.	41	43	26	46	4	2	30.0		1.00	1.00
15	Guscio fond.	43	44	24	26	4	2	30.0		1.00	1.00
16	Guscio fond.	44	45	29	24	4	2	30.0		1.00	1.00



16\_MOD\_NUMERAZIONE\_D3



16\_MOD\_SPESSORI\_D3

# MODELLAZIONE DELLA STRUTTURA: ELEMENTI SOLAIO-PANNELLO

## LEGENDA TABELLA DATI SOLAI-PANNELLI

Il programma utilizza per la modellazione elementi a tre o più nodi denominati in generale solaio o pannello.

Ogni elemento solaio-pannello è individuato da una poligonale di nodi 1,2, ..., N.

L'elemento solaio è utilizzato in primo luogo per la modellazione dei carichi agenti sugli elementi strutturali. In secondo luogo può essere utilizzato per la corretta ripartizione delle forze orizzontali agenti nel proprio piano. L'elemento balcone è derivato dall'elemento solaio.

I carichi agenti sugli elementi solaio, raccolti in un archivio, sono direttamente assegnati agli elementi utilizzando le informazioni raccolte nell' archivio (es. i coefficienti combinatori). La tabella seguente riporta i dati utilizzati per la definizione dei carichi e delle masse.

L'elemento pannello è utilizzato solo per l'applicazione dei carichi, quali pesi delle tamponature o spinte dovute al vento o terre. In questo caso i carichi sono applicati in analogia agli altri elementi strutturali (si veda il cap. SCHEMATIZZAZIONE DEI CASI DI CARICO).

<b>Id.Arch.</b>	Identificativo dell' archivio
<b>Tipo</b>	Tipo di carico <b>Variab.</b> Carico variabile generico <b>Var. rid.</b> Carico variabile generico con riduzione in funzione dell' area (c.5.5. ...) <b>Neve</b> Carico di neve
<b>G1k</b>	carico permanente (comprensivo del peso proprio)
<b>G2k</b>	carico permanente non strutturale e non compiutamente definito
<b>Qk</b>	carico variabile
<b>Fatt. A</b>	fattore di riduzione del carico variabile (0.5 o 0.75) per tipo "Var.rid."
<b>S sis.</b>	fattore di riduzione del carico variabile per la definizione delle masse sismiche per D.M. 96 (vedi NOTA sul capitolo "normativa di riferimento")
<b>Psi 0</b>	Coefficiente combinatorio dei valori caratteristici delle azioni variabili: <b>per valore raro</b>
<b>Psi 1</b>	Coefficiente combinatorio dei valori caratteristici delle azioni variabili: <b>per valore frequente</b>
<b>Psi 2</b>	Coefficiente combinatorio dei valori caratteristici delle azioni variabili: <b>per valore quasi permanente</b>
<b>Psi S 2</b>	Coefficiente di combinazione che fornisce il valore quasi-permanente dell'azione

	variabile: <b>per la definizione delle masse sismiche</b>
<b>Fatt. Fi</b>	Coefficiente di correlazione dei carichi per edifici

Ogni elemento è caratterizzato da un insieme di proprietà riportate in tabella che ne completano la modellazione. In particolare per ogni elemento viene indicato in tabella:

<b>Elem</b>	numero dell'elemento
<b>Tipo</b>	codice di comportamento <b>S</b> elemento utilizzato solo per scarico <b>C</b> elemento utilizzato per scarico e per modellazione piano rigido <b>P</b> elemento utilizzato come pannello <b>M</b> scarico monodirezionale <b>B</b> scarico bidirezionale
<b>Id.Arch.</b>	Identificativo dell' archivio
<b>Mat</b>	codice del materiale assegnato all'elemento
<b>Spessore</b>	spessore dell'elemento (costante)
<b>Orditura</b>	angolo (rispetto all'asse X) della direzione dei travetti principali
<b>Gk</b>	carico permanente solaio (comprensivo del peso proprio)
<b>Qk</b>	carico variabile solaio
<b>Nodi</b>	numero dei nodi che definiscono l'elemento (5 per riga)

Nel caso in cui si sia proceduto alla progettazione dei solai con le tensioni ammissibili vengono riportate le massime tensioni nell'elemento (massima compressione nel calcestruzzo, massima tensione nell'acciaio, massima tensione tangenziale); nel caso in cui si sia proceduto alla progettazione con il metodo degli stati limite vengono riportati il rapporto  $x/d$  e le verifiche per sollecitazioni proporzionali nonché le verifiche in esercizio.

In particolare i simboli utilizzati in tabella assumono il seguente significato:

<b>Elem.</b>	numero identificativo dell'elemento
<b>Stato</b>	Codici di verifica relativi alle tensioni normali e alle tensioni tangenziali
<b>Note</b>	Viene riportato il codice relativo alla sezione(s) e relativo al materiale(m);
<b>Pos.</b>	Ascissa del punto di verifica
<b>F ist, F infi</b>	Frecce istantanee e a tempo infinito
<b>Momento</b>	Momento flettente
<b>Taglio</b>	Sollecitazione di taglio
<b>Af inf.</b>	Area di armatura longitudinale posta all'intradosso della trave
<b>Af sup.</b>	Area di armatura longitudinale posta all'estradosso della trave
<b>AfV</b>	Area dell'armatura atta ad assorbire le azioni di taglio
<b>Beff</b>	Base della sezione di cls per l'assorbimento del taglio
<b>simboli utilizzati con il metodo delle tensioni ammissibili:</b>	
<b>sc max</b>	Massima tensione di compressione del calcestruzzo
<b>sf max</b>	Massima tensione nell'acciaio
<b>tau max</b>	Massima tensione tangenziale nel cls
<b>simboli utilizzati con il metodo degli stati limite:</b>	
<b>x/d</b>	rapporto tra posizione dell'asse neutro e altezza utile alla rottura della sezione (per sola flessione)
<b>verif.</b>	rapporto $S_d/S_u$ con sollecitazioni ultime proporzionali: valore minore o uguale a 1 per verifica positiva
<b>Verif.V</b>	rapporto $S_d/S_u$ con sollecitazioni taglienti proporzionali valore minore o uguale a 1 per verifica positiva
<b>rRfck</b>	rapporto tra la massima compressione nel calcestruzzo e la tensione $f_{ck}$ in combinazioni rare [normalizzato a 1]
<b>rFfck</b>	rapporto tra la massima compressione nel calcestruzzo e la tensione $f_{ck}$ in combinazioni frequenti [normalizzato a 1]
<b>rPfck</b>	rapporto tra la massima compressione nel calcestruzzo e la tensione $f_{ck}$ in combinazioni quasi permanenti [normalizzato a 1]
<b>rRfyk</b>	rapporto tra la massima tensione nell'acciaio e la tensione $f_{yk}$ in combinazioni frequenti [normalizzato a 1]

<b>rFyk</b>	rapporto tra la massima tensione nell'acciaio e la tensione fyk in combinazioni rare [normalizzato a 1]
<b>rPfyk</b>	rapporto tra la massima tensione nell'acciaio e la tensione fyk in combinazioni quasi permanenti [normalizzato a 1]
<b>wR</b>	apertura caratteristica delle fessure in combinazioni rare [mm]
<b>wF</b>	apertura caratteristica delle fessure in combinazioni frequenti [mm]
<b>wP</b>	apertura caratteristica delle fessure in combinazioni quasi permanenti [mm]

Nel caso in cui si sia proceduto alla verifica delle tamponature secondo il D.M. 17.01.2018 - §7.2.3 viene riportata una tabella riassuntiva delle verifiche degli elementi pannello. La verifica confronta i momenti sollecitanti indotti dal sisma con i momenti resistenti, secondo tre ipotesi, due basate sulla resistenza a pressoflessione della tamponatura ed una basata sul cinematiso a seguito della formazione di tre cerniere plastiche sulla tamponatura (rif. Ufficio di Vigilanza sulle Costruzioni, Provincia di Terni).

Qualora la tamponatura sia di tipo antiespulsione (nelle due possibili varianti ordinaria o armata) viene condotta una verifica con meccanismo ad arco con degrado di resistenza. La verifica confronta le pressioni sollecitanti indotte dal sisma con le pressioni resistenti che la tamponatura sviluppa attraverso il meccanismo ad arco. La verifica considera anche il degrado di resistenza dovuto al danneggiamento nel piano della tamponatura.

Per quest'ultima tamponatura sono disponibili, in funzione del materiale impiegato (materiale [52] o materiale [53]):

- **Tamponatura Antiespulsione ordinaria Poroton® Cis Edil** sp.30 cm; con metodo di verifica per meccanismo ad arco con degrado di resistenza, sviluppato attraverso i risultati di un progetto di ricerca sperimentale condotto dall'Università degli Studi di Padova. Utilizzabile per il materiale [52].
- **Tamponatura Antiespulsione armata Poroton® Cis Edil** sp.30 cm; con metodo di verifica per meccanismo ad arco con degrado di resistenza, sviluppato attraverso i risultati di un progetto di ricerca sperimentale condotto dall'Università degli Studi di Padova. Utilizzabile per il materiale [53].

La verifica è stata calibrata sulla base di prove sperimentali sul sistema di Tamponatura Antiespulsione anche in presenza di aperture.

(rif. Rapporti di Prova redatti dal Dipartimento ICEA - Università degli Studi di Padova di test sperimentali condotti sul sistema Tamponatura Antiespulsione di Cis Edil)

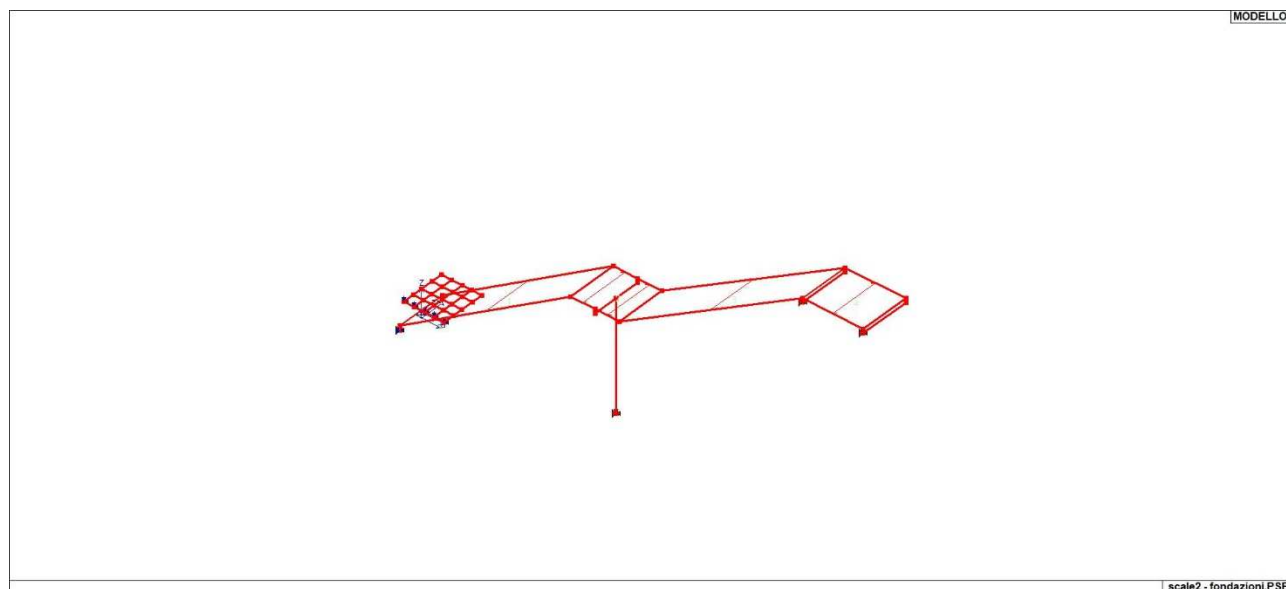
In particolare i simboli utilizzati in tabella assumono il seguente significato:

<b>Elem.</b>	Numero identificativo dell'elemento
<b>Stato</b>	Codice di verifica
<b>Ver. c.c.</b>	Verifica nell'ipotesi di trave appoggiata con carico concentrato in mezzera
<b>Ver. c.d.</b>	Verifica nell'ipotesi di trave appoggiata con carico distribuito
<b>Ver. c.cin.</b>	Verifica nell'ipotesi di cinematiso con formazione di cerniere plastiche in appoggio e mezzera
<b>Ver. CIS</b>	Rapporto $p_a/p_r$ (valore minore o uguale a 1 per verifica positiva)
<b>Z</b>	Quota del baricentro dell'elemento
<b>T1</b>	Periodo proprio dell'edificio nella direzione di interesse (ortogonale al pannello)
<b>Ta</b>	Periodo proprio della parete
<b>Sa</b>	Accelerazione massima, adimensionalizzata allo SLV
<b><math>p_a</math></b>	Pressione sulla parete causata dall'azione sismica
<b><math>p_r</math></b>	Pressione resistente del meccanismo ad arco
<b>Drift</b>	Spostamento relativo interpiano allo SLV valutato secondo il D.M. 14.01.2018 - § 7.3.3.3
<b>Beta a</b>	Coef. riduttivo per tener conto del danneggiamento del piano dipendente dallo spostamento, ottenuto sperimentalmente

ID Arch.	Tipo	G1k	G2k	Qk	Fatt. A	s sis.	Psi 0	Psi 1	Psi 2	Psi S 2	Fatt. Fi
1	Variab.	60.00		500.00		1.00	0.70	0.70	0.60	0.60	1.00

Elem.	Tipo	ID Arch.	Mat.	Spessore	Orditura	G1k	G2k	Qk	Nodo 1/6..	Nodo 2/7..	Nodo 3/8..	Nodo..	Nodo..
						daN/ m2	daN/ m2	daN/ m2					

Elem.	Tipo	ID Arch.	Mat.	Spessore	Orditura	G1k	G2k	Qk	Nodo 1/6..	Nodo 2/7..	Nodo 3/8..	Nodo..	Nodo..
1	SM	1	m=12	1.0	90.0	60.00		500.00	17	18	12	11	
2	SM	1	m=12	1.0	90.0	60.00		500.00	17	3	19	20	4
									18				
3	SM	1	m=12	1.0	90.0	60.00		500.00	7	8	20	19	
4	SM	1	m=12	1.0	90.0	60.00		500.00	9	10	8	7	



17\_MOD\_NUMERAZIONE\_SOLAI

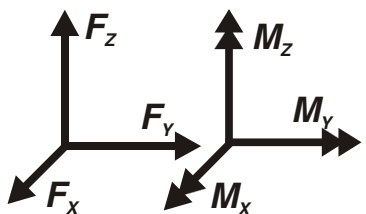
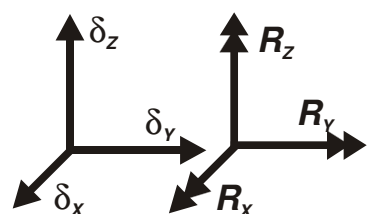
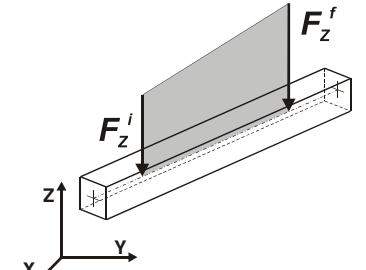
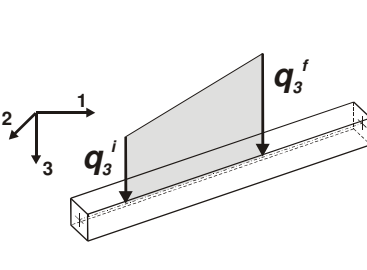
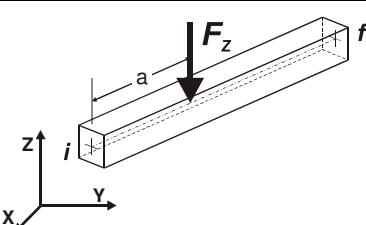
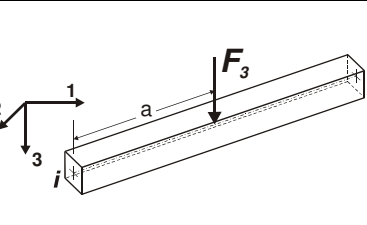
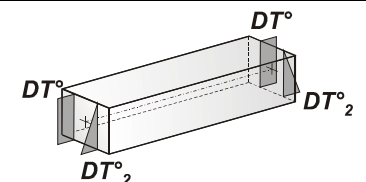
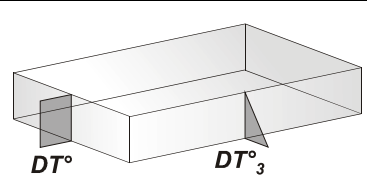
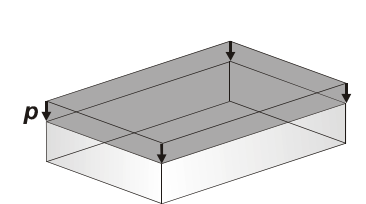
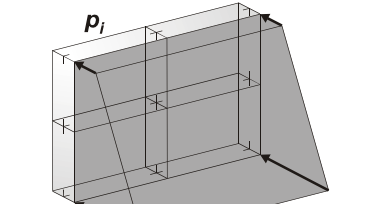
## MODELLAZIONE DELLE AZIONI

### LEGENDA TABELLA DATI AZIONI

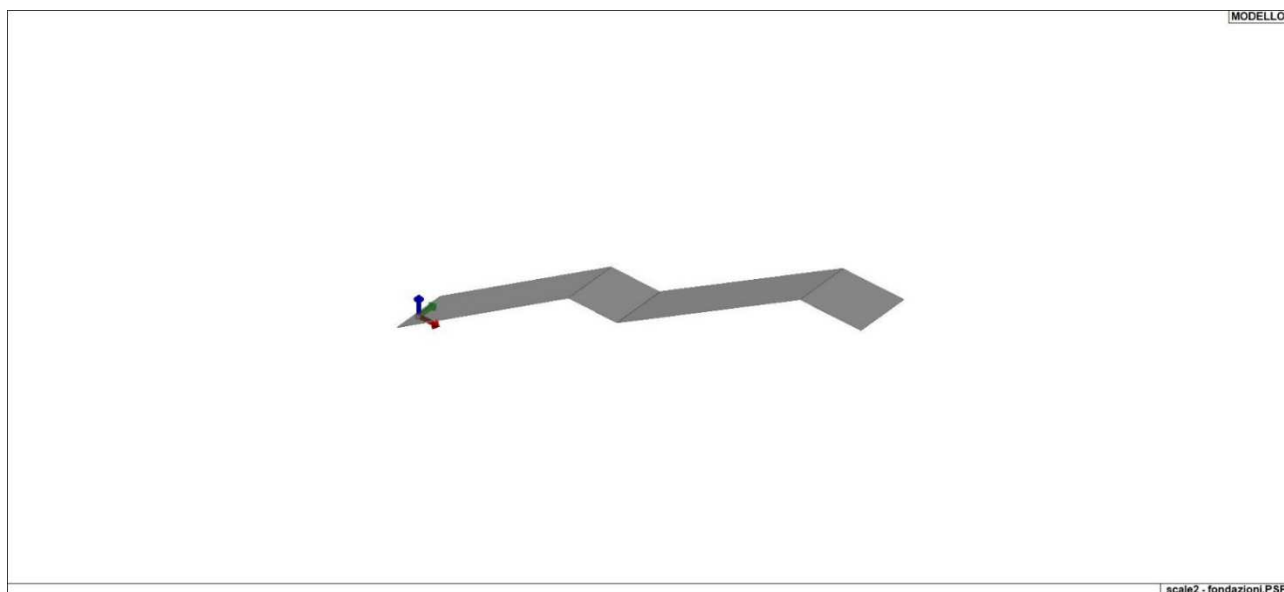
Il programma consente l'uso di diverse tipologie di carico (azioni). Le azioni utilizzate nella modellazione sono individuate da una sigla identificativa ed un codice numerico (gli elementi strutturali richiamano quest'ultimo nella propria descrizione). Per ogni azione applicata alla struttura viene di riportato il codice, il tipo e la sigla identificativa. Le tabelle successive dettagliano i valori caratteristici di ogni azione in relazione al tipo. Le tabelle riportano infatti i seguenti dati in relazione al tipo:

<b>1</b>	<b>carico concentrato nodale</b> 6 dati (forza Fx, Fy, Fz, momento Mx, My, Mz)
<b>2</b>	<b>spostamento nodale impresso</b> 6 dati (spostamento Tx, Ty, Tz, rotazione Rx, Ry, Rz)
<b>3</b>	<b>carico distribuito globale su elemento tipo trave</b> 7 dati (fx,fy,fz,mx,my,mz,ascissa di inizio carico) 7 dati (fx,fy,fz,mx,my,mz,ascissa di fine carico)
<b>4</b>	<b>carico distribuito locale su elemento tipo trave</b> 7 dati (f1,f2,f3,m1,m2,m3,ascissa di inizio carico) 7 dati (f1,f2,f3,m1,m2,m3,ascissa di fine carico)
<b>5</b>	<b>carico concentrato globale su elemento tipo trave</b> 7 dati (Fx,Fy,Fz,Mx,My,Mz,ascissa di carico)
<b>6</b>	<b>carico concentrato locale su elemento tipo trave</b> 7 dati (F1, F2, F3, M1, M2, M3, ascissa di carico)
<b>7</b>	<b>variazione termica applicata ad elemento tipo trave</b> 7 dati (variazioni termiche: uniforme, media e differenza in altezza e larghezza al nodo iniziale e finale)

<b>8</b>	<b>carico di pressione uniforme su elemento tipo piastra</b> 1 dato (pressione)
<b>9</b>	<b>carico di pressione variabile su elemento tipo piastra</b> 4 dati (pressione, quota, pressione, quota)
<b>10</b>	<b>variazione termica applicata ad elemento tipo piastra</b> 2 dati (variazioni termiche: media e differenza nello spessore)
<b>11</b>	<b>carico variabile generale su elementi tipo trave e piastra</b> 1 dato descrizione della tipologia 4 dati per segmento (posizione, valore, posizione, valore) la tipologia precisa l'ascissa di definizione, la direzione del carico, la modalità di carico e la larghezza d'influenza per gli elementi tipo trave
<b>12</b>	<b>gruppo di carichi con impronta su piastra</b> 9 dati (numero di ripetizioni in direzione X e Y, valore di ciascun carico, posizione centrale del primo, dimensioni dell'impronta, interasse tra i carichi)

 <p>Carico concentrato nodale</p>	 <p>Spostamento impresso</p>
 <p>Carico distribuito globale</p>	 <p>Carico distribuito locale</p>
 <p>Carico concentrato globale</p>	 <p>Carico concentrato locale</p>
 <p>Carico termico 2D</p>	 <p>Carico termico 3D</p>
 <p>Carico pressione uniforme</p>	 <p>Carico pressione variabile</p>





21\_CAR\_CARICHI\_SOLAI

## SCHEMATIZZAZIONE DEI CASI DI CARICO

### LEGENDA TABELLA CASI DI CARICO

Il programma consente l'applicazione di diverse tipologie di casi di carico.

Sono previsti i seguenti 11 tipi di casi di carico:

	<b>Sigla</b>	<b>Tipo</b>	<b>Descrizione</b>
<b>1</b>	<b>Ggk</b>	A	caso di carico comprensivo del peso proprio struttura
<b>2</b>	<b>Gk</b>	NA	caso di carico con azioni permanenti
<b>3</b>	<b>Qk</b>	NA	caso di carico con azioni variabili
<b>4</b>	<b>Gsk</b>	A	caso di carico comprensivo dei carichi permanenti sui solai e sulle coperture
<b>5</b>	<b>Qsk</b>	A	caso di carico comprensivo dei carichi variabili sui solai
<b>6</b>	<b>Qnk</b>	A	caso di carico comprensivo dei carichi di neve sulle coperture
<b>7</b>	<b>Qtk</b>	SA	caso di carico comprensivo di una variazione termica agente sulla struttura
<b>8</b>	<b>Qvk</b>	NA	caso di carico comprensivo di azioni da vento sulla struttura
<b>9</b>	<b>Esk</b>	SA	caso di carico sismico con analisi statica equivalente
<b>10</b>	<b>Edk</b>	SA	caso di carico sismico con analisi dinamica
<b>11</b>	<b>Etk</b>	NA	caso di carico comprensivo di azioni derivanti dall' incremento di spinta delle terre in condizione sismica
<b>12</b>	<b>Pk</b>	NA	caso di carico comprensivo di azioni derivanti da coazioni, cedimenti e precompressioni

Sono di tipo automatico A (ossia non prevedono introduzione dati da parte dell'utente) i seguenti casi di carico: 1-Ggk; 4-Gsk; 5-Qsk; 6-Qnk.

Sono di tipo semi-automatico SA (ossia prevedono una minima introduzione dati da parte dell'utente) i seguenti casi di carico:

7-Qtk, in quanto richiede solo il valore della variazione termica;

9-Esk e 10-Edk, in quanto richiedono il valore dell'angolo di ingresso del sisma e l'individuazione dei casi di carico partecipanti alla definizione delle masse.

Sono di tipo non automatico NA ossia prevedono la diretta applicazione di carichi generici agli elementi strutturali (si veda il precedente punto Modellazione delle Azioni) i restanti casi di carico.

Nella tabella successiva vengono riportati i casi di carico agenti sulla struttura, con l'indicazione dei dati relativi

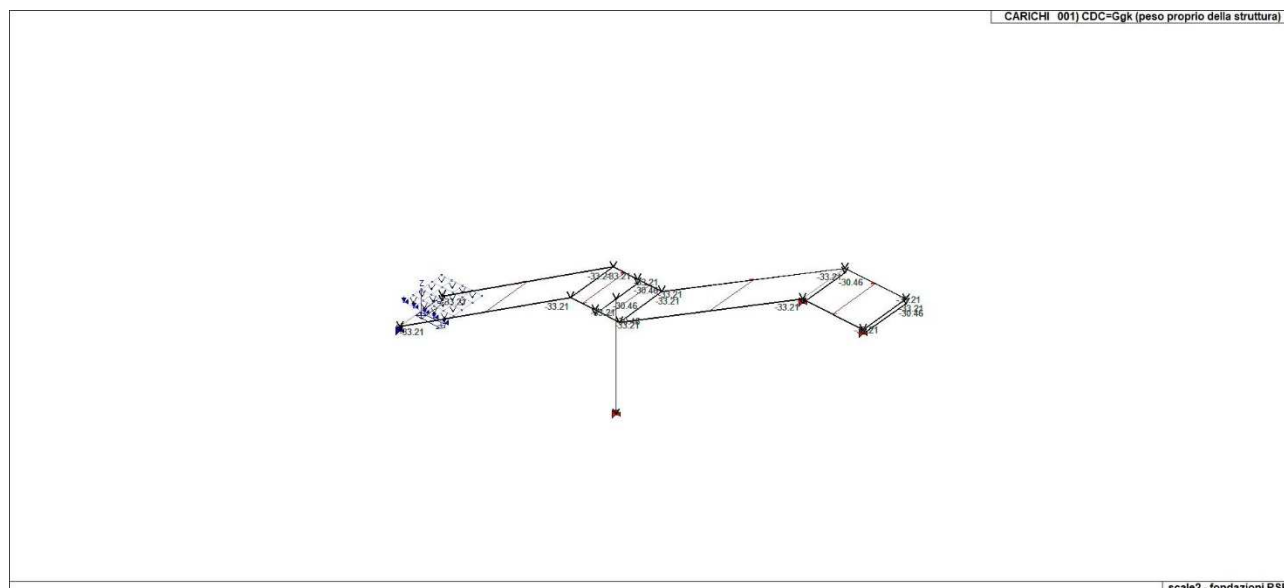
al caso di carico stesso:

*Numero Tipo e Sigla identificativa, Valore di riferimento del caso di carico (se previsto).*

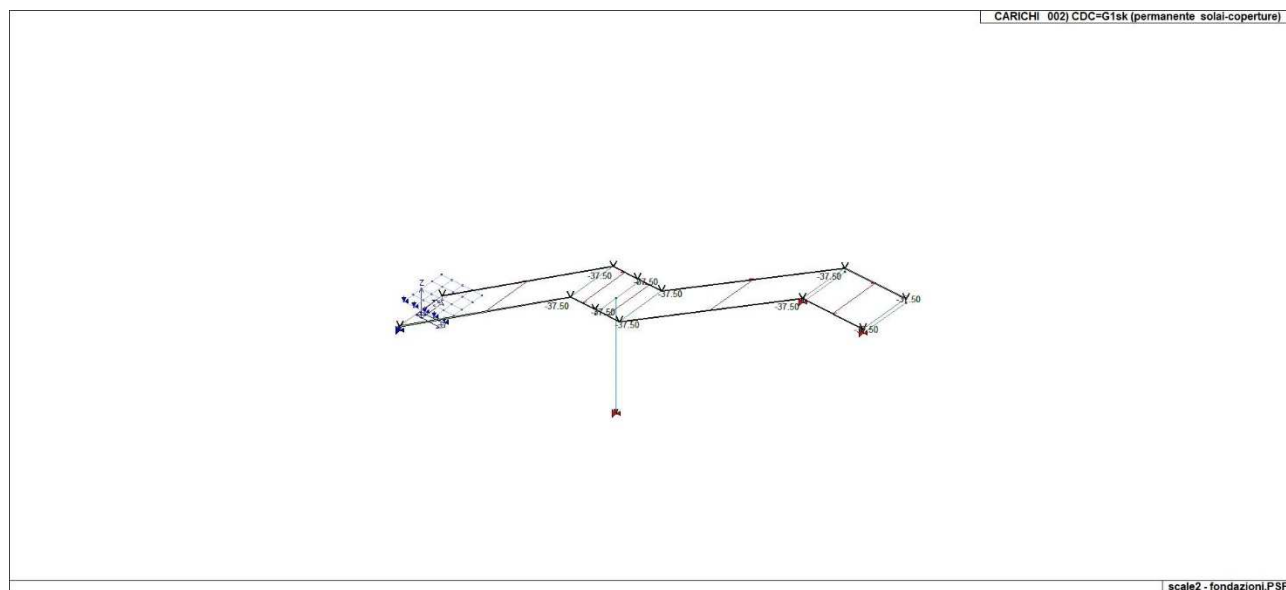
In successione, per i casi di carico non automatici, viene riportato l'elenco di nodi ed elementi direttamente caricati con la sigla identificativa del carico.

Per i casi di carico di tipo sismico (9-Esk e 10-Edk), viene riportata la tabella di definizione delle masse: per ogni caso di carico partecipante alla definizione delle masse viene indicata la relativa aliquota (partecipazione) considerata. Si precisa che per i caso di carico 5-Qsk e 6-Qnk la partecipazione è prevista localmente per ogni elemento solaio o copertura presente nel modello (si confronti il valore Sksol nel capitolo relativo agli elementi solaio) e pertanto la loro partecipazione è di norma pari a uno.

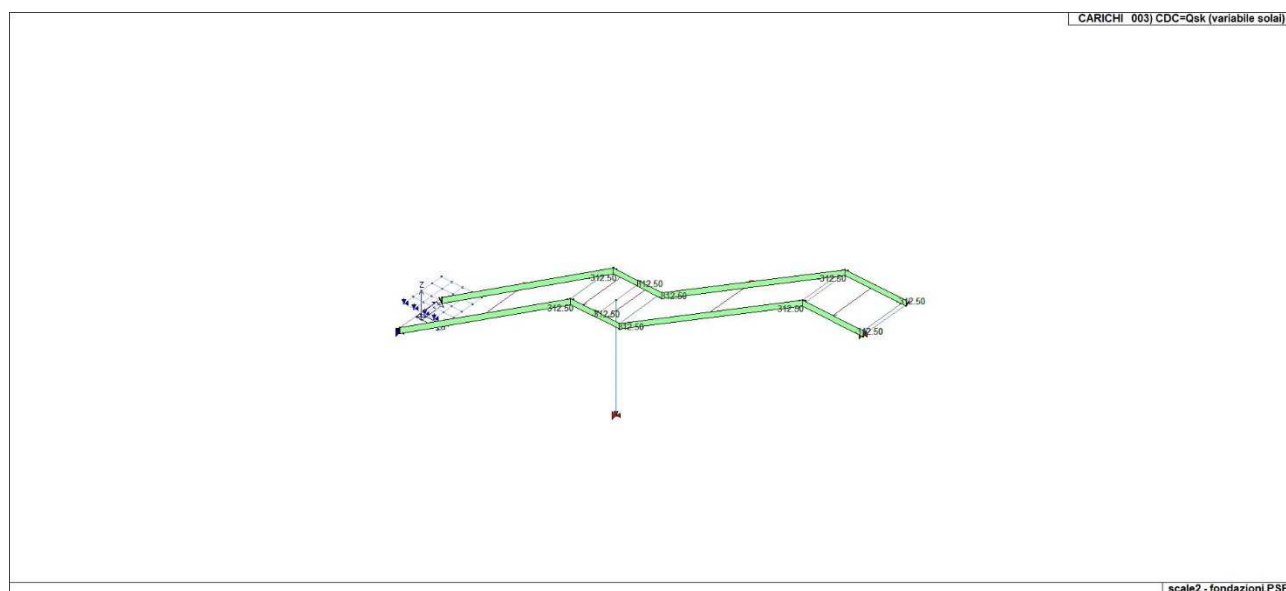
CDC	Tipo	Sigla Id	Note
1	Ggk	CDC=Ggk (peso proprio della struttura)	
2	Gsk	CDC=G1sk (permanente solai-coperture)	
3	Qsk	CDC=Qsk (variabile solai)	
4	Edk	CDC=Ed (dinamico SLU) alfa=0.0 (ecc. +)	partecipazione:1.00 per 1 CDC=Ggk (peso proprio della struttura)
			partecipazione:1.00 per 2 CDC=G1sk (permanente solai-coperture)
			partecipazione:1.00 per 3 CDC=Qsk (variabile solai)
5	Edk	CDC=Ed (dinamico SLU) alfa=0.0 (ecc. -)	come precedente CDC sismico
6	Edk	CDC=Ed (dinamico SLU) alfa=90.00 (ecc. +)	come precedente CDC sismico
7	Edk	CDC=Ed (dinamico SLU) alfa=90.00 (ecc. -)	come precedente CDC sismico
8	Edk	CDC=Ed (dinamico SLD) alfa=0.0 (ecc. +)	come precedente CDC sismico
9	Edk	CDC=Ed (dinamico SLD) alfa=0.0 (ecc. -)	come precedente CDC sismico
10	Edk	CDC=Ed (dinamico SLD) alfa=90.00 (ecc. +)	come precedente CDC sismico
11	Edk	CDC=Ed (dinamico SLD) alfa=90.00 (ecc. -)	come precedente CDC sismico
12	Edk	CDC=Ed (dinamico SLU) verticale	come precedente CDC sismico
13	Edk	CDC=Ed (dinamico SLO) alfa=0.0 (ecc. +)	come precedente CDC sismico
14	Edk	CDC=Ed (dinamico SLO) alfa=0.0 (ecc. -)	come precedente CDC sismico
15	Edk	CDC=Ed (dinamico SLO) alfa=90.00 (ecc. +)	come precedente CDC sismico
16	Edk	CDC=Ed (dinamico SLO) alfa=90.00 (ecc. -)	come precedente CDC sismico



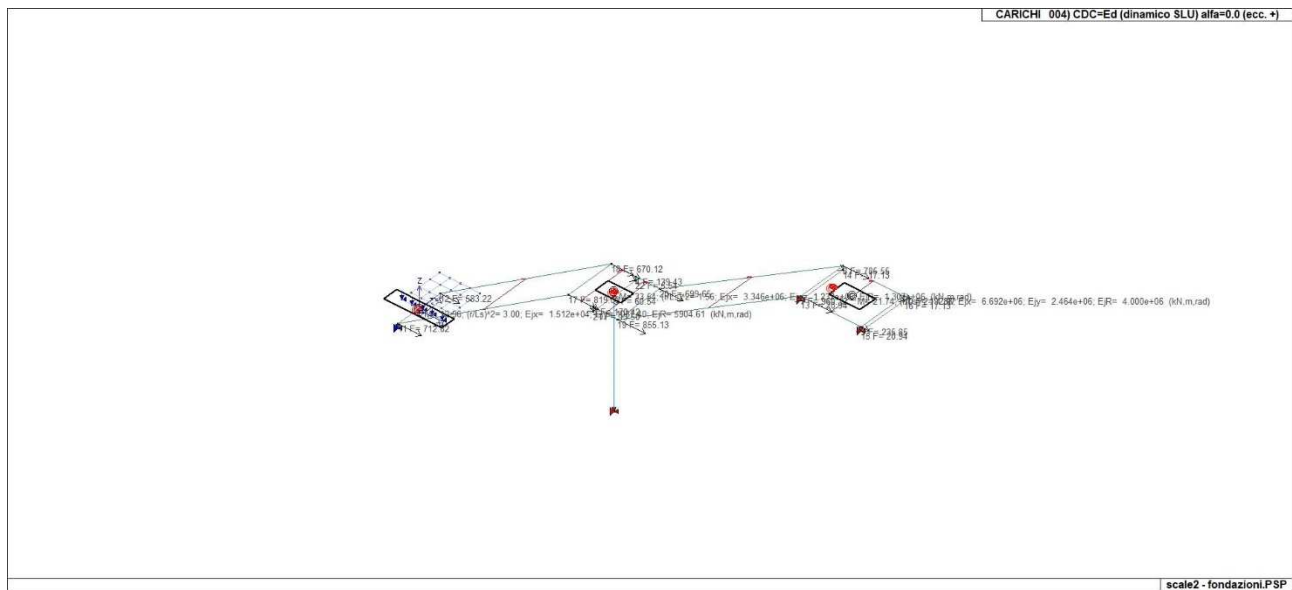
22\_CDC\_001\_CDC=Ggk (peso proprio della struttura)



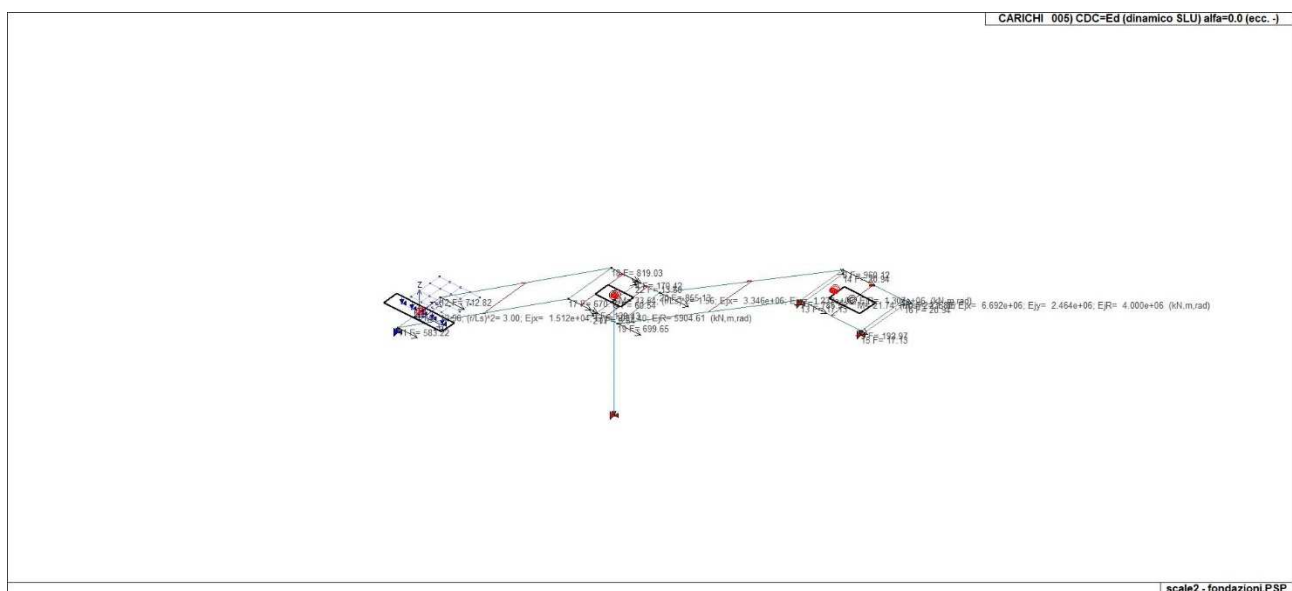
22\_CDC\_002\_CDC=G1sk (permanente solai-coperture)



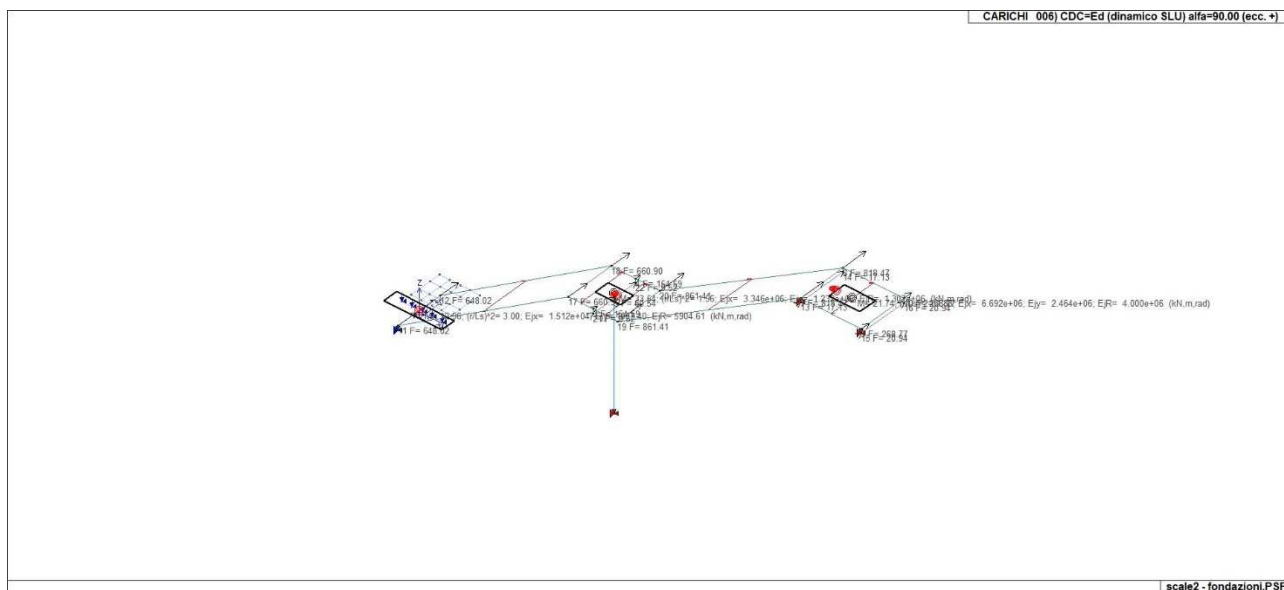
22\_CDC\_003\_CDC=Qsk (variabile solai)



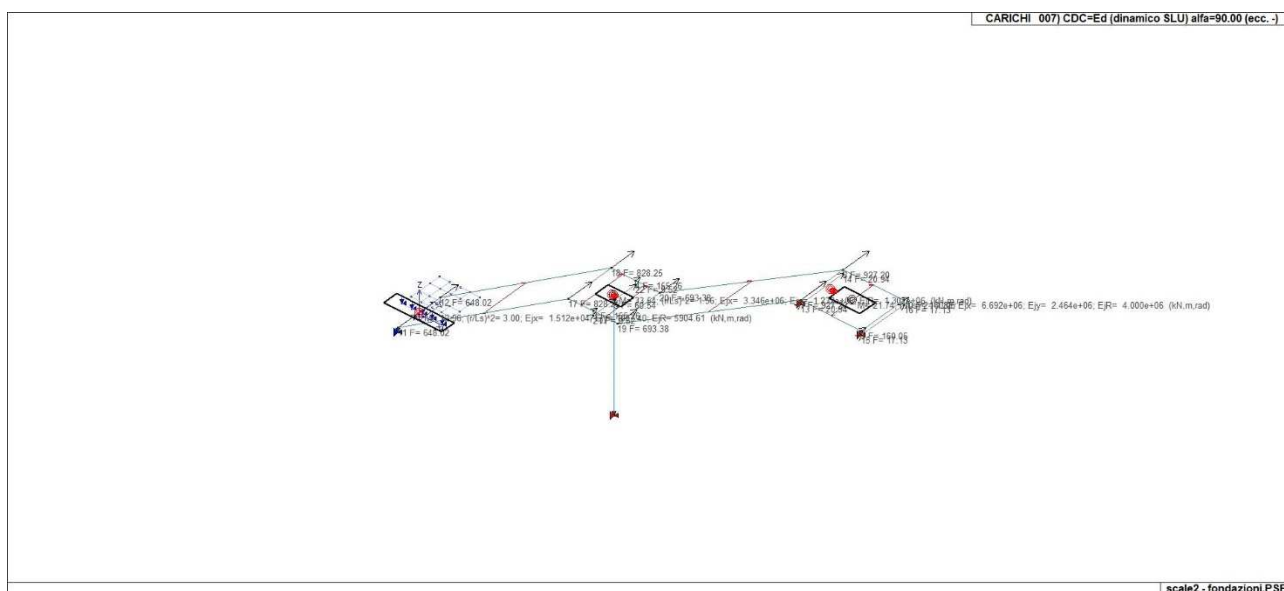
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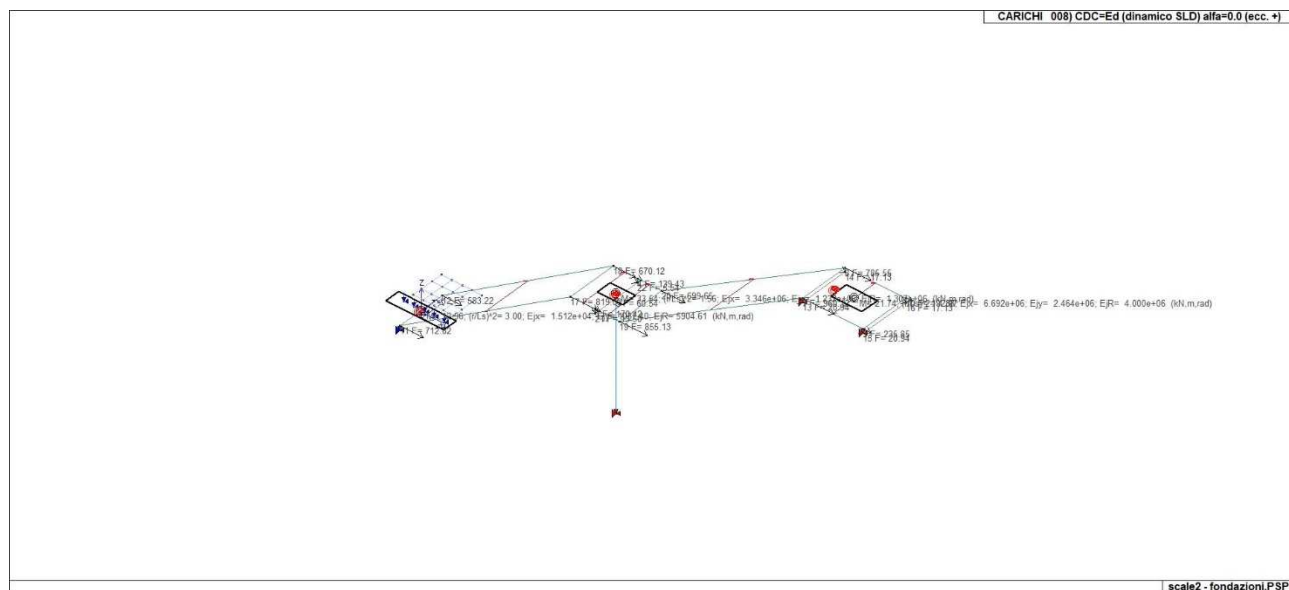
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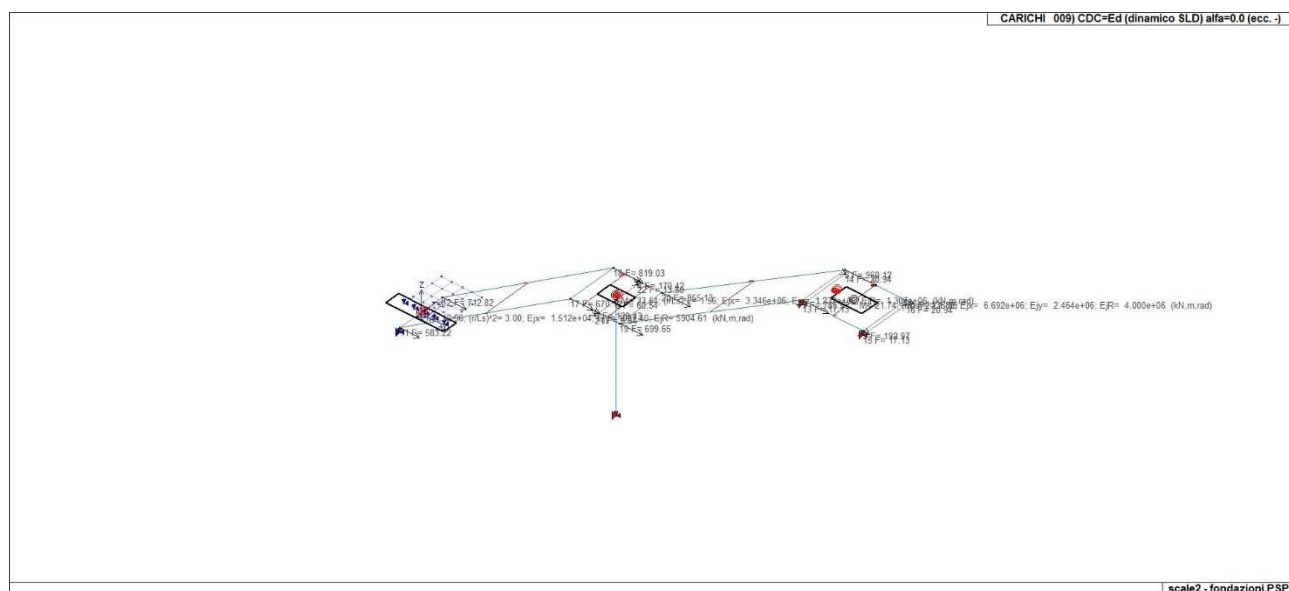
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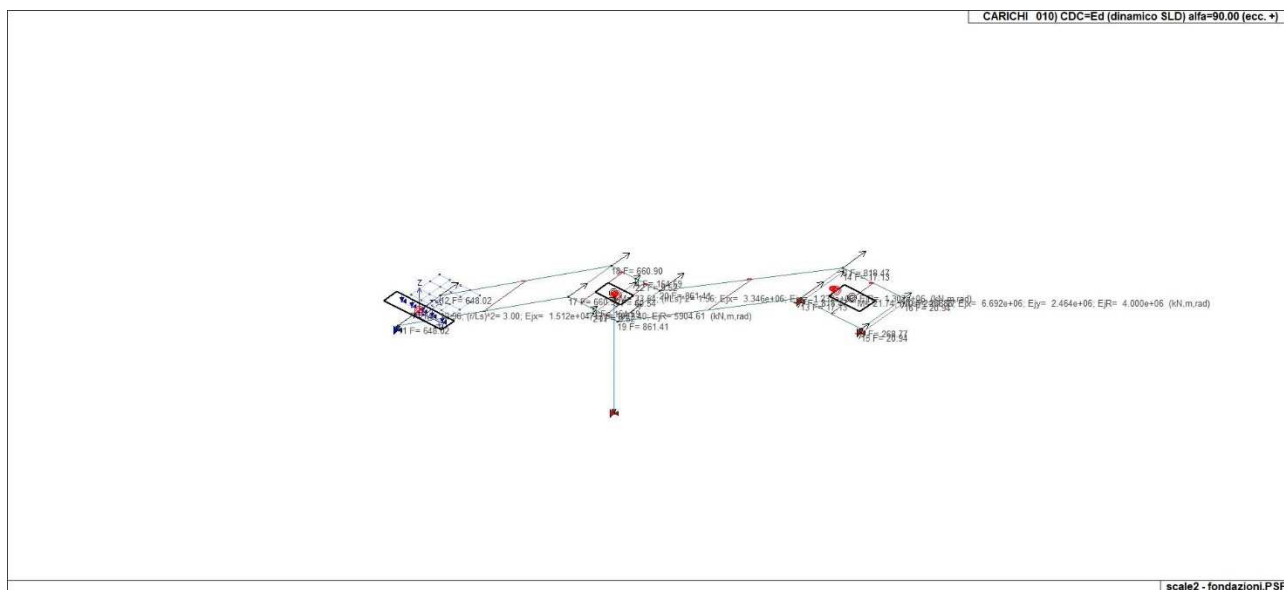
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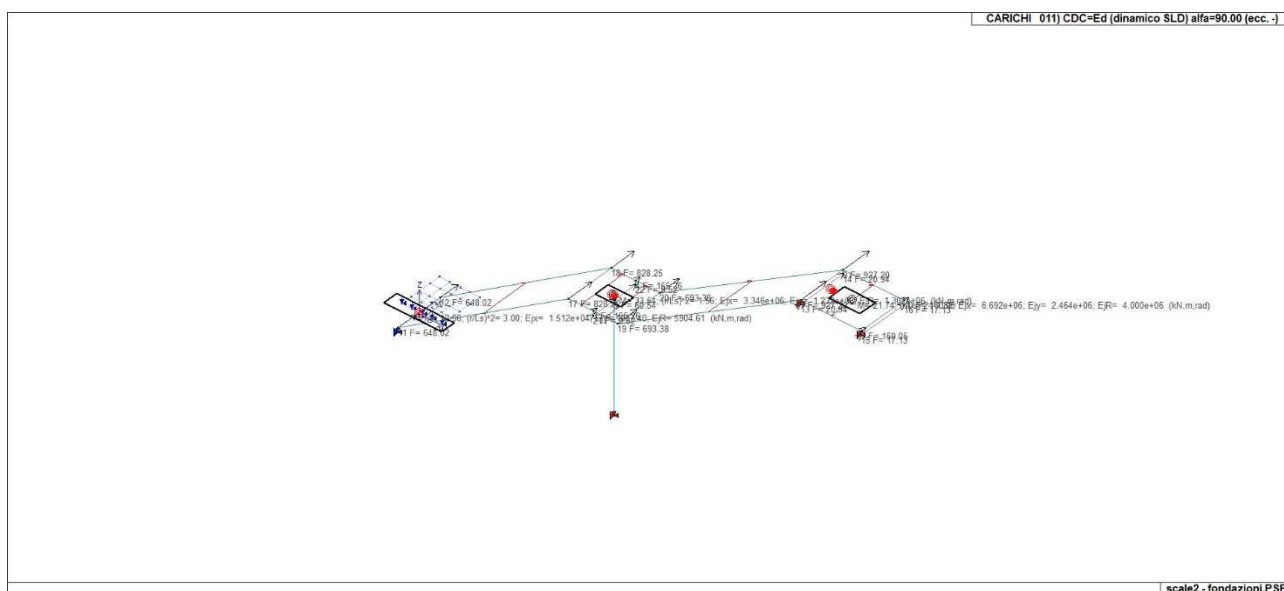
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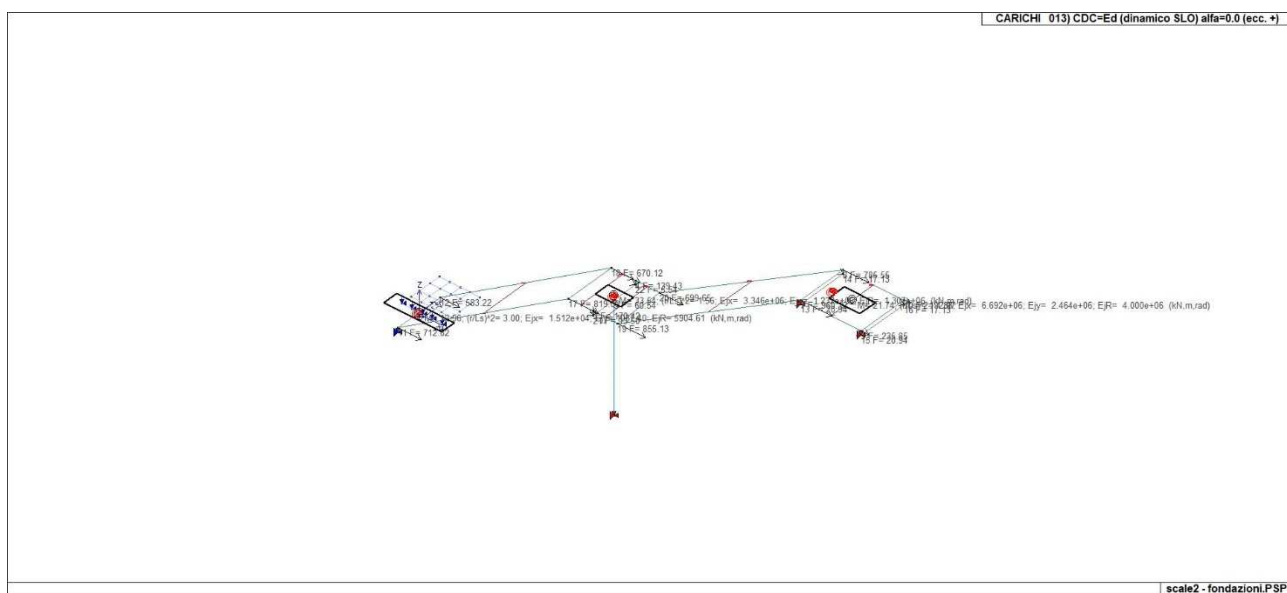
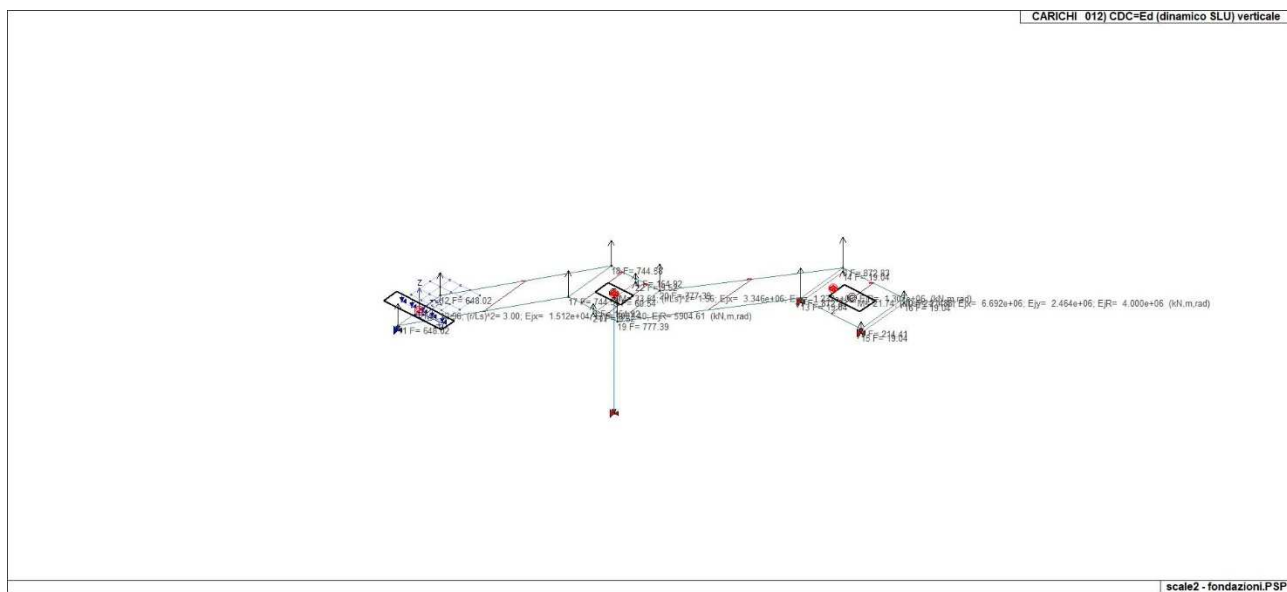
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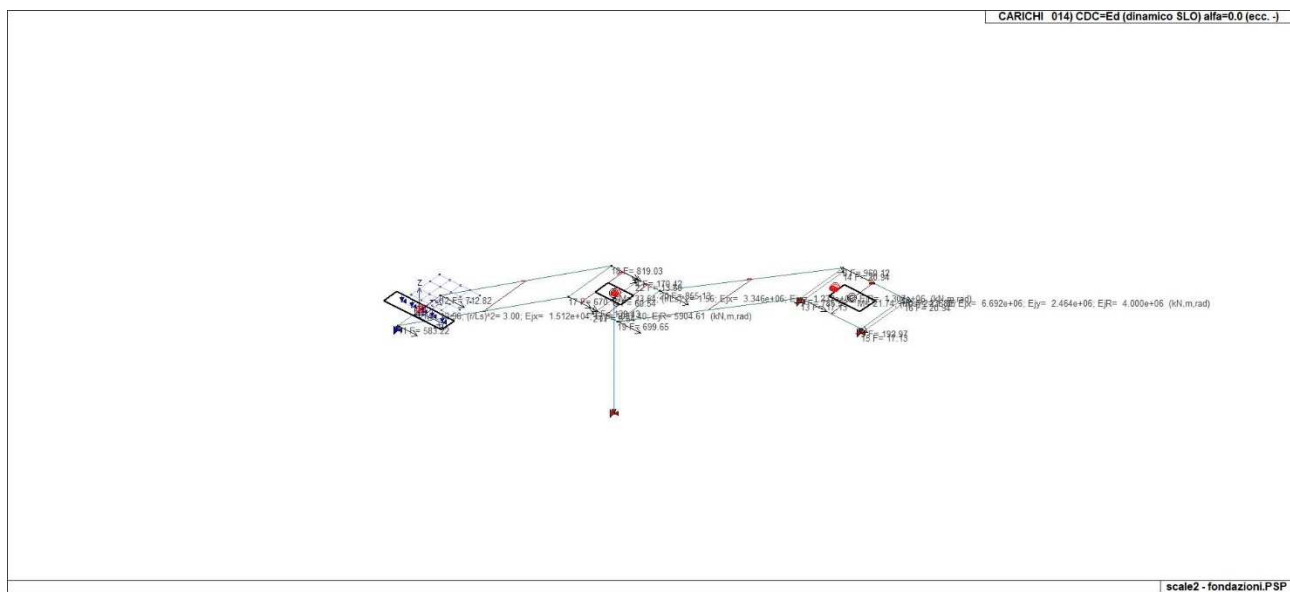
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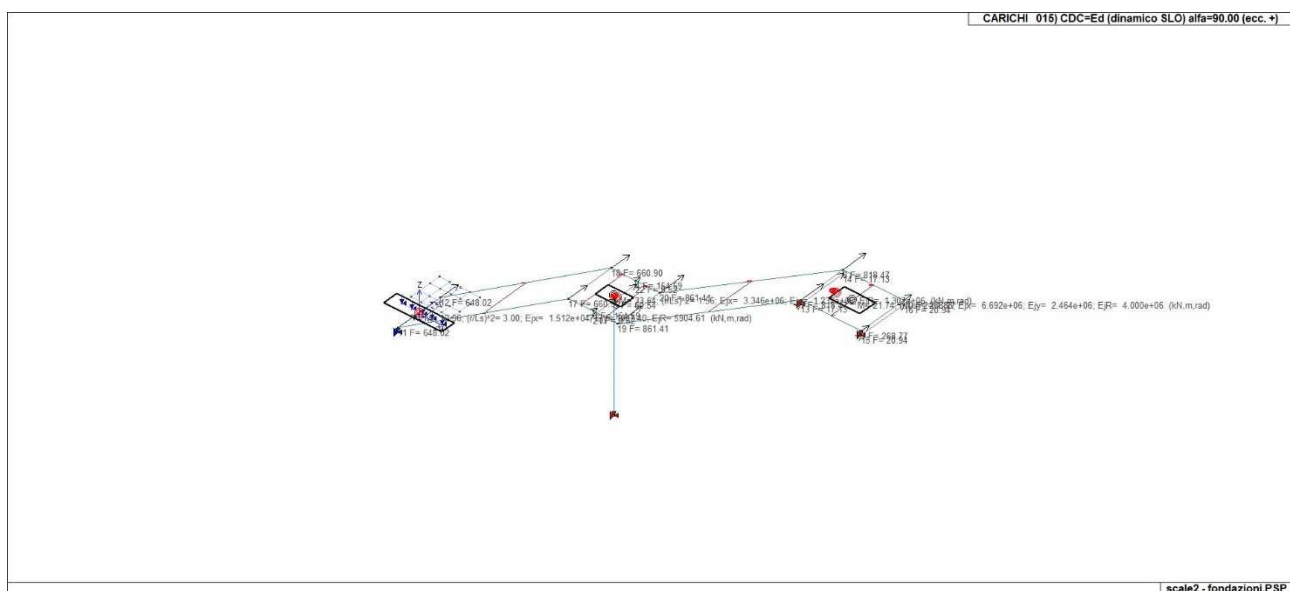
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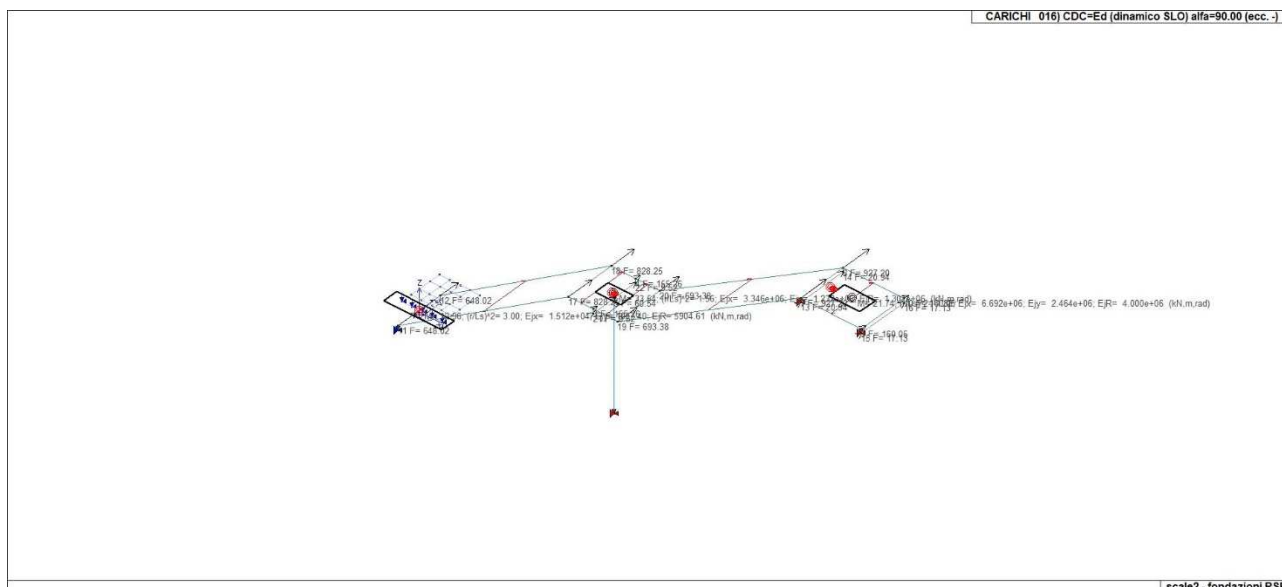




22\_CDC\_014\_CDC=Ed (dinamico SLO) alfa=0.0 (ecc. -)



22\_CDC\_015\_CDC=Ed (dinamico SLO) alfa=90.00 (ecc. +)



<i>Categoria F Rimesse e parcheggi (autoveicoli ≤ 30kN)</i>	<i>0,70</i>	<i>0,70</i>	<i>0,60</i>
<i>Categoria G Rimesse e parcheggi (autoveicoli &gt; 30kN)</i>	<i>0,70</i>	<i>0,50</i>	<i>0,30</i>
<i>Categoria H Coperture</i>	<i>0,00</i>	<i>0,00</i>	<i>0,00</i>
<i>Vento</i>	<i>0,60</i>	<i>0,20</i>	<i>0,00</i>
<i>Neve a quota ≤ 1000 m</i>	<i>0,50</i>	<i>0,20</i>	<i>0,00</i>
<i>Neve a quota &gt; 1000 m</i>	<i>0,70</i>	<i>0,50</i>	<i>0,20</i>
<i>Variazioni Termiche</i>	<i>0,60</i>	<i>0,50</i>	<i>0,00</i>

Nelle verifiche possono essere adottati in alternativa due diversi approcci progettuali:

- per l'approccio 1 si considerano due diverse combinazioni di gruppi di coefficienti di sicurezza parziali per le azioni, per i materiali e per la resistenza globale (combinazione 1 con coefficienti A1 e combinazione 2 con coefficienti A2),
- per l'approccio 2 si definisce un'unica combinazione per le azioni, per la resistenza dei materiali e per la resistenza globale (con coefficienti A1).

NTC 2018 Tabella 2.6.I

		Coefficiente $\gamma_f$	<b>EQU</b>	<b>A1</b>	<b>A2</b>
<i>Carichi permanenti</i>	<i>Favorevoli</i>	$\gamma_{G1}$	0,9	1,0	1,0
	<i>Sfavorevoli</i>		1,1	1,3	1,0
<i>Carichi permanenti non strutturali</i> <i>(Non compiutamente definiti)</i>	<i>Favorevoli</i>	$\gamma_{G2}$	0,8	0,8	0,8
	<i>Sfavorevoli</i>		1,5	1,5	1,3
<i>Carichi variabili</i>	<i>Favorevoli</i>	$\gamma_{Qi}$	0,0	0,0	0,0
	<i>Sfavorevoli</i>		1,5	1,5	1,3

<b>Cmb</b>	<b>Tipo</b>	<b>Sigla Id</b>
1	SLU	Comb. SLU A1 1
2	SLU	Comb. SLU A1 2
3	SLU	Comb. SLU A1 3
4	SLU	Comb. SLU A1 4
5	SLE(r)	Comb. SLE(rara) 5
6	SLE(r)	Comb. SLE(rara) 6
7	SLE(f)	Comb. SLE(freq.) 7
8	SLE(f)	Comb. SLE(freq.) 8
9	SLE(p)	Comb. SLE(perm.) 9
10	SLE(p)	Comb. SLE(perm.) 10
11	SLU	Comb. SLU A1 (SLV sism.) 11
12	SLU	Comb. SLU A1 (SLV sism.) 12
13	SLU	Comb. SLU A1 (SLV sism.) 13
14	SLU	Comb. SLU A1 (SLV sism.) 14
15	SLU	Comb. SLU A1 (SLV sism.) 15
16	SLU	Comb. SLU A1 (SLV sism.) 16
17	SLU	Comb. SLU A1 (SLV sism.) 17
18	SLU	Comb. SLU A1 (SLV sism.) 18
19	SLU	Comb. SLU A1 (SLV sism.) 19
20	SLU	Comb. SLU A1 (SLV sism.) 20
21	SLU	Comb. SLU A1 (SLV sism.) 21
22	SLU	Comb. SLU A1 (SLV sism.) 22
23	SLU	Comb. SLU A1 (SLV sism.) 23
24	SLU	Comb. SLU A1 (SLV sism.) 24
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28	SLU	Comb. SLU A1 (SLV sism.) 28
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36	SLU	Comb. SLU A1 (SLV sism.) 36

<b>Cmb</b>	<b>Tipo</b>	<b>Sigla Id</b>
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49	SLU	Comb. SLU A1 (SLV sism.) 49
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51	SLU	Comb. SLU A1 (SLV sism.) 51
52	SLU	Comb. SLU A1 (SLV sism.) 52
53	SLU	Comb. SLU A1 (SLV sism.) 53
54	SLU	Comb. SLU A1 (SLV sism.) 54
55	SLU	Comb. SLU A1 (SLV sism.) 55
56	SLU	Comb. SLU A1 (SLV sism.) 56
57	SLU	Comb. SLU A1 (SLV sism.) 57
58	SLU	Comb. SLU A1 (SLV sism.) 58
59	SLU	Comb. SLU A1 (SLV sism.) 59
60	SLU	Comb. SLU A1 (SLV sism.) 60
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63	SLU	Comb. SLU A1 (SLV sism.) 63
64	SLU	Comb. SLU A1 (SLV sism.) 64
65	SLU	Comb. SLU A1 (SLV sism.) 65
66	SLU	Comb. SLU A1 (SLV sism.) 66
67	SLU	Comb. SLU A1 (SLV sism.) 67
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69	SLU	Comb. SLU A1 (SLV sism.) 69
70	SLU	Comb. SLU A1 (SLV sism.) 70
71	SLU	Comb. SLU A1 (SLV sism.) 71
72	SLU	Comb. SLU A1 (SLV sism.) 72

Cmb	Tipo	Sigla Id
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74	SLU	Comb. SLU A1 (SLV sism.) 74
75	SLD(sis)	Comb. SLE (SLD Danno sism.) 75
76	SLD(sis)	Comb. SLE (SLD Danno sism.) 76
77	SLD(sis)	Comb. SLE (SLD Danno sism.) 77
78	SLD(sis)	Comb. SLE (SLD Danno sism.) 78
79	SLD(sis)	Comb. SLE (SLD Danno sism.) 79
80	SLD(sis)	Comb. SLE (SLD Danno sism.) 80
81	SLD(sis)	Comb. SLE (SLD Danno sism.) 81
82	SLD(sis)	Comb. SLE (SLD Danno sism.) 82
83	SLD(sis)	Comb. SLE (SLD Danno sism.) 83
84	SLD(sis)	Comb. SLE (SLD Danno sism.) 84
85	SLD(sis)	Comb. SLE (SLD Danno sism.) 85
86	SLD(sis)	Comb. SLE (SLD Danno sism.) 86
87	SLD(sis)	Comb. SLE (SLD Danno sism.) 87
88	SLD(sis)	Comb. SLE (SLD Danno sism.) 88
89	SLD(sis)	Comb. SLE (SLD Danno sism.) 89
90	SLD(sis)	Comb. SLE (SLD Danno sism.) 90
91	SLD(sis)	Comb. SLE (SLD Danno sism.) 91
92	SLD(sis)	Comb. SLE (SLD Danno sism.) 92
93	SLD(sis)	Comb. SLE (SLD Danno sism.) 93
94	SLD(sis)	Comb. SLE (SLD Danno sism.) 94
95	SLD(sis)	Comb. SLE (SLD Danno sism.) 95
96	SLD(sis)	Comb. SLE (SLD Danno sism.) 96
97	SLD(sis)	Comb. SLE (SLD Danno sism.) 97
98	SLD(sis)	Comb. SLE (SLD Danno sism.) 98
99	SLD(sis)	Comb. SLE (SLD Danno sism.) 99
100	SLD(sis)	Comb. SLE (SLD Danno sism.) 100
101	SLD(sis)	Comb. SLE (SLD Danno sism.) 101
102	SLD(sis)	Comb. SLE (SLD Danno sism.) 102
103	SLD(sis)	Comb. SLE (SLD Danno sism.) 103
104	SLD(sis)	Comb. SLE (SLD Danno sism.) 104
105	SLD(sis)	Comb. SLE (SLD Danno sism.) 105
106	SLD(sis)	Comb. SLE (SLD Danno sism.) 106
107	SLU	Comb. SLU A1 (SLV sism.) 107
108	SLU	Comb. SLU A1 (SLV sism.) 108
109	SLU	Comb. SLU A1 (SLV sism.) 109
110	SLU	Comb. SLU A1 (SLV sism.) 110
111	SLU	Comb. SLU A1 (SLV sism.) 111
112	SLU	Comb. SLU A1 (SLV sism.) 112
113	SLU	Comb. SLU A1 (SLV sism.) 113
114	SLU	Comb. SLU A1 (SLV sism.) 114
115	SLU	Comb. SLU A1 (SLV sism.) 115
116	SLU	Comb. SLU A1 (SLV sism.) 116
117	SLU	Comb. SLU A1 (SLV sism.) 117
118	SLU	Comb. SLU A1 (SLV sism.) 118
119	SLU	Comb. SLU A1 (SLV sism.) 119
120	SLU	Comb. SLU A1 (SLV sism.) 120
121	SLU	Comb. SLU A1 (SLV sism.) 121

Cmb	Tipo	Sigla Id
122	SLU	Comb. SLU A1 (SLV sism.) 122
123	SLU	Comb. SLU A1 (SLV sism.) 123
124	SLU	Comb. SLU A1 (SLV sism.) 124
125	SLU	Comb. SLU A1 (SLV sism.) 125
126	SLU	Comb. SLU A1 (SLV sism.) 126
127	SLU	Comb. SLU A1 (SLV sism.) 127
128	SLU	Comb. SLU A1 (SLV sism.) 128
129	SLU	Comb. SLU A1 (SLV sism.) 129
130	SLU	Comb. SLU A1 (SLV sism.) 130
131	SLU	Comb. SLU A1 (SLV sism.) 131
132	SLU	Comb. SLU A1 (SLV sism.) 132
133	SLU	Comb. SLU A1 (SLV sism.) 133
134	SLU	Comb. SLU A1 (SLV sism.) 134
135	SLU	Comb. SLU A1 (SLV sism.) 135
136	SLU	Comb. SLU A1 (SLV sism.) 136
137	SLU	Comb. SLU A1 (SLV sism.) 137
138	SLU	Comb. SLU A1 (SLV sism.) 138
139	SLD(sis)	Comb. SLE (SLO Operativo sism.) 139
140	SLD(sis)	Comb. SLE (SLO Operativo sism.) 140
141	SLD(sis)	Comb. SLE (SLO Operativo sism.) 141
142	SLD(sis)	Comb. SLE (SLO Operativo sism.) 142
143	SLD(sis)	Comb. SLE (SLO Operativo sism.) 143
144	SLD(sis)	Comb. SLE (SLO Operativo sism.) 144
145	SLD(sis)	Comb. SLE (SLO Operativo sism.) 145
146	SLD(sis)	Comb. SLE (SLO Operativo sism.) 146
147	SLD(sis)	Comb. SLE (SLO Operativo sism.) 147
148	SLD(sis)	Comb. SLE (SLO Operativo sism.) 148
149	SLD(sis)	Comb. SLE (SLO Operativo sism.) 149
150	SLD(sis)	Comb. SLE (SLO Operativo sism.) 150
151	SLD(sis)	Comb. SLE (SLO Operativo sism.) 151
152	SLD(sis)	Comb. SLE (SLO Operativo sism.) 152
153	SLD(sis)	Comb. SLE (SLO Operativo sism.) 153
154	SLD(sis)	Comb. SLE (SLO Operativo sism.) 154
155	SLD(sis)	Comb. SLE (SLO Operativo sism.) 155
156	SLD(sis)	Comb. SLE (SLO Operativo sism.) 156
157	SLD(sis)	Comb. SLE (SLO Operativo sism.) 157
158	SLD(sis)	Comb. SLE (SLO Operativo sism.) 158
159	SLD(sis)	Comb. SLE (SLO Operativo sism.) 159
160	SLD(sis)	Comb. SLE (SLO Operativo sism.) 160
161	SLD(sis)	Comb. SLE (SLO Operativo sism.) 161
162	SLD(sis)	Comb. SLE (SLO Operativo sism.) 162
163	SLD(sis)	Comb. SLE (SLO Operativo sism.) 163
164	SLD(sis)	Comb. SLE (SLO Operativo sism.) 164
165	SLD(sis)	Comb. SLE (SLO Operativo sism.) 165
166	SLD(sis)	Comb. SLE (SLO Operativo sism.) 166
167	SLD(sis)	Comb. SLE (SLO Operativo sism.) 167
168	SLD(sis)	Comb. SLE (SLO Operativo sism.) 168
169	SLD(sis)	Comb. SLE (SLO Operativo sism.) 169
170	SLD(sis)	Comb. SLE (SLO Operativo sism.) 170

Cmb	CDC 1/15...	CDC 2/16...	CDC 3/17...	CDC 4/18...	CDC 5/19...	CDC 6/20...	CDC 7/21...	CDC 8/22...	CDC 9/23...	CDC 10/24...	CDC 11/25...	CDC 12/26...	CDC 13/27...	CDC 14/28...
1	1.30	1.30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0												
2	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0												
3	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0												
4	1.00	1.00	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0												
5	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0												
6	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0												
7	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0												
8	1.00	1.00	0.70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0												

Cmb	CDC 1/15...	CDC 2/16...	CDC 3/17...	CDC 4/18...	CDC 5/19...	CDC 6/20...	CDC 7/21...	CDC 8/22...	CDC 9/23...	CDC 10/24...	CDC 11/25...	CDC 12/26...	CDC 13/27...	CDC 14/28...
9	1.00 0.0	1.00 0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	1.00 0.0	1.00 0.0	0.60	-1.00	0.0	-0.30	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
12	1.00 0.0	1.00 0.0	0.60	-1.00	0.0	-0.30	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
13	1.00 0.0	1.00 0.0	0.60	-1.00	0.0	0.30	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
14	1.00 0.0	1.00 0.0	0.60	-1.00	0.0	0.30	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
15	1.00 0.0	1.00 0.0	0.60	1.00	0.0	-0.30	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
16	1.00 0.0	1.00 0.0	0.60	1.00	0.0	-0.30	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
17	1.00 0.0	1.00 0.0	0.60	1.00	0.0	0.30	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
18	1.00 0.0	1.00 0.0	0.60	1.00	0.0	0.30	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
19	1.00 0.0	1.00 0.0	0.60	-1.00	0.0	0.0	-0.30	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
20	1.00 0.0	1.00 0.0	0.60	-1.00	0.0	0.0	-0.30	0.0	0.0	0.0	0.0	0.30	0.0	0.0
21	1.00 0.0	1.00 0.0	0.60	-1.00	0.0	0.0	0.30	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
22	1.00 0.0	1.00 0.0	0.60	-1.00	0.0	0.0	0.30	0.0	0.0	0.0	0.0	0.30	0.0	0.0
23	1.00 0.0	1.00 0.0	0.60	1.00	0.0	0.0	-0.30	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
24	1.00 0.0	1.00 0.0	0.60	1.00	0.0	0.0	-0.30	0.0	0.0	0.0	0.0	0.30	0.0	0.0
25	1.00 0.0	1.00 0.0	0.60	1.00	0.0	0.0	0.30	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
26	1.00 0.0	1.00 0.0	0.60	1.00	0.0	0.0	0.30	0.0	0.0	0.0	0.0	0.30	0.0	0.0
27	1.00 0.0	1.00 0.0	0.60	0.0	-1.00	-0.30	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
28	1.00 0.0	1.00 0.0	0.60	0.0	-1.00	-0.30	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
29	1.00 0.0	1.00 0.0	0.60	0.0	-1.00	0.30	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
30	1.00 0.0	1.00 0.0	0.60	0.0	-1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
31	1.00 0.0	1.00 0.0	0.60	0.0	1.00	-0.30	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
32	1.00 0.0	1.00 0.0	0.60	0.0	1.00	-0.30	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
33	1.00 0.0	1.00 0.0	0.60	0.0	1.00	0.30	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
34	1.00 0.0	1.00 0.0	0.60	0.0	1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
35	1.00 0.0	1.00 0.0	0.60	0.0	-1.00	0.0	-0.30	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
36	1.00 0.0	1.00 0.0	0.60	0.0	-1.00	0.0	-0.30	0.0	0.0	0.0	0.0	0.30	0.0	0.0
37	1.00 0.0	1.00 0.0	0.60	0.0	-1.00	0.0	0.30	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
38	1.00 0.0	1.00 0.0	0.60	0.0	-1.00	0.0	0.30	0.0	0.0	0.0	0.0	0.30	0.0	0.0
39	1.00 0.0	1.00 0.0	0.60	0.0	1.00	0.0	-0.30	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
40	1.00 0.0	1.00 0.0	0.60	0.0	1.00	0.0	-0.30	0.0	0.0	0.0	0.0	0.30	0.0	0.0
41	1.00 0.0	1.00 0.0	0.60	0.0	1.00	0.0	0.30	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
42	1.00 0.0	1.00 0.0	0.60	0.0	1.00	0.0	0.30	0.0	0.0	0.0	0.0	0.30	0.0	0.0
43	1.00 0.0	1.00 0.0	0.60	-0.30	0.0	-1.00	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0

Cmb	CDC 1/15...	CDC 2/16...	CDC 3/17...	CDC 4/18...	CDC 5/19...	CDC 6/20...	CDC 7/21...	CDC 8/22...	CDC 9/23...	CDC 10/24...	CDC 11/25...	CDC 12/26...	CDC 13/27...	CDC 14/28...
44	1.00	1.00	0.60	-0.30	0.0	-1.00	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
	0.0	0.0												
45	1.00	1.00	0.60	-0.30	0.0	1.00	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
	0.0	0.0												
46	1.00	1.00	0.60	-0.30	0.0	1.00	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
	0.0	0.0												
47	1.00	1.00	0.60	0.30	0.0	-1.00	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
	0.0	0.0												
48	1.00	1.00	0.60	0.30	0.0	-1.00	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
	0.0	0.0												
49	1.00	1.00	0.60	0.30	0.0	1.00	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
	0.0	0.0												
50	1.00	1.00	0.60	0.30	0.0	1.00	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
	0.0	0.0												
51	1.00	1.00	0.60	0.0	-0.30	-1.00	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
	0.0	0.0												
52	1.00	1.00	0.60	0.0	-0.30	-1.00	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
	0.0	0.0												
53	1.00	1.00	0.60	0.0	-0.30	1.00	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
	0.0	0.0												
54	1.00	1.00	0.60	0.0	-0.30	1.00	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
	0.0	0.0												
55	1.00	1.00	0.60	0.0	0.30	-1.00	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
	0.0	0.0												
56	1.00	1.00	0.60	0.0	0.30	-1.00	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
	0.0	0.0												
57	1.00	1.00	0.60	0.0	0.30	1.00	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
	0.0	0.0												
58	1.00	1.00	0.60	0.0	0.30	1.00	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0
	0.0	0.0												
59	1.00	1.00	0.60	-0.30	0.0	0.0	-1.00	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
	0.0	0.0												
60	1.00	1.00	0.60	-0.30	0.0	0.0	-1.00	0.0	0.0	0.0	0.0	0.30	0.0	0.0
	0.0	0.0												
61	1.00	1.00	0.60	-0.30	0.0	0.0	1.00	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
	0.0	0.0												
62	1.00	1.00	0.60	-0.30	0.0	0.0	1.00	0.0	0.0	0.0	0.0	0.30	0.0	0.0
	0.0	0.0												
63	1.00	1.00	0.60	0.30	0.0	0.0	-1.00	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
	0.0	0.0												
64	1.00	1.00	0.60	0.30	0.0	0.0	-1.00	0.0	0.0	0.0	0.0	0.30	0.0	0.0
	0.0	0.0												
65	1.00	1.00	0.60	0.30	0.0	0.0	1.00	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
	0.0	0.0												
66	1.00	1.00	0.60	0.30	0.0	0.0	1.00	0.0	0.0	0.0	0.0	0.30	0.0	0.0
	0.0	0.0												
67	1.00	1.00	0.60	0.0	-0.30	0.0	-1.00	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
	0.0	0.0												
68	1.00	1.00	0.60	0.0	-0.30	0.0	-1.00	0.0	0.0	0.0	0.0	0.30	0.0	0.0
	0.0	0.0												
69	1.00	1.00	0.60	0.0	-0.30	0.0	1.00	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
	0.0	0.0												
70	1.00	1.00	0.60	0.0	-0.30	0.0	1.00	0.0	0.0	0.0	0.0	0.30	0.0	0.0
	0.0	0.0												
71	1.00	1.00	0.60	0.0	0.30	0.0	-1.00	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
	0.0	0.0												
72	1.00	1.00	0.60	0.0	0.30	0.0	-1.00	0.0	0.0	0.0	0.0	0.30	0.0	0.0
	0.0	0.0												
73	1.00	1.00	0.60	0.0	0.30	0.0	1.00	0.0	0.0	0.0	0.0	-0.30	0.0	0.0
	0.0	0.0												
74	1.00	1.00	0.60	0.0	0.30	0.0	1.00	0.0	0.0	0.0	0.0	0.30	0.0	0.0
	0.0	0.0												
75	1.00	1.00	0.60	0.0	0.0	0.0	0.0	-1.00	0.0	-0.30	0.0	0.0	0.0	0.0
	0.0	0.0												
76	1.00	1.00	0.60	0.0	0.0	0.0	0.0	-1.00	0.0	0.30	0.0	0.0	0.0	0.0
	0.0	0.0												
77	1.00	1.00	0.60	0.0	0.0	0.0	0.0	1.00	0.0	-0.30	0.0	0.0	0.0	0.0
	0.0	0.0												
78	1.00	1.00	0.60	0.0	0.0	0.0	0.0	1.00	0.0	0.30	0.0	0.0	0.0	0.0
	0.0	0.0												

Cmb	CDC 1/15...	CDC 2/16...	CDC 3/17...	CDC 4/18...	CDC 5/19...	CDC 6/20...	CDC 7/21...	CDC 8/22...	CDC 9/23...	CDC 10/24...	CDC 11/25...	CDC 12/26...	CDC 13/27...	CDC 14/28...
79	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	-1.00	0.0	0.0	-0.30	0.0	0.0	0.0
80	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	-1.00	0.0	0.0	0.30	0.0	0.0	0.0
81	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	1.00	0.0	0.0	-0.30	0.0	0.0	0.0
82	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	1.00	0.0	0.0	0.30	0.0	0.0	0.0
83	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	-1.00	-0.30	0.0	0.0	0.0	0.0
84	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	-1.00	0.30	0.0	0.0	0.0	0.0
85	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	1.00	-0.30	0.0	0.0	0.0	0.0
86	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	1.00	0.30	0.0	0.0	0.0	0.0
87	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	-0.30	0.0	0.0	0.0
88	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	0.30	0.0	0.0	0.0
89	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	1.00	0.0	-0.30	0.0	0.0	0.0
90	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.30	0.0	0.0	0.0
91	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	-0.30	0.0	-1.00	0.0	0.0	0.0	0.0
92	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	-0.30	0.0	1.00	0.0	0.0	0.0	0.0
93	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.30	0.0	-1.00	0.0	0.0	0.0	0.0
94	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.30	0.0	1.00	0.0	0.0	0.0	0.0
95	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	-0.30	-1.00	0.0	0.0	0.0	0.0
96	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	-0.30	1.00	0.0	0.0	0.0	0.0
97	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.30	-1.00	0.0	0.0	0.0	0.0
98	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.30	1.00	0.0	0.0	0.0	0.0
99	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	-0.30	0.0	0.0	-1.00	0.0	0.0	0.0
100	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	-0.30	0.0	0.0	1.00	0.0	0.0	0.0
101	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.30	0.0	0.0	-1.00	0.0	0.0	0.0
102	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.30	0.0	0.0	1.00	0.0	0.0	0.0
103	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	-1.00	0.0	0.0	0.0
104	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	1.00	0.0	0.0	0.0
105	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.30	0.0	-1.00	0.0	0.0	0.0
106	1.00 0.0	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.30	0.0	1.00	0.0	0.0	0.0
107	1.00 0.0	1.00 0.0	0.60	-0.30	0.0	-0.30	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
108	1.00 0.0	1.00 0.0	0.60	-0.30	0.0	-0.30	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.0
109	1.00 0.0	1.00 0.0	0.60	-0.30	0.0	0.30	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
110	1.00 0.0	1.00 0.0	0.60	-0.30	0.0	0.30	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.0
111	1.00 0.0	1.00 0.0	0.60	0.30	0.0	-0.30	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
112	1.00 0.0	1.00 0.0	0.60	0.30	0.0	-0.30	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.0
113	1.00 0.0	1.00 0.0	0.60	0.30	0.0	0.30	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	0.0

Cmb	CDC 1/15...	CDC 2/16...	CDC 3/17...	CDC 4/18...	CDC 5/19...	CDC 6/20...	CDC 7/21...	CDC 8/22...	CDC 9/23...	CDC 10/24...	CDC 11/25...	CDC 12/26...	CDC 13/27...	CDC 14/28...
114	1.00 0.0	1.00 0.0	0.60	0.30	0.0	0.30	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.0
115	1.00 0.0	1.00 0.0	0.60	-0.30	0.0	0.0	-0.30	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
116	1.00 0.0	1.00 0.0	0.60	-0.30	0.0	0.0	-0.30	0.0	0.0	0.0	0.0	1.00	0.0	0.0
117	1.00 0.0	1.00 0.0	0.60	-0.30	0.0	0.0	0.30	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
118	1.00 0.0	1.00 0.0	0.60	-0.30	0.0	0.0	0.30	0.0	0.0	0.0	0.0	1.00	0.0	0.0
119	1.00 0.0	1.00 0.0	0.60	0.30	0.0	0.0	-0.30	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
120	1.00 0.0	1.00 0.0	0.60	0.30	0.0	0.0	-0.30	0.0	0.0	0.0	0.0	1.00	0.0	0.0
121	1.00 0.0	1.00 0.0	0.60	0.30	0.0	0.0	0.30	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
122	1.00 0.0	1.00 0.0	0.60	0.30	0.0	0.0	0.30	0.0	0.0	0.0	0.0	1.00	0.0	0.0
123	1.00 0.0	1.00 0.0	0.60	0.0	-0.30	-0.30	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
124	1.00 0.0	1.00 0.0	0.60	0.0	-0.30	-0.30	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.0
125	1.00 0.0	1.00 0.0	0.60	0.0	-0.30	0.30	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
126	1.00 0.0	1.00 0.0	0.60	0.0	-0.30	0.30	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.0
127	1.00 0.0	1.00 0.0	0.60	0.0	0.30	-0.30	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
128	1.00 0.0	1.00 0.0	0.60	0.0	0.30	-0.30	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.0
129	1.00 0.0	1.00 0.0	0.60	0.0	0.30	0.30	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
130	1.00 0.0	1.00 0.0	0.60	0.0	0.30	0.30	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.0
131	1.00 0.0	1.00 0.0	0.60	0.0	-0.30	0.0	-0.30	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
132	1.00 0.0	1.00 0.0	0.60	0.0	-0.30	0.0	-0.30	0.0	0.0	0.0	0.0	1.00	0.0	0.0
133	1.00 0.0	1.00 0.0	0.60	0.0	-0.30	0.0	0.30	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
134	1.00 0.0	1.00 0.0	0.60	0.0	-0.30	0.0	0.30	0.0	0.0	0.0	0.0	1.00	0.0	0.0
135	1.00 0.0	1.00 0.0	0.60	0.0	0.30	0.0	-0.30	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
136	1.00 0.0	1.00 0.0	0.60	0.0	0.30	0.0	-0.30	0.0	0.0	0.0	0.0	1.00	0.0	0.0
137	1.00 0.0	1.00 0.0	0.60	0.0	0.30	0.0	0.30	0.0	0.0	0.0	0.0	-1.00	0.0	0.0
138	1.00 0.0	1.00 0.0	0.60	0.0	0.30	0.0	0.30	0.0	0.0	0.0	0.0	1.00	0.0	0.0
139	1.00 -0.30	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.00	0.0
140	1.00 0.30	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.00	0.0
141	1.00 -0.30	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.0
142	1.00 0.30	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.0
143	1.00 0.0	1.00 -0.30	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.00	0.0
144	1.00 0.0	1.00 0.30	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.00	0.0
145	1.00 0.0	1.00 -0.30	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.0
146	1.00 0.0	1.00 0.30	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.0
147	1.00 -0.30	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.00
148	1.00 0.30	1.00 0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.00



Cmb	CDC 1/15...	CDC 2/16...	CDC 3/17...	CDC 4/18...	CDC 5/19...	CDC 6/20...	CDC 7/21...	CDC 8/22...	CDC 9/23...	CDC 10/24...	CDC 11/25...	CDC 12/26...	CDC 13/27...	CDC 14/28...
149	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00
	-0.30	0.0												
150	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00
	0.30	0.0												
151	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.00
	0.0	-0.30												
152	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.00
	0.0	0.30												
153	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00
	0.0	-0.30												
154	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00
	0.0	0.30												
155	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.30	0.0
	-1.00	0.0												
156	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.30	0.0
	1.00	0.0												
157	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.0
	-1.00	0.0												
158	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.0
	1.00	0.0												
159	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.30
	-1.00	0.0												
160	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.30
	1.00	0.0												
161	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30
	-1.00	0.0												
162	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30
	1.00	0.0												
163	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.30	0.0
	0.0	-1.00												
164	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.30	0.0
	0.0	1.00												
165	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.0
	0.0	-1.00												
166	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.0
	0.0	1.00												
167	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.30
	0.0	-1.00												
168	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.30
	0.0	1.00												
169	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30
	0.0	-1.00												
170	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.30
	0.0	1.00												

# AZIONE SISMICA

## VALUTAZIONE DELL' AZIONE SISMICA

L'azione sismica sulle costruzioni è valutata a partire dalla "pericolosità sismica di base", in condizioni ideali di sito di riferimento rigido con superficie topografica orizzontale.

Allo stato attuale, la pericolosità sismica su reticolo di riferimento nell'intervallo di riferimento è fornita dai dati pubblicati sul sito <http://esse1.mi.ingv.it/>. Per punti non coincidenti con il reticolo di riferimento e periodi di ritorno non contemplati direttamente si opera come indicato nell' allegato alle NTC (rispettivamente media pesata e interpolazione).

L' azione sismica viene definita in relazione ad un periodo di riferimento  $V_r$  che si ricava, per ciascun tipo di costruzione, moltiplicandone la vita nominale per il coefficiente d'uso (vedi tabella Parametri della struttura). Fissato il periodo di riferimento  $V_r$  e la probabilità di superamento  $P_{ver}$  associata a ciascuno degli stati limite considerati, si ottiene il periodo di ritorno  $T_r$  e i relativi parametri di pericolosità sismica (vedi tabella successiva):

$a_g$ : accelerazione orizzontale massima del terreno;

$F_o$ : valore massimo del fattore di amplificazione dello spettro in accelerazione orizzontale;

$T^*c$ : periodo di inizio del tratto a velocità costante dello spettro in accelerazione orizzontale;

### Parametri della struttura

Classe d'uso	Vita $V_n$ [anni]	Coeff. Uso	Periodo $V_r$ [anni]	Tipo di suolo	Categoria topografica
III	50.0	1.5	75.0	C	T1

Per la struttura in esame si sono adottati i parametri di pericolosità sismica da analisi di Risposta Sismica locale; si sono adottati i parametri spettrali riportati nelle seguenti tabelle; i parametri consentono la definizione degli spettri elastici come previsto al cap. 3.2 delle norme tecniche:

lo spettro di risposta elastico in accelerazione della componente orizzontale del moto sismico,  $S_e$ , è definito dalle seguenti espressioni:

$$\begin{aligned} 0 \leq T < T_B & S_e(T) = a_g \cdot S \cdot \eta \cdot F_o \cdot \left[ \frac{T}{T_B} + \frac{1}{\eta \cdot F_o} \left( 1 - \frac{T}{T_B} \right) \right] \\ T_B \leq T < T_C & S_e(T) = a_g \cdot S \cdot \eta \cdot F_o \\ T_C \leq T < T_D & S_e(T) = a_g \cdot S \cdot \eta \cdot F_o \cdot \left( \frac{T_C}{T} \right) \\ T_D \leq T & S_e(T) = a_g \cdot S \cdot \eta \cdot F_o \cdot \left( \frac{T_C \cdot T_D}{T^2} \right) \end{aligned}$$

Lo spettro di risposta elastico in accelerazione della componente verticale del moto sismico,  $S_{ve}$ , è definito dalle espressioni:

$$\begin{aligned} 0 \leq T < T_B & S_{ve}(T) = a_g \cdot S \cdot \eta \cdot F_v \cdot \left[ \frac{T}{T_B} + \frac{1}{\eta \cdot F_o} \left( 1 - \frac{T}{T_B} \right) \right] \\ T_B \leq T < T_C & S_{ve}(T) = a_g \cdot S \cdot \eta \cdot F_v \\ T_C \leq T < T_D & S_{ve}(T) = a_g \cdot S \cdot \eta \cdot F_v \cdot \left( \frac{T_C}{T} \right) \\ T_D \leq T & S_{ve}(T) = a_g \cdot S \cdot \eta \cdot F_v \cdot \left( \frac{T_C \cdot T_D}{T^2} \right) \end{aligned}$$

I valori di  $S_s$ ,  $T_B$ ,  $T_C$  e  $T_D$ , sono riportati nella seguente Tabella

Categoria di sottosuolo	$S_s$	$T_B$	$T_C$	$T_D$
A, B, C, D, E	1,0	0,05 s	0,15 s	1,0 s

S è il coefficiente che tiene conto della categoria di sottosuolo e delle condizioni topografiche mediante la relazione seguente  $S = S_s \cdot S_t$  (3.2.3); nel caso di RSL i valori sono unitari

Fo è il fattore che quantifica l'amplificazione spettrale massima, su sito in esame

Fv è il fattore che quantifica l'amplificazione spettrale massima verticale, in termini di accelerazione orizzontale massima del terreno ag su sito in esame

Tb è il periodo corrispondente all'inizio del tratto dello spettro ad accelerazione costante.

Tc è il periodo corrispondente all'inizio del tratto dello spettro a velocità costante.

Td è il periodo corrispondente all'inizio del tratto dello spettro a spostamento costante.

### Simbologia adottata nelle tabelle

Se(t)	Accelerazioni dello spettro di input
Tr	Periodo di ritorno
Tmin	Valore minore tra i tre periodi di vibrazione dell'edificio con massa partecipante più elevata
2Tmax	Valore maggiore tra i tre periodi di vibrazione dell'edificio con massa partecipante più elevata moltiplicato per due
Integrale RSL	Integrale dello spettro di risposta sismica locale valutato nell'intervallo compreso tra Tmin e 2Tmax
Integrale NTC*1.2	Integrale dello spettro da normativa amplificato del 20% valutato nell'intervallo compreso tra Tmin e 2Tmax
Rapporto	Rapporto tra Integrale RSL e Integrale NTC*1.2;
Esito confronto RSL vs NTC	<ul style="list-style-type: none"> <li>- Possibile l'uso dello spettro NTC se Rapporto minore di 1 e <math>RSL &lt; NTC \cdot 1.3</math></li> <li>- Non ammesso l'uso dello spettro NTC se <math>RSL \geq NTC \cdot 1.3</math> e Rapporto maggiore di 1</li> <li>- Non ammesso l'uso dello spettro NTC (30% superato) se <math>RSL \geq NTC \cdot 1.3</math></li> <li>- Non ammesso l'uso dello spettro NTC (rapporto integrali) se Rapporto maggiore di 1</li> </ul>
Se(t) RSL	Accelerazioni dello spettro di risposta sismica locale
Se(t) NTC*1.3	Accelerazioni dello spettro da normativa amplificate del 30%
Confronto ord.55	<p>Confronto tra lo spettro di risposta sismica locale e lo spettro da normativa amplificato del 30% nell'intervallo compreso tra Tmin e 2Tmax secondo l'Ordinanza n. 55 – 24/04/2018:</p> <ul style="list-style-type: none"> <li>- Non richiesto (ad di fuori dell'intervallo compreso tra Tmin e 2Tmax);</li> <li>- <math>RSL \leq NTC \cdot 1.3</math>;</li> <li>- <math>RSL &gt; NTC \cdot 1.3</math></li> </ul>
Esito confronto RSL vs NTC (0.7 A)	<p>Se lo spettro di risposta sismica locale è minore del 70% dello spettro da normativa non è consentito l'uso dello spettro di risposta sismica locale (7.2.6 NTC 2018):</p> <ul style="list-style-type: none"> <li>- Possibile l'uso dello spettro RSL;</li> <li>- Non ammesso l'uso di RSL (0.7 non superato).</li> </ul>
Se(t) NTC*0.7 suolo tipo A	70% delle Accelerazioni dello spettro da normativa valutato per categoria A di sottosuolo
Confronto NTC	<p>Confronto tra lo spettro di risposta sismica locale e il 70% dello spettro da normativa:</p> <ul style="list-style-type: none"> <li>- <math>RSL \geq NTC\_A \cdot 0.7</math>;</li> <li>- <math>RSL &lt; NTC\_A \cdot 0.7</math></li> </ul>

A seguire sono riportati i confronti tra pericolosità sismica RSL e NTC come previsto da Ordinanza n.55 – 24/04/2018 e NTC (7.2.6)

Id nodo	Longitudine	Latitudine	Distanza
			Km
Loc.	10.925	44.647	
16280	10.893	44.607	5.101
16281	10.963	44.608	5.260
16059	10.961	44.658	3.089
16058	10.891	44.656	2.860

SL	Pver	Tr	ag	Fo	T*c
		Anni	g		sec
SLO	81.0	45.0	0.099	2.873	0.360
SLD	63.0	75.0	0.124	2.843	0.374
SLV	10.0	712.0	0.327	2.790	0.396
SLC	5.0	1462.0	0.423	2.780	0.404

SL	ag	S	Fo	Fv	Tb	Tc	Td
	g				sec	sec	sec
SLO	0.099	1.000	2.873	1.222	0.120	0.360	1.997
SLD	0.124	1.000	2.843	1.354	0.125	0.374	2.098
SLV	0.327	1.000	2.790	2.155	0.132	0.396	2.909
SLC	0.423	1.000	2.780	2.442	0.135	0.404	3.293

File spettro in input	Normalizzazione
Z:/LAVORI 2021/ARCHILINEA/2780 - AUTODROMO MODENA/01 - TRIBUNE/SLV tribune.txt	Appendice 1) Ordinanza PCM n. 55 24/04/18

Periodo	Se(t) spettro input
[s]	[g]
0.01	0.319
0.01	0.319
0.01	0.319
0.01	0.320
0.01	0.320
0.02	0.320
0.02	0.321
0.02	0.321
0.02	0.322
0.02	0.322
0.03	0.323
0.03	0.325
0.03	0.328
0.04	0.335
0.04	0.355
0.04	0.366
0.05	0.368
0.05	0.377
0.06	0.390
0.07	0.399
0.07	0.424

Periodo	Se(t) spettro input
0.08	0.461
0.09	0.536
0.10	0.494
0.11	0.490
0.12	0.555
0.13	0.606
0.14	0.659
0.16	0.733
0.17	0.739
0.19	0.729
0.21	0.770
0.23	0.840
0.26	0.855
0.29	0.815
0.32	0.841
0.35	0.790
0.38	0.776
0.42	0.704
0.47	0.650
0.52	0.640
0.57	0.522
0.63	0.463

Periodo	Se(t) spettro input
0.70	0.412
0.77	0.377
0.85	0.328
0.93	0.271
1.03	0.242
1.14	0.193
1.26	0.179
1.39	0.171
1.53	0.158
1.69	0.144
1.86	0.106
2.06	0.092
2.27	0.073
2.51	0.060
2.77	0.048
3.05	0.040
3.37	0.033
3.72	0.026
4.10	0.019
4.53	0.013
5.00	0.009

Periodo di ritorno <Tr>	Accelerazione max <ag>	Amplificazione <Fo>	Inizio v=costante <T*c>
	[g]		[s]
30	0.084	2.842	0.339
50	0.104	2.881	0.366
72	0.122	2.843	0.373
101	0.142	2.846	0.380
140	0.167	2.788	0.380
201	0.199	2.753	0.383
475	0.281	2.790	0.392
975	0.369	2.790	0.399
2475	0.507	2.766	0.410

Confronto spettri RSL vs NTC	
Tmin	0.100
2Tmax	0.700
Integrale RSL	0.405
Integrale NTC*1.2	0.380
Rapporto	1.066
Esito confronto	Non ammesso l'uso dello spettro NTC

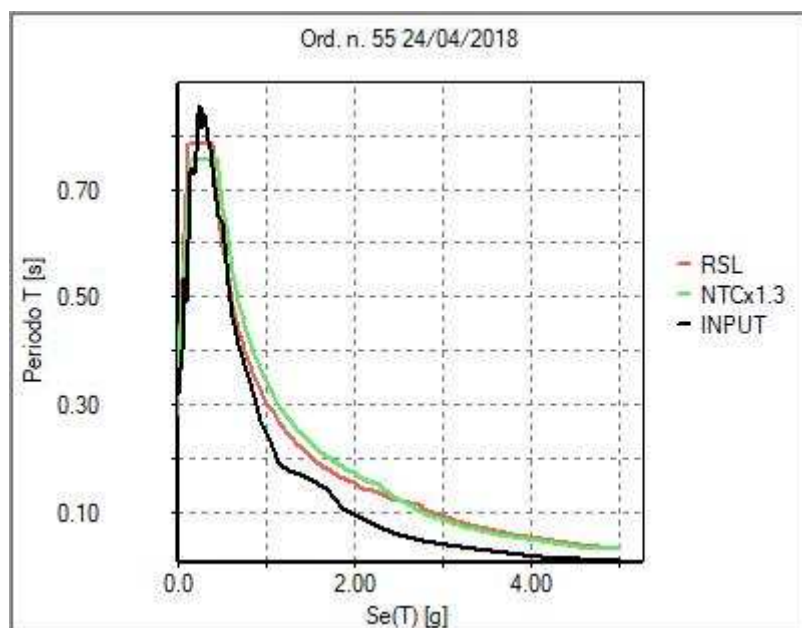


Fig. 1

Periodo [s]	Se(t) RSL [g]	Se(t) NTC*1.3 [g]	Confronto ord.55
0.000	0.281	0.310	Non richiesto
0.010	0.319	0.339	Non richiesto
0.011	0.323	0.342	Non richiesto
0.012	0.328	0.345	Non richiesto
0.013	0.333	0.349	Non richiesto
0.015	0.338	0.353	Non richiesto
0.016	0.344	0.357	Non richiesto
0.018	0.350	0.362	Non richiesto
0.020	0.358	0.368	Non richiesto
0.022	0.365	0.374	Non richiesto
0.024	0.374	0.381	Non richiesto
0.027	0.384	0.388	Non richiesto
0.030	0.395	0.396	Non richiesto
0.033	0.406	0.405	Non richiesto
0.036	0.419	0.415	Non richiesto
0.040	0.434	0.426	Non richiesto
0.044	0.450	0.438	Non richiesto
0.048	0.467	0.451	Non richiesto
0.053	0.487	0.465	Non richiesto
0.059	0.508	0.481	Non richiesto
0.065	0.531	0.499	Non richiesto
0.072	0.557	0.519	Non richiesto
0.079	0.586	0.541	Non richiesto
0.088	0.618	0.564	Non richiesto
0.097	0.653	0.591	Non richiesto
0.100	0.665	0.601	RSL > NTC*1.3
0.107	0.691	0.620	RSL > NTC*1.3
0.118	0.734	0.652	RSL > NTC*1.3
0.130	0.781	0.688	RSL > NTC*1.3
0.131	0.783	0.690	RSL > NTC*1.3
0.143	0.783	0.727	RSL > NTC*1.3
0.152	0.783	0.753	RSL > NTC*1.3

Periodo	Se(t) RSL	Se(t) NTC*1.3	Confronto ord.55
0.158	0.783	0.753	RSL > NTC*1.3
0.175	0.783	0.753	RSL > NTC*1.3
0.193	0.783	0.753	RSL > NTC*1.3
0.213	0.783	0.753	RSL > NTC*1.3
0.234	0.783	0.753	RSL > NTC*1.3
0.235	0.783	0.753	RSL > NTC*1.3
0.259	0.783	0.753	RSL > NTC*1.3
0.286	0.783	0.753	RSL > NTC*1.3
0.316	0.783	0.753	RSL > NTC*1.3
0.338	0.783	0.753	RSL > NTC*1.3
0.349	0.783	0.753	RSL > NTC*1.3
0.385	0.783	0.753	RSL > NTC*1.3
0.392	0.783	0.753	RSL > NTC*1.3
0.425	0.723	0.753	RSL <= NTC*1.3
0.442	0.695	0.753	RSL <= NTC*1.3
0.457	0.672	0.753	RSL <= NTC*1.3
0.469	0.655	0.734	RSL <= NTC*1.3
0.517	0.594	0.665	RSL <= NTC*1.3
0.545	0.563	0.631	RSL <= NTC*1.3
0.571	0.538	0.603	RSL <= NTC*1.3
0.630	0.487	0.546	RSL <= NTC*1.3
0.649	0.473	0.530	RSL <= NTC*1.3
0.695	0.442	0.495	RSL <= NTC*1.3
0.700	0.439	0.492	RSL <= NTC*1.3
0.753	0.408	0.457	Non richiesto
0.767	0.400	0.448	Non richiesto
0.847	0.363	0.406	Non richiesto
0.857	0.359	0.402	Non richiesto
0.935	0.329	0.368	Non richiesto
0.960	0.320	0.358	Non richiesto
1.032	0.298	0.334	Non richiesto
1.064	0.289	0.323	Non richiesto
1.139	0.270	0.302	Non richiesto

Periodo	Se(t) RSL	Se(t) NTC*1.3	Confronto ord.55
1.168	0.263	0.295	Non richiesto
1.257	0.244	0.274	Non richiesto
1.271	0.242	0.271	Non richiesto
1.375	0.223	0.250	Non richiesto
1.387	0.221	0.248	Non richiesto
1.479	0.208	0.233	Non richiesto
1.531	0.201	0.225	Non richiesto
1.582	0.194	0.217	Non richiesto
1.686	0.182	0.204	Non richiesto
1.689	0.182	0.204	Non richiesto
1.790	0.172	0.192	Non richiesto
1.864	0.165	0.185	Non richiesto
1.894	0.162	0.182	Non richiesto
1.997	0.154	0.172	Non richiesto
2.058	0.149	0.167	Non richiesto
2.101	0.146	0.164	Non richiesto
2.205	0.139	0.156	Non richiesto
2.252	0.136	0.153	Non richiesto
2.271	0.135	0.150	Non richiesto
2.308	0.133	0.145	Non richiesto
2.412	0.127	0.133	Non richiesto
2.507	0.123	0.123	Non richiesto
2.516	0.122	0.122	Non richiesto
2.619	0.117	0.113	Non richiesto
2.723	0.113	0.104	Non richiesto
2.766	0.109	0.101	Non richiesto
2.774	0.109	0.101	Non richiesto
2.825	0.105	0.097	Non richiesto
2.876	0.101	0.094	Non richiesto

Periodo	Se(t) RSL	Se(t) NTC*1.3	Confronto ord.55
2.927	0.098	0.090	Non richiesto
2.979	0.094	0.087	Non richiesto
3.030	0.091	0.084	Non richiesto
3.053	0.090	0.083	Non richiesto
3.081	0.088	0.082	Non richiesto
3.132	0.085	0.079	Non richiesto
3.183	0.083	0.076	Non richiesto
3.234	0.080	0.074	Non richiesto
3.285	0.077	0.072	Non richiesto
3.336	0.075	0.070	Non richiesto
3.370	0.074	0.068	Non richiesto
3.387	0.073	0.068	Non richiesto
3.438	0.071	0.066	Non richiesto
3.489	0.069	0.064	Non richiesto
3.540	0.067	0.062	Non richiesto
3.591	0.065	0.060	Non richiesto
3.642	0.063	0.058	Non richiesto
3.694	0.061	0.057	Non richiesto
3.719	0.060	0.056	Non richiesto
3.745	0.060	0.055	Non richiesto
3.796	0.058	0.054	Non richiesto
3.847	0.057	0.052	Non richiesto
3.898	0.055	0.051	Non richiesto
3.949	0.054	0.050	Non richiesto
4.000	0.052	0.048	Non richiesto
4.105	0.050	0.046	Non richiesto
4.530	0.041	0.038	Non richiesto
5.000	0.033	0.031	Non richiesto

Confronto spettro RSL vs NTC (0.7 A)	
Esito confronto	Possibile l'uso dello spettro RSL

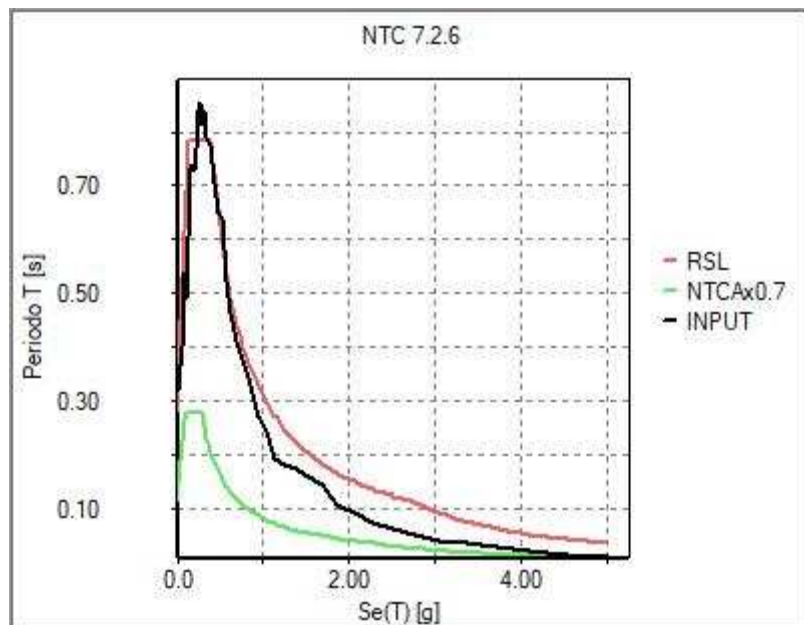


Fig. 2

Periodo	Se(t) RSL	Se(t) NTC*0.7 suolo tipo A	Confronto NTC
[s]	[g]	[g]	
0.000	0.281	0.114	RSL >= NTC A*0.7
0.010	0.319	0.131	RSL >= NTC A*0.7
0.011	0.323	0.133	RSL >= NTC A*0.7
0.012	0.328	0.135	RSL >= NTC A*0.7
0.013	0.333	0.137	RSL >= NTC A*0.7

Periodo	Se(t) RSL	Se(t) NTC*0.7 suolo tipo A	Confronto NTC
0.015	0.338	0.139	RSL >= NTC A*0.7
0.016	0.344	0.142	RSL >= NTC A*0.7
0.018	0.350	0.145	RSL >= NTC A*0.7
0.020	0.358	0.148	RSL >= NTC A*0.7
0.022	0.365	0.151	RSL >= NTC A*0.7
0.024	0.374	0.155	RSL >= NTC A*0.7
0.027	0.384	0.159	RSL >= NTC A*0.7
0.030	0.395	0.164	RSL >= NTC A*0.7
0.033	0.406	0.169	RSL >= NTC A*0.7
0.036	0.419	0.175	RSL >= NTC A*0.7
0.040	0.434	0.181	RSL >= NTC A*0.7
0.044	0.450	0.188	RSL >= NTC A*0.7
0.048	0.467	0.196	RSL >= NTC A*0.7
0.053	0.487	0.205	RSL >= NTC A*0.7
0.059	0.508	0.214	RSL >= NTC A*0.7
0.065	0.531	0.224	RSL >= NTC A*0.7
0.072	0.557	0.236	RSL >= NTC A*0.7
0.079	0.586	0.248	RSL >= NTC A*0.7
0.088	0.618	0.262	RSL >= NTC A*0.7
0.096	0.651	0.277	RSL >= NTC A*0.7
0.097	0.653	0.277	RSL >= NTC A*0.7
0.107	0.691	0.277	RSL >= NTC A*0.7
0.118	0.734	0.277	RSL >= NTC A*0.7
0.130	0.781	0.277	RSL >= NTC A*0.7
0.131	0.783	0.277	RSL >= NTC A*0.7
0.143	0.783	0.277	RSL >= NTC A*0.7
0.158	0.783	0.277	RSL >= NTC A*0.7
0.175	0.783	0.277	RSL >= NTC A*0.7
0.193	0.783	0.277	RSL >= NTC A*0.7
0.201	0.783	0.277	RSL >= NTC A*0.7
0.213	0.783	0.277	RSL >= NTC A*0.7
0.235	0.783	0.277	RSL >= NTC A*0.7
0.259	0.783	0.277	RSL >= NTC A*0.7
0.286	0.783	0.277	RSL >= NTC A*0.7
0.289	0.783	0.277	RSL >= NTC A*0.7
0.306	0.783	0.261	RSL >= NTC A*0.7
0.316	0.783	0.254	RSL >= NTC A*0.7
0.349	0.783	0.230	RSL >= NTC A*0.7
0.385	0.783	0.208	RSL >= NTC A*0.7
0.392	0.783	0.204	RSL >= NTC A*0.7
0.412	0.746	0.195	RSL >= NTC A*0.7
0.425	0.723	0.189	RSL >= NTC A*0.7
0.469	0.655	0.171	RSL >= NTC A*0.7
0.517	0.594	0.155	RSL >= NTC A*0.7
0.517	0.594	0.155	RSL >= NTC A*0.7
0.571	0.538	0.140	RSL >= NTC A*0.7
0.622	0.494	0.129	RSL >= NTC A*0.7
0.630	0.487	0.127	RSL >= NTC A*0.7
0.695	0.442	0.115	RSL >= NTC A*0.7
0.727	0.423	0.110	RSL >= NTC A*0.7
0.767	0.400	0.104	RSL >= NTC A*0.7
0.832	0.369	0.096	RSL >= NTC A*0.7
0.847	0.363	0.095	RSL >= NTC A*0.7
0.935	0.329	0.086	RSL >= NTC A*0.7
0.937	0.328	0.085	RSL >= NTC A*0.7
1.032	0.298	0.078	RSL >= NTC A*0.7
1.042	0.295	0.077	RSL >= NTC A*0.7
1.139	0.270	0.070	RSL >= NTC A*0.7
1.147	0.268	0.070	RSL >= NTC A*0.7
1.252	0.245	0.064	RSL >= NTC A*0.7
1.257	0.244	0.064	RSL >= NTC A*0.7
1.357	0.226	0.059	RSL >= NTC A*0.7
1.387	0.221	0.058	RSL >= NTC A*0.7
1.462	0.210	0.055	RSL >= NTC A*0.7
1.531	0.201	0.052	RSL >= NTC A*0.7
1.567	0.196	0.051	RSL >= NTC A*0.7
1.672	0.184	0.048	RSL >= NTC A*0.7
1.689	0.182	0.047	RSL >= NTC A*0.7
1.778	0.173	0.045	RSL >= NTC A*0.7
1.864	0.165	0.043	RSL >= NTC A*0.7
1.883	0.163	0.043	RSL >= NTC A*0.7

Periodo	Se(t) RSL	Se(t) NTC*0.7 suolo tipo A	Confronto NTC
1.988	0.155	0.040	RSL >= NTC A*0.7
2.058	0.149	0.039	RSL >= NTC A*0.7
2.093	0.147	0.038	RSL >= NTC A*0.7
2.198	0.140	0.036	RSL >= NTC A*0.7
2.252	0.136	0.036	RSL >= NTC A*0.7
2.271	0.135	0.035	RSL >= NTC A*0.7
2.303	0.133	0.034	RSL >= NTC A*0.7
2.408	0.128	0.031	RSL >= NTC A*0.7
2.507	0.123	0.029	RSL >= NTC A*0.7
2.513	0.122	0.029	RSL >= NTC A*0.7
2.618	0.117	0.026	RSL >= NTC A*0.7
2.723	0.113	0.024	RSL >= NTC A*0.7
2.766	0.109	0.024	RSL >= NTC A*0.7
2.774	0.109	0.023	RSL >= NTC A*0.7
2.825	0.105	0.023	RSL >= NTC A*0.7
2.876	0.101	0.022	RSL >= NTC A*0.7
2.927	0.098	0.021	RSL >= NTC A*0.7
2.979	0.094	0.020	RSL >= NTC A*0.7
3.030	0.091	0.020	RSL >= NTC A*0.7
3.053	0.090	0.019	RSL >= NTC A*0.7
3.081	0.088	0.019	RSL >= NTC A*0.7
3.132	0.085	0.018	RSL >= NTC A*0.7
3.183	0.083	0.018	RSL >= NTC A*0.7
3.234	0.080	0.017	RSL >= NTC A*0.7
3.285	0.077	0.017	RSL >= NTC A*0.7
3.336	0.075	0.016	RSL >= NTC A*0.7
3.370	0.074	0.016	RSL >= NTC A*0.7
3.387	0.073	0.016	RSL >= NTC A*0.7
3.438	0.071	0.015	RSL >= NTC A*0.7
3.489	0.069	0.015	RSL >= NTC A*0.7
3.540	0.067	0.014	RSL >= NTC A*0.7
3.591	0.065	0.014	RSL >= NTC A*0.7
3.642	0.063	0.014	RSL >= NTC A*0.7
3.694	0.061	0.013	RSL >= NTC A*0.7
3.719	0.060	0.013	RSL >= NTC A*0.7
3.745	0.060	0.013	RSL >= NTC A*0.7
3.796	0.058	0.013	RSL >= NTC A*0.7
3.847	0.057	0.012	RSL >= NTC A*0.7
3.898	0.055	0.012	RSL >= NTC A*0.7
3.949	0.054	0.012	RSL >= NTC A*0.7
4.000	0.052	0.011	RSL >= NTC A*0.7
4.105	0.050	0.011	RSL >= NTC A*0.7
4.530	0.041	0.009	RSL >= NTC A*0.7
5.000	0.033	0.007	RSL >= NTC A*0.7

Periodo di ritorno <Tr>	Esito confronto
30	Possibile l'uso dello spettro RSL
50	Possibile l'uso dello spettro RSL
72	Possibile l'uso dello spettro RSL
101	Possibile l'uso dello spettro RSL
140	Possibile l'uso dello spettro RSL
201	Possibile l'uso dello spettro RSL
475	Possibile l'uso dello spettro RSL
975	Possibile l'uso dello spettro RSL
2475	Possibile l'uso dello spettro RSL



# RISULTATI ANALISI SISMICHE

## LEGENDA TABELLA ANALISI SISMICHE

Il programma consente l'analisi di diverse configurazioni sismiche.

Sono previsti, infatti, i seguenti casi di carico:

- 9. Esk** caso di carico sismico con analisi statica equivalente
- 10. Edk** caso di carico sismico con analisi dinamica

Ciascun caso di carico è caratterizzato da un angolo di ingresso e da una configurazione di masse determinante la forza sismica complessiva (si rimanda al capitolo relativo ai casi di carico per chiarimenti inerenti questo aspetto).

Nella colonna Note, in funzione della norma in uso sono riportati i parametri fondamentali che caratterizzano l'azione sismica: in particolare possono essere presenti i seguenti valori:

<b>Angolo di ingresso</b>	Angolo di ingresso dell'azione sismica orizzontale
<b>Fattore di importanza</b>	Fattore di importanza dell'edificio, in base alla categoria di appartenenza
<b>Zona sismica</b>	Zona sismica
<b>Accelerazione ag</b>	Accelerazione orizzontale massima sul suolo
<b>Categoria suolo</b>	Categoria di profilo stratigrafico del suolo di fondazione
<b>Fattore q</b>	Fattore di struttura/di comportamento. Dipendente dalla tipologia strutturale
<b>Fattore di sito S</b>	Fattore dipendente dalla stratigrafia e dal profilo topografico
<b>Classe di duttilità CD</b>	Classe di duttilità della struttura – "A" duttilità alta, "B" duttilità bassa
<b>Fattore riduz. SLD</b>	Fattore di riduzione dello spettro elastico per lo stato limite di danno
<b>Periodo proprio T1</b>	Periodo proprio di vibrazione della struttura
<b>Coefficiente Lambda</b>	Coefficiente dipendente dal periodo proprio T1 e dal numero di piani della struttura
<b>Ordinata spettro Sd(T1)</b>	Valore delle ordinate dello spettro di progetto per lo stato limite ultimo, componente orizzontale (verticale Svd)
<b>Ordinata spettro Se(T1)</b>	Valore delle ordinate dello spettro elastico ridotta del fattore SLD per lo stato limite di danno, componente orizzontale (verticale Sve)
<b>Ordinata spettro S (Tb-Tc)</b>	Valore dell' ordinata dello spettro in uso nel tratto costante
<b>numero di modi considerati</b>	Numero di modi di vibrare della struttura considerati nell'analisi dinamica

Per ciascun caso di carico sismico viene riportato l'insieme di dati sotto riportati (le masse sono espresse in unità di forza):

- c) **analisi sismica statica equivalente:**
  - quota, posizione del centro di applicazione e azione orizzontale risultante, posizione del baricentro delle rigidezze, rapporto  $r/L_s$  (per strutture a nucleo), indici di regolarità e/r secondo EC8 4.2.3.2
  - azione sismica complessiva
- d) **analisi sismica dinamica con spettro di risposta:**
  - quota, posizione del centro di massa e massa risultante, posizione del baricentro delle rigidezze, rapporto  $r/L_s$  (per strutture a nucleo) , indici di regolarità e/r secondo EC8 4.2.3.2
  - frequenza, periodo, accelerazione spettrale, massa eccitata nelle tre direzioni globali per tutti i modi

- massa complessiva ed aliquota di massa complessiva eccitata.

Per ciascuna combinazione sismica definita SLD o SLO viene riportato il livello di deformazione  $\epsilon_T$  (dr) degli elementi strutturali verticali. Per semplicità di consultazione il livello è espresso anche in unità  $1000 \cdot \epsilon_T/h$  da confrontare direttamente con i valori forniti nella norma (es. 5 per edifici con tamponamenti collegati rigidamente alla struttura, 10.0 per edifici con tamponamenti collegati elasticamente, 3 per edifici in muratura ordinaria, 4 per edifici in muratura armata).

Qualora si applichi il D.M. 96 (vedi NOTA sul capitolo "normativa di riferimento") l'analisi sismica dinamica può essere comprensiva di sollecitazione verticale contemporanea a quella orizzontale, nel qual caso è effettuata una sovrapposizione degli effetti in ragione della radice dei quadrati degli effetti stessi. Per ciascuna combinazione sismica - analisi effettuate con il D.M. 96 (vedi NOTA sul capitolo "normativa di riferimento") - viene riportato il livello di deformazione  $\epsilon_T$ ,  $\epsilon_P$  e  $\epsilon_D$  degli elementi strutturali verticali. Per semplicità di consultazione il livello è espresso in unità  $1000 \cdot \epsilon_T/h$  da confrontare direttamente con il valore 2 o 4 per la verifica.

Per gli edifici sismicamente isolati si riportano di seguito le verifiche condotte sui dispositivi di isolamento. Le verifiche sono effettuate secondo la circolare n.7/2019 del C.S.LL.PP nelle combinazioni in SLC come previsto dal DM 17-01-2018. Per ogni combinazione è riportato il codice di verifica ed i valori utilizzati per la verifica: spostamento  $dE$ , area ridotta e dimensione  $A_2$ , azione verticale, deformazioni di taglio dell'elastomero e tensioni nell'acciaio.

Qualora si applichi l'Ordinanza 3274 e s.m.i. le verifiche sono eseguite in accordo con l'allegato 10.A. In particolare la tabella, per ogni combinazione di calcolo, riporta:

<b>Nodo</b>	Nodo di appoggio dell' isolatore
<b>Cmb</b>	Combinazione oggetto della verifica
<b>Verif.</b>	Codice di verifica ok – verifica positiva , NV – verifica negativa, ND – verifica non completata
<b>dE</b>	Spostamento relativo tra le due facce (amplificato del 20% per Ordinanza 3274 e smi) combinato con la regola del 30%
<b>Ang fi</b>	Angolo utilizzato per il calcolo dell' area ridotta $A_r$ (per dispositivi circolari)
<b>V</b>	Azione verticale agente
<b>Ar</b>	Area ridotta efficace
<b>Dim A2</b>	Dimensione utile per il calcolo della deformazione per rotazione
<b>Sig s</b>	Tensione nell' inserto in acciaio
<b>Gam c(a,s,t)</b>	Deformazioni di taglio dell' elastomero
<b>Vcr</b>	Carico critico per instabilità

Affinché la verifica sia positiva deve essere:

- 7)  $V > 0$
- 8)  $\text{Sig s} < f_{yk}$
- 9)  $\text{Gam t} < 5$
- 10)  $\text{Gam s} < \text{Gam}^*$  (caratteristica dell' elastomero)
- 11)  $\text{Gam s} < 2$
- 12)  $V < 0.5 V_{cr}$

**Calcolo dei fattori di comportamento secondo il D.M. 17/01/2018**

La costruzione, nuova, è caratterizzata da non regolarità sia in pianta sia in altezza ed è progettata considerando un comportamento non dissipativo (ND).

**Parametri fattore in direzione x e y**

Sistema costruttivo: acciaio o composto acciaio-calcestruzzo  
Tipologia strutturale: strutture intelaiate o strutture con controventi eccentrici  
Valore base fattore  $q_0 = 4.000$   
Fattore di regolarità  $K_R = 0.8$   
Fattore dissipativo  $q_D = q_0 \cdot K_R = 3.200$   
Fattore non dissipativo  $q_{ND} = 2/3 \cdot q_D = 1.500$  ( $\leq 1.5$ )

**Fattori di comportamento utilizzati**

	Dissipativi	Non dissipativi
q SLU x	3.200	1.500
q SLU y	3.200	1.500
q SLU z	1.500	1.500

CDC	Tipo	Sigla Id	Note
4	Edk	CDC=Ed (dinamico SLU) alfa=0.0 (ecc. +)	
			categoria suolo: C
			fattore di sito S = 1.000
			ordinata spettro (tratto Tb-Tc) = 0.609 g
			angolo di ingresso: 0.0
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.015 sec.
			fattore q: 1.500
			fattore per spost. $\mu_d$ : 3.500
			classe di duttilità CD: ND
			numero di modi considerati: 51
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	daN	m	m	m	m	m	m			
5.55	2174.48	10.20	0.0	0.0	-0.06	10.65	0.0	1.881	0.356	0.0
5.45	76.14	10.65	0.0	0.0	-0.06	0.0	0.0	0.0	0.0	0.0
2.83	3353.79	4.81	0.0	0.0	-0.06	4.80	0.0	1.561	0.011	0.0
2.73	79.57	4.80	0.0	0.0	-0.06	0.0	0.0	0.0	0.0	0.0
0.10	1296.04	0.0	0.0	0.0	-0.06	0.0	0.0	3.000	0.0	0.0
Risulta	6980.02									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.640	0.610	0.395	0.22	3.11e-03	3164.27	45.3	0.27	3.80e-03	0.0	0.0
2	4.265	0.234	0.609	0.06	8.18e-04	470.99	6.7	2.36e-04	3.38e-06	0.0	0.0
3	5.686	0.176	0.609	0.18	2.56e-03	446.41	6.4	0.50	7.10e-03	0.0	0.0
4	13.074	0.076	0.490	1357.71	19.5	0.78	1.12e-02	262.92	3.8	0.0	0.0
5	14.854	0.067	0.471	987.79	14.2	10.40	0.1	723.86	10.4	0.0	0.0
6	19.063	0.052	0.439	371.41	5.3	0.83	1.20e-02	1896.17	27.2	0.0	0.0
7	20.898	0.048	0.429	100.18	1.4	0.04	6.18e-04	272.44	3.9	0.0	0.0
8	22.225	0.045	0.423	103.29	1.5	0.39	5.63e-03	1166.36	16.7	0.0	0.0
9	45.629	0.022	0.374	3.44	4.93e-02	0.01	1.48e-04	0.04	5.19e-04	0.0	0.0
10	49.705	0.020	0.370	3.47	4.97e-02	0.30	4.36e-03	196.59	2.8	0.0	0.0
11	65.875	0.015	0.360	2.71	3.88e-02	2.87	4.12e-02	149.18	2.1	0.0	0.0
12	66.083	0.015	0.360	1930.91	27.7	1.15	1.65e-02	473.21	6.8	0.0	0.0
13	69.736	0.014	0.358	2.95	4.22e-02	14.33	0.2	0.05	7.14e-04	0.0	0.0
14	71.198	0.014	0.357	0.25	3.59e-03	628.19	9.0	0.03	3.87e-04	0.0	0.0
15	91.219	0.011	0.351	101.27	1.5	13.67	0.2	1.33	1.91e-02	0.0	0.0
16	109.130	0.009	0.347	0.63	9.03e-03	865.07	12.4	11.81	0.2	0.0	0.0
17	155.211	0.006	0.341	379.39	5.4	2.04e-04	2.92e-06	10.16	0.1	0.0	0.0
18	168.097	0.006	0.340	3.56	5.09e-02	8.89e-04	1.27e-05	0.47	6.78e-03	0.0	0.0
19	177.739	0.006	0.339	329.13	4.7	2.64e-03	3.78e-05	0.20	2.89e-03	0.0	0.0
20	214.055	0.005	0.337	0.23	3.29e-03	4.98e-05	0.0	0.01	1.59e-04	0.0	0.0
21	217.790	0.005	0.337	2.18	3.13e-02	2.67e-03	3.83e-05	0.19	2.68e-03	0.0	0.0
22	218.633	0.005	0.337	1.15	1.65e-02	4.22e-04	6.05e-06	3.34e-04	4.78e-06	0.0	0.0
23	219.817	0.005	0.337	0.07	1.04e-03	6.72e-04	9.62e-06	7.70e-05	1.10e-06	0.0	0.0
24	222.708	0.004	0.337	56.36	0.8	8.99e-06	0.0	1.11	1.59e-02	0.0	0.0
25	243.447	0.004	0.336	3.39	4.86e-02	5.97e-04	8.55e-06	2.67e-04	3.82e-06	0.0	0.0
26	299.065	0.003	0.334	7.08e-03	1.01e-04	1.48e-03	2.12e-05	0.01	1.72e-04	0.0	0.0

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
27	299.606	0.003	0.334	0.25	3.63e-03	3.22e-05	0.0	37.17	0.5	0.0	0.0
28	371.014	0.003	0.333	7.38e-04	1.06e-05	232.30	3.3	0.47	6.80e-03	0.0	0.0
29	497.733	0.002	0.332	0.03	3.89e-04	0.0	0.0	9.86	0.1	0.0	0.0
30	585.416	0.002	0.331	7.84e-04	1.12e-05	0.0	0.0	640.02	9.2	0.0	0.0
31	668.025	0.001	0.330	9.67e-04	1.38e-05	0.0	0.0	6.80e-03	9.74e-05	0.0	0.0
32	751.581	0.001	0.330	1.03e-04	1.48e-06	1.41e-06	0.0	0.0	0.0	0.0	0.0
33	842.322	0.001	0.330	0.0	0.0	6.82e-05	0.0	0.0	0.0	0.0	0.0
34	1.3920e+03	7.1840e-04	0.329	2.87e-05	0.0	4.15e-05	0.0	2.19e-06	0.0	0.0	0.0
35	1.5339e+03	6.5191e-04	0.329	9.84e-06	0.0	2.47	3.54e-02	0.11	1.56e-03	0.0	0.0
36	2.2540e+03	4.4366e-04	0.328	7.00e-05	1.00e-06	8.48e-06	0.0	3.49e-06	0.0	0.0	0.0
37	2.4147e+03	4.1413e-04	0.328	0.0	0.0	0.38	5.39e-03	0.19	2.73e-03	0.0	0.0
38	2.9188e+03	3.4261e-04	0.328	0.0	0.0	1.17e-05	0.0	0.0	0.0	0.0	0.0
39	3.0977e+03	3.2282e-04	0.328	0.0	0.0	0.0	0.0	7.47e-05	1.07e-06	0.0	0.0
40	3.9486e+03	2.5325e-04	0.328	2.42e-03	3.47e-05	0.0	0.0	1.15e-05	0.0	0.0	0.0
41	6.0445e+03	1.6544e-04	0.328	1.24e-03	1.77e-05	0.0	0.0	0.0	0.0	0.0	0.0
42	7.2534e+03	1.3787e-04	0.328	0.0	0.0	872.84	12.5	0.0	0.0	0.0	0.0
43	1.0510e+04	9.5146e-05	0.328	7.99e-05	1.15e-06	0.0	0.0	872.82	12.5	0.0	0.0
44	1.1405e+04	8.7684e-05	0.327	959.87	13.8	0.0	0.0	9.66e-05	1.38e-06	0.0	0.0
45	1.4659e+04	6.8217e-05	0.327	0.0	0.0	214.24	3.1	4.41e-05	0.0	0.0	0.0
46	2.1206e+04	4.7157e-05	0.327	2.34e-05	0.0	9.93e-06	0.0	214.40	3.1	0.0	0.0
47	2.3007e+04	4.3464e-05	0.327	236.06	3.4	0.0	0.0	2.47e-05	0.0	0.0	0.0
48	7.1939e+04	1.3901e-05	0.327	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	7.4259e+04	1.3466e-05	0.327	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	1.0369e+05	9.6440e-06	0.327	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	1.0369e+05	9.6438e-06	0.327	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Risulta				6938.15		6941.95		6941.95			
In percentuale				99.40		99.45		99.45			

CDC	Tipo	Sigla Id	Note
5	Edk	CDC=Ed (dinamico SLU) alfa=0.0 (ecc. -)	
			categoria suolo: C
			fattore di sito S = 1.000
			ordinata spettro (tratto Tb-Tc) = 0.609 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.079 sec.
			fattore q: 1.500
			fattore per spost. mu d: 3.500
			classe di duttilità CD: ND
			numero di modi considerati: 51
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	daN	m	m	m	m	m	m			
5.55	2174.48	10.20	0.0	0.0	0.06	10.65	0.0	1.881	0.356	0.0
5.45	76.14	10.65	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0
2.83	3353.79	4.81	0.0	0.0	0.06	4.80	0.0	1.561	0.011	0.0
2.73	79.57	4.80	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0
0.10	1296.04	0.0	0.0	0.0	0.06	0.0	0.0	3.000	0.0	0.0
Risulta	6980.02									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.639	0.610	0.395	2.51	3.60e-02	3163.51	45.3	0.27	3.83e-03	0.0	0.0
2	4.264	0.234	0.609	0.36	5.16e-03	469.81	6.7	1.70e-04	2.44e-06	0.0	0.0
3	5.669	0.176	0.609	50.39	0.7	448.09	6.4	0.59	8.42e-03	0.0	0.0
4	12.709	0.079	0.495	1976.11	28.3	0.02	2.66e-04	155.95	2.2	0.0	0.0
5	14.447	0.069	0.475	731.86	10.5	11.28	0.2	747.10	10.7	0.0	0.0
6	18.961	0.053	0.440	336.09	4.8	0.57	8.23e-03	1689.13	24.2	0.0	0.0
7	20.561	0.049	0.431	130.86	1.9	0.03	3.96e-04	204.98	2.9	0.0	0.0
8	22.065	0.045	0.424	64.85	0.9	0.48	6.86e-03	1619.78	23.2	0.0	0.0
9	45.658	0.022	0.374	1.83	2.62e-02	0.01	1.62e-04	0.42	5.95e-03	0.0	0.0
10	49.681	0.020	0.370	4.18	6.00e-02	0.34	4.87e-03	197.20	2.8	0.0	0.0

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
11	64.781	0.015	0.360	481.09	6.9	3.56	5.10e-02	1.22	1.75e-02	0.0	0.0
12	69.730	0.014	0.358	3.35	4.80e-02	14.71	0.2	6.84e-03	9.80e-05	0.0	0.0
13	70.823	0.014	0.357	1273.67	18.2	2.88	4.13e-02	525.47	7.5	0.0	0.0
14	71.199	0.014	0.357	6.44	9.22e-02	625.33	9.0	1.42	2.04e-02	0.0	0.0
15	85.384	0.012	0.352	124.73	1.8	9.94	0.1	1.24	1.77e-02	0.0	0.0
16	109.094	0.009	0.347	0.44	6.32e-03	869.17	12.5	11.95	0.2	0.0	0.0
17	161.384	0.006	0.341	420.18	6.0	5.88e-03	8.43e-05	0.26	3.80e-03	0.0	0.0
18	167.740	0.006	0.340	22.94	0.3	4.77e-06	0.0	0.91	1.31e-02	0.0	0.0
19	171.490	0.006	0.340	275.00	3.9	4.46e-04	6.39e-06	7.54	0.1	0.0	0.0
20	214.053	0.005	0.337	0.23	3.23e-03	3.61e-05	0.0	7.99e-03	1.14e-04	0.0	0.0
21	217.516	0.005	0.337	0.30	4.34e-03	2.22e-03	3.19e-05	0.26	3.66e-03	0.0	0.0
22	218.672	0.005	0.337	0.71	1.02e-02	2.91e-05	0.0	5.96e-03	8.53e-05	0.0	0.0
23	220.508	0.005	0.337	0.01	1.53e-04	2.85e-03	4.08e-05	0.01	1.59e-04	0.0	0.0
24	222.858	0.004	0.337	49.50	0.7	7.19e-05	1.03e-06	0.93	1.34e-02	0.0	0.0
25	242.868	0.004	0.336	9.34	0.1	2.05e-06	0.0	0.27	3.93e-03	0.0	0.0
26	270.524	0.004	0.335	6.89e-03	9.86e-05	1.22e-03	1.75e-05	2.34e-05	0.0	0.0	0.0
27	299.607	0.003	0.334	0.26	3.65e-03	4.00e-05	0.0	37.22	0.5	0.0	0.0
28	371.014	0.003	0.333	7.36e-04	1.05e-05	232.30	3.3	0.47	6.80e-03	0.0	0.0
29	497.733	0.002	0.332	0.03	3.89e-04	0.0	0.0	9.85	0.1	0.0	0.0
30	585.426	0.002	0.331	6.16e-04	8.83e-06	0.0	0.0	639.96	9.2	0.0	0.0
31	668.023	0.001	0.330	4.29e-04	6.14e-06	1.80e-06	0.0	3.27e-06	0.0	0.0	0.0
32	751.580	0.001	0.330	1.10e-03	1.58e-05	0.0	0.0	3.70e-04	5.30e-06	0.0	0.0
33	842.322	0.001	0.330	0.0	0.0	6.82e-05	0.0	0.0	0.0	0.0	0.0
34	1.2591e+03	7.9422e-04	0.329	4.01e-05	0.0	1.28e-05	0.0	0.0	0.0	0.0	0.0
35	1.5339e+03	6.5191e-04	0.329	9.78e-06	0.0	2.47	3.54e-02	0.11	1.56e-03	0.0	0.0
36	2.0389e+03	4.9047e-04	0.328	9.39e-05	1.35e-06	1.95e-06	0.0	0.0	0.0	0.0	0.0
37	2.4147e+03	4.1413e-04	0.328	0.0	0.0	0.38	5.39e-03	0.19	2.73e-03	0.0	0.0
38	2.9188e+03	3.4261e-04	0.328	0.0	0.0	1.17e-05	0.0	0.0	0.0	0.0	0.0
39	3.0977e+03	3.2282e-04	0.328	0.0	0.0	0.0	0.0	7.47e-05	1.07e-06	0.0	0.0
40	3.9484e+03	2.5327e-04	0.328	2.88e-03	4.12e-05	0.0	0.0	0.0	0.0	0.0	0.0
41	6.0451e+03	1.6542e-04	0.328	5.39e-04	7.72e-06	0.0	0.0	7.81e-06	0.0	0.0	0.0
42	7.2534e+03	1.3787e-04	0.328	0.0	0.0	872.84	12.5	0.0	0.0	0.0	0.0
43	1.0510e+04	9.5146e-05	0.328	1.23e-05	0.0	0.0	0.0	872.82	12.5	0.0	0.0
44	1.2608e+04	7.9313e-05	0.327	785.34	11.3	0.0	0.0	2.75e-05	0.0	0.0	0.0
45	1.4659e+04	6.8217e-05	0.327	0.0	0.0	214.24	3.1	4.41e-05	0.0	0.0	0.0
46	2.1206e+04	4.7157e-05	0.327	0.0	0.0	9.93e-06	0.0	214.40	3.1	0.0	0.0
47	2.5436e+04	3.9315e-05	0.327	193.14	2.8	0.0	0.0	3.01e-06	0.0	0.0	0.0
48	7.1939e+04	1.3901e-05	0.327	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	7.4259e+04	1.3466e-05	0.327	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	1.0369e+05	9.6440e-06	0.327	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	1.0369e+05	9.6438e-06	0.327	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Risulta				6945.76		6941.95		6941.95			
In percentuale				99.51		99.45		99.45			

CDC	Tipo	Sigla Id	Note
6	Edk	CDC=Ed (dinamico SLU) alfa=90.00 (ecc. +)	
			categoria suolo: C
			fattore di sito S = 1.000
			ordinata spettro (tratto Tb-Tc) = 0.609 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.601 sec.
			fattore q: 1.500
			fattore per spost. mu d: 1.500
			classe di duttilità CD: ND
			numero di modi considerati: 51
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	daN	m	m	m	m	m	m			
5.55	2174.48	10.20	0.0	0.07	0.0	10.65	0.0	1.881	0.356	0.0
5.45	76.14	10.65	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.0
2.83	3353.79	4.81	0.0	0.06	0.0	4.80	0.0	1.561	0.011	0.0
2.73	79.57	4.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.10	1296.04	0.0	0.0	0.0	0.0	0.0	0.0	3.000	0.0	0.0
Risulta	6980.02									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.664	0.601	0.401	0.29	4.21e-03	3162.92	45.3	0.28	4.02e-03	0.0	0.0
2	4.264	0.235	0.609	0.20	2.82e-03	463.35	6.6	1.66e-04	2.37e-06	0.0	0.0
3	5.598	0.179	0.609	14.08	0.2	455.26	6.5	0.52	7.38e-03	0.0	0.0
4	12.912	0.077	0.492	1680.22	24.1	0.13	1.88e-03	203.30	2.9	0.0	0.0
5	14.641	0.068	0.473	867.89	12.4	9.88	0.1	739.74	10.6	0.0	0.0
6	19.047	0.053	0.439	339.26	4.9	0.73	1.04e-02	1841.70	26.4	0.0	0.0
7	20.722	0.048	0.430	117.39	1.7	2.50e-04	3.58e-06	251.20	3.6	0.0	0.0
8	22.199	0.045	0.423	84.50	1.2	0.49	7.02e-03	1333.34	19.1	0.0	0.0
9	45.643	0.022	0.374	2.55	3.66e-02	0.01	1.52e-04	0.18	2.53e-03	0.0	0.0
10	49.676	0.020	0.370	3.84	5.50e-02	0.58	8.34e-03	196.72	2.8	0.0	0.0
11	65.302	0.015	0.360	446.85	6.4	3.23	4.62e-02	1.96	2.81e-02	0.0	0.0
12	68.230	0.015	0.359	1400.39	20.1	0.10	1.50e-03	574.12	8.2	0.0	0.0
13	69.847	0.014	0.358	5.51	7.90e-02	18.15	0.3	0.12	1.78e-03	0.0	0.0
14	71.202	0.014	0.357	0.21	3.05e-03	624.77	9.0	0.02	3.03e-04	0.0	0.0
15	88.088	0.011	0.352	113.67	1.6	8.06	0.1	1.18	1.69e-02	0.0	0.0
16	112.608	0.009	0.346	0.36	5.20e-03	816.46	11.7	11.24	0.2	0.0	0.0
17	162.260	0.006	0.340	348.44	5.0	9.07e-05	1.30e-06	8.39	0.1	0.0	0.0
18	167.398	0.006	0.340	87.27	1.3	3.80e-03	5.44e-05	1.34	1.92e-02	0.0	0.0
19	170.098	0.006	0.340	282.43	4.0	1.30e-03	1.86e-05	0.03	4.75e-04	0.0	0.0
20	203.433	0.005	0.338	0.04	5.23e-04	7.37e-05	1.06e-06	0.02	2.64e-04	0.0	0.0
21	217.900	0.005	0.337	0.83	1.19e-02	3.98e-03	5.70e-05	0.20	2.93e-03	0.0	0.0
22	222.153	0.005	0.337	39.75	0.6	1.22e-05	0.0	0.80	1.14e-02	0.0	0.0
23	230.511	0.004	0.337	15.77	0.2	1.23e-05	0.0	0.33	4.77e-03	0.0	0.0
24	231.118	0.004	0.337	2.47	3.54e-02	1.07e-03	1.53e-05	7.80e-04	1.12e-05	0.0	0.0
25	232.134	0.004	0.336	0.23	3.34e-03	1.06e-04	1.52e-06	0.05	7.75e-04	0.0	0.0
26	283.723	0.004	0.335	6.32e-03	9.05e-05	2.40e-03	3.44e-05	4.81e-05	0.0	0.0	0.0
27	299.812	0.003	0.334	0.25	3.55e-03	9.22e-05	1.32e-06	37.19	0.5	0.0	0.0
28	332.747	0.003	0.334	9.40e-04	1.35e-05	288.11	4.1	0.62	8.84e-03	0.0	0.0
29	497.881	0.002	0.332	0.03	3.87e-04	0.0	0.0	9.83	0.1	0.0	0.0
30	585.421	0.002	0.331	7.08e-04	1.01e-05	0.0	0.0	640.00	9.2	0.0	0.0
31	704.696	0.001	0.330	1.14e-03	1.63e-05	0.0	0.0	9.13e-04	1.31e-05	0.0	0.0
32	707.615	0.001	0.330	1.35e-04	1.93e-06	1.01e-06	0.0	8.16e-04	1.17e-05	0.0	0.0
33	842.494	0.001	0.330	0.0	0.0	6.86e-05	0.0	0.0	0.0	0.0	0.0
34	1.3205e+03	7.5726e-04	0.329	3.43e-05	0.0	1.10e-05	0.0	0.0	0.0	0.0	0.0
35	1.6166e+03	6.1857e-04	0.329	8.78e-06	0.0	2.22	3.19e-02	0.10	1.40e-03	0.0	0.0
36	2.1384e+03	4.6765e-04	0.328	8.17e-05	1.17e-06	1.12e-05	0.0	4.54e-06	0.0	0.0	0.0
37	2.2936e+03	4.3600e-04	0.328	0.0	0.0	0.44	6.33e-03	0.21	3.01e-03	0.0	0.0
38	2.9188e+03	3.4260e-04	0.328	0.0	0.0	1.17e-05	0.0	0.0	0.0	0.0	0.0
39	3.0978e+03	3.2281e-04	0.328	0.0	0.0	0.0	0.0	7.47e-05	1.07e-06	0.0	0.0
40	4.6578e+03	2.1470e-04	0.328	4.07e-05	0.0	0.0	0.0	4.37e-06	0.0	0.0	0.0
41	4.6645e+03	2.1438e-04	0.328	3.52e-03	5.04e-05	0.0	0.0	4.90e-06	0.0	0.0	0.0
42	7.4904e+03	1.3350e-04	0.328	0.0	0.0	818.47	11.7	0.0	0.0	0.0	0.0
43	1.0510e+04	9.5146e-05	0.328	2.83e-05	0.0	0.0	0.0	872.82	12.5	0.0	0.0
44	1.1961e+04	8.3603e-05	0.327	872.60	12.5	0.0	0.0	4.54e-05	0.0	0.0	0.0
45	1.3093e+04	7.6377e-05	0.327	0.0	0.0	268.56	3.8	3.95e-05	0.0	0.0	0.0
46	2.1206e+04	4.7157e-05	0.327	4.84e-06	0.0	7.06e-06	0.0	214.40	3.1	0.0	0.0
47	2.4130e+04	4.1441e-05	0.327	214.60	3.1	0.0	0.0	7.74e-06	0.0	0.0	0.0
48	7.1939e+04	1.3901e-05	0.327	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	7.4259e+04	1.3466e-05	0.327	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	1.0369e+05	9.6440e-06	0.327	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	1.0369e+05	9.6438e-06	0.327	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Risulta				6941.95		6941.95		6941.95			
In				99.45		99.45		99.45			
percentuale											

CDC	Tipo	Sigla Id	Note
7	Edk	CDC=Ed (dinamico SLU) alfa=90.00 (ecc. -)	
			categoria suolo: C
			fattore di sito S = 1.000
			ordinata spettro (tratto Tb-Tc) = 0.609 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.619 sec.
			fattore q: 1.500
			fattore per spost. mu d: 1.500

CDC	Tipo	Sigla Id	Note
			classe di duttilità CD: ND
			numero di modi considerati: 51
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	daN	m	m	m	m	m	m			
5.55	2174.48	10.20	0.0	-0.07	0.0	10.65	0.0	1.881	0.356	0.0
5.45	76.14	10.65	0.0	-0.07	0.0	0.0	0.0	0.0	0.0	0.0
2.83	3353.79	4.81	0.0	-0.06	0.0	4.80	0.0	1.561	0.011	0.0
2.73	79.57	4.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.10	1296.04	0.0	0.0	0.0	0.0	0.0	0.0	3.000	0.0	0.0
Risulta	6980.02									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.616	0.619	0.390	0.33	4.73e-03	3167.13	45.4	0.25	3.63e-03	0.0	0.0
2	4.265	0.234	0.609	0.15	2.21e-03	477.47	6.8	2.25e-04	3.22e-06	0.0	0.0
3	5.772	0.173	0.609	13.93	0.2	436.98	6.3	0.60	8.53e-03	0.0	0.0
4	12.890	0.078	0.493	1671.95	24.0	0.47	6.70e-03	204.27	2.9	0.0	0.0
5	14.633	0.068	0.473	864.92	12.4	12.11	0.2	737.82	10.6	0.0	0.0
6	19.019	0.053	0.439	352.99	5.1	0.64	9.15e-03	1807.42	25.9	0.0	0.0
7	20.718	0.048	0.430	117.91	1.7	1.38e-03	1.98e-05	233.58	3.3	0.0	0.0
8	22.143	0.045	0.424	81.68	1.2	0.42	5.95e-03	1384.37	19.8	0.0	0.0
9	45.644	0.022	0.374	2.54	3.64e-02	0.01	1.58e-04	0.18	2.58e-03	0.0	0.0
10	49.709	0.020	0.370	3.85	5.51e-02	0.14	2.00e-03	197.11	2.8	0.0	0.0
11	65.291	0.015	0.360	442.36	6.3	4.24	6.08e-02	2.23	3.20e-02	0.0	0.0
12	68.229	0.015	0.359	1409.80	20.2	0.05	7.27e-04	572.97	8.2	0.0	0.0
13	69.720	0.014	0.358	0.05	7.42e-04	13.77	0.2	1.08	1.55e-02	0.0	0.0
14	71.196	0.014	0.357	0.45	6.38e-03	628.78	9.0	1.04e-03	1.49e-05	0.0	0.0
15	88.020	0.011	0.352	113.59	1.6	15.98	0.2	1.49	2.14e-02	0.0	0.0
16	105.934	0.009	0.347	0.73	1.04e-02	917.22	13.1	12.50	0.2	0.0	0.0
17	162.261	0.006	0.340	348.44	5.0	8.55e-05	1.23e-06	8.39	0.1	0.0	0.0
18	167.407	0.006	0.340	88.19	1.3	3.32e-03	4.76e-05	1.35	1.93e-02	0.0	0.0
19	170.099	0.006	0.340	281.47	4.0	9.56e-04	1.37e-05	0.04	5.11e-04	0.0	0.0
20	207.411	0.005	0.338	0.12	1.73e-03	2.16e-04	3.09e-06	6.83e-03	9.78e-05	0.0	0.0
21	217.898	0.005	0.337	0.85	1.21e-02	3.21e-03	4.60e-05	0.20	2.92e-03	0.0	0.0
22	222.086	0.005	0.337	39.32	0.6	9.98e-06	0.0	0.75	1.07e-02	0.0	0.0
23	226.705	0.004	0.337	0.40	5.76e-03	4.70e-05	0.0	0.08	1.08e-03	0.0	0.0
24	230.514	0.004	0.337	15.89	0.2	7.92e-06	0.0	0.35	4.97e-03	0.0	0.0
25	231.119	0.004	0.337	2.57	3.68e-02	1.01e-03	1.45e-05	2.94e-04	4.21e-06	0.0	0.0
26	283.723	0.004	0.335	6.33e-03	9.06e-05	8.49e-04	1.22e-05	3.62e-05	0.0	0.0	0.0
27	299.405	0.003	0.334	0.26	3.66e-03	2.59e-05	0.0	37.20	0.5	0.0	0.0
28	426.553	0.002	0.332	5.48e-04	7.86e-06	176.40	2.5	0.33	4.79e-03	0.0	0.0
29	497.587	0.002	0.332	0.03	3.89e-04	0.0	0.0	9.88	0.1	0.0	0.0
30	585.421	0.002	0.331	7.08e-04	1.01e-05	0.0	0.0	640.00	9.2	0.0	0.0
31	704.696	0.001	0.330	1.14e-03	1.63e-05	0.0	0.0	9.13e-04	1.31e-05	0.0	0.0
32	707.615	0.001	0.330	1.35e-04	1.93e-06	1.11e-06	0.0	8.16e-04	1.17e-05	0.0	0.0
33	842.150	0.001	0.330	0.0	0.0	6.78e-05	0.0	0.0	0.0	0.0	0.0
34	1.3205e+03	7.5726e-04	0.329	3.42e-05	0.0	4.22e-05	0.0	2.42e-06	0.0	0.0	0.0
35	1.4628e+03	6.8362e-04	0.329	1.08e-05	0.0	2.71	3.89e-02	0.12	1.72e-03	0.0	0.0
36	2.1384e+03	4.6765e-04	0.328	8.17e-05	1.17e-06	1.29e-06	0.0	0.0	0.0	0.0	0.0
37	2.5616e+03	3.9039e-04	0.328	0.0	0.0	0.31	4.39e-03	0.17	2.44e-03	0.0	0.0
38	2.9187e+03	3.4261e-04	0.328	0.0	0.0	1.17e-05	0.0	0.0	0.0	0.0	0.0
39	3.0976e+03	3.2283e-04	0.328	0.0	0.0	0.0	0.0	7.47e-05	1.07e-06	0.0	0.0
40	4.6578e+03	2.1470e-04	0.328	4.07e-05	0.0	0.0	0.0	4.37e-06	0.0	0.0	0.0
41	4.6645e+03	2.1438e-04	0.328	3.52e-03	5.04e-05	0.0	0.0	4.90e-06	0.0	0.0	0.0
42	7.0376e+03	1.4209e-04	0.328	0.0	0.0	927.20	13.3	0.0	0.0	0.0	0.0
43	1.0510e+04	9.5146e-05	0.328	2.83e-05	0.0	0.0	0.0	872.82	12.5	0.0	0.0
44	1.1961e+04	8.3603e-05	0.327	872.60	12.5	0.0	0.0	4.54e-05	0.0	0.0	0.0
45	1.6967e+04	5.8938e-05	0.327	0.0	0.0	159.92	2.3	6.90e-05	0.0	0.0	0.0
46	2.1206e+04	4.7157e-05	0.327	4.83e-06	0.0	2.09e-05	0.0	214.40	3.1	0.0	0.0
47	2.4130e+04	4.1441e-05	0.327	214.60	3.1	0.0	0.0	7.74e-06	0.0	0.0	0.0
48	7.1939e+04	1.3901e-05	0.327	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	7.4259e+04	1.3466e-05	0.327	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	1.0369e+05	9.6440e-06	0.327	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	1.0369e+05	9.6438e-06	0.327	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Risulta				6941.95		6941.95		6941.95			



Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X % x g	M efficace Y % x g	M efficace Z % x g	Energia	Energia x v
In percentuale				99.45	99.45	99.45		

CDC	Tipo	Sigla Id	Note
8	Edk	CDC=Ed (dinamico SLD) alfa=0.0 (ecc. +)	
			categoria suolo: C
			fattore di sito S = 1.000
			ordinata spettro (tratto Tb-Tc) = 0.354 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.015 sec.
			numero di modi considerati: 51
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	daN	m	m	m	m	m	m			
5.55	2174.48	10.20	0.0	0.0	-0.06	10.65	0.0	1.881	0.356	0.0
5.45	76.14	10.65	0.0	0.0	-0.06	0.0	0.0	0.0	0.0	0.0
2.83	3353.79	4.81	0.0	0.0	-0.06	4.80	0.0	1.561	0.011	0.0
2.73	79.57	4.80	0.0	0.0	-0.06	0.0	0.0	0.0	0.0	0.0
0.10	1296.04	0.0	0.0	0.0	-0.06	0.0	0.0	3.000	0.0	0.0
Risulta	6980.02									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X %	%	M efficace Y %	%	M efficace Z %	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.640	0.610	0.217	0.22	3.11e-03	3164.27	45.3	0.27	3.80e-03	0.0	0.0
2	4.265	0.234	0.354	0.06	8.18e-04	470.99	6.7	2.36e-04	3.38e-06	0.0	0.0
3	5.686	0.176	0.354	0.18	2.56e-03	446.41	6.4	0.50	7.10e-03	0.0	0.0
4	13.074	0.076	0.265	1357.71	19.5	0.78	1.12e-02	262.92	3.8	0.0	0.0
5	14.854	0.067	0.248	987.79	14.2	10.40	0.1	723.86	10.4	0.0	0.0
6	19.063	0.052	0.221	371.41	5.3	0.83	1.20e-02	1896.17	27.2	0.0	0.0
7	20.898	0.048	0.212	100.18	1.4	0.04	6.18e-04	272.44	3.9	0.0	0.0
8	22.225	0.045	0.207	103.29	1.5	0.39	5.63e-03	1166.36	16.7	0.0	0.0
9	45.629	0.022	0.165	3.44	4.93e-02	0.01	1.48e-04	0.04	5.19e-04	0.0	0.0
10	49.705	0.020	0.161	3.47	4.97e-02	0.30	4.36e-03	196.59	2.8	0.0	0.0
11	65.875	0.015	0.152	2.71	3.88e-02	2.87	4.12e-02	149.18	2.1	0.0	0.0
12	66.083	0.015	0.152	1930.91	27.7	1.15	1.65e-02	473.21	6.8	0.0	0.0
13	69.736	0.014	0.151	2.95	4.22e-02	14.33	0.2	0.05	7.14e-04	0.0	0.0
14	71.198	0.014	0.150	0.25	3.59e-03	628.19	9.0	0.03	3.87e-04	0.0	0.0
15	91.219	0.011	0.145	101.27	1.5	13.67	0.2	1.33	1.91e-02	0.0	0.0
16	109.130	0.009	0.141	0.63	9.03e-03	865.07	12.4	11.81	0.2	0.0	0.0
17	155.211	0.006	0.136	379.39	5.4	2.04e-04	2.92e-06	10.16	0.1	0.0	0.0
18	168.097	0.006	0.135	3.56	5.09e-02	8.89e-04	1.27e-05	0.47	6.78e-03	0.0	0.0
19	177.739	0.006	0.135	329.13	4.7	2.64e-03	3.78e-05	0.20	2.89e-03	0.0	0.0
20	214.055	0.005	0.133	0.23	3.29e-03	4.98e-05	0.0	0.01	1.59e-04	0.0	0.0
21	217.790	0.005	0.133	2.18	3.13e-02	2.67e-03	3.83e-05	0.19	2.68e-03	0.0	0.0
22	218.633	0.005	0.133	1.15	1.65e-02	4.22e-04	6.05e-06	3.34e-04	4.78e-06	0.0	0.0
23	219.817	0.005	0.133	0.07	1.04e-03	6.72e-04	9.62e-06	7.70e-05	1.10e-06	0.0	0.0
24	222.708	0.004	0.133	56.36	0.8	8.99e-06	0.0	1.11	1.59e-02	0.0	0.0
25	243.447	0.004	0.132	3.39	4.86e-02	5.97e-04	8.55e-06	2.67e-04	3.82e-06	0.0	0.0
26	299.065	0.003	0.131	7.08e-03	1.01e-04	1.48e-03	2.12e-05	0.01	1.72e-04	0.0	0.0
27	299.606	0.003	0.131	0.25	3.63e-03	3.22e-05	0.0	37.17	0.5	0.0	0.0
28	371.014	0.003	0.129	7.38e-04	1.06e-05	232.30	3.3	0.47	6.80e-03	0.0	0.0
29	497.733	0.002	0.128	0.03	3.89e-04	0.0	0.0	9.86	0.1	0.0	0.0
30	585.416	0.002	0.128	7.84e-04	1.12e-05	0.0	0.0	640.02	9.2	0.0	0.0
31	668.025	0.001	0.127	9.67e-04	1.38e-05	0.0	0.0	6.80e-03	9.74e-05	0.0	0.0
32	751.581	0.001	0.127	1.03e-04	1.48e-06	1.41e-06	0.0	0.0	0.0	0.0	0.0
33	842.322	0.001	0.127	0.0	0.0	6.82e-05	0.0	0.0	0.0	0.0	0.0
34	1.3920e+03	7.1840e-04	0.126	2.87e-05	0.0	4.15e-05	0.0	2.19e-06	0.0	0.0	0.0
35	1.5339e+03	6.5191e-04	0.126	9.84e-06	0.0	2.47	3.54e-02	0.11	1.56e-03	0.0	0.0
36	2.2540e+03	4.4366e-04	0.125	7.00e-05	1.00e-06	8.48e-06	0.0	3.49e-06	0.0	0.0	0.0
37	2.4147e+03	4.1413e-04	0.125	0.0	0.0	0.38	5.39e-03	0.19	2.73e-03	0.0	0.0
38	2.9188e+03	3.4261e-04	0.125	0.0	0.0	1.17e-05	0.0	0.0	0.0	0.0	0.0
39	3.0977e+03	3.2282e-04	0.125	0.0	0.0	0.0	0.0	7.47e-05	1.07e-06	0.0	0.0



Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
40	3.9486e+03	2.5325e-04	0.125	2.42e-03	3.47e-05	0.0	0.0	1.15e-05	0.0	0.0	0.0
41	6.0445e+03	1.6544e-04	0.125	1.24e-03	1.77e-05	0.0	0.0	0.0	0.0	0.0	0.0
42	7.2534e+03	1.3787e-04	0.125	0.0	0.0	872.84	12.5	0.0	0.0	0.0	0.0
43	1.0510e+04	9.5146e-05	0.125	7.99e-05	1.15e-06	0.0	0.0	872.82	12.5	0.0	0.0
44	1.1405e+04	8.7684e-05	0.125	959.87	13.8	0.0	0.0	9.66e-05	1.38e-06	0.0	0.0
45	1.4659e+04	6.8217e-05	0.125	0.0	0.0	214.24	3.1	4.41e-05	0.0	0.0	0.0
46	2.1206e+04	4.7157e-05	0.125	2.34e-05	0.0	9.93e-06	0.0	214.40	3.1	0.0	0.0
47	2.3007e+04	4.3464e-05	0.125	236.06	3.4	0.0	0.0	2.47e-05	0.0	0.0	0.0
48	7.1939e+04	1.3901e-05	0.125	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	7.4259e+04	1.3466e-05	0.125	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	1.0369e+05	9.6440e-06	0.125	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	1.0369e+05	9.6438e-06	0.125	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Risulta				6938.15		6941.95		6941.95			
In percentuale				99.40		99.45		99.45			

CDC	Tipo	Sigla Id	Note
9	Edk	CDC=Ed (dinamico SLD) alfa=0.0 (ecc. -)	
			categoria suolo: C
			fattore di sito S = 1.000
			ordinata spettro (tratto Tb-Tc) = 0.354 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.079 sec.
			numero di modi considerati: 51
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	daN	m	m	m	m	m	m			
5.55	2174.48	10.20	0.0	0.0	0.06	10.65	0.0	1.881	0.356	0.0
5.45	76.14	10.65	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0
2.83	3353.79	4.81	0.0	0.0	0.06	4.80	0.0	1.561	0.011	0.0
2.73	79.57	4.80	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0
0.10	1296.04	0.0	0.0	0.0	0.06	0.0	0.0	3.000	0.0	0.0
Risulta	6980.02									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.639	0.610	0.217	2.51	3.60e-02	3163.51	45.3	0.27	3.83e-03	0.0	0.0
2	4.264	0.234	0.354	0.36	5.16e-03	469.81	6.7	1.70e-04	2.44e-06	0.0	0.0
3	5.669	0.176	0.354	50.39	0.7	448.09	6.4	0.59	8.42e-03	0.0	0.0
4	12.709	0.079	0.269	1976.11	28.3	0.02	2.66e-04	155.95	2.2	0.0	0.0
5	14.447	0.069	0.252	731.86	10.5	11.28	0.2	747.10	10.7	0.0	0.0
6	18.961	0.053	0.221	336.09	4.8	0.57	8.23e-03	1689.13	24.2	0.0	0.0
7	20.561	0.049	0.214	130.86	1.9	0.03	3.96e-04	204.98	2.9	0.0	0.0
8	22.065	0.045	0.208	64.85	0.9	0.48	6.86e-03	1619.78	23.2	0.0	0.0
9	45.658	0.022	0.165	1.83	2.62e-02	0.01	1.62e-04	0.42	5.95e-03	0.0	0.0
10	49.681	0.020	0.161	4.18	6.00e-02	0.34	4.87e-03	197.20	2.8	0.0	0.0
11	64.781	0.015	0.153	481.09	6.9	3.56	5.10e-02	1.22	1.75e-02	0.0	0.0
12	69.730	0.014	0.151	3.35	4.80e-02	14.71	0.2	6.84e-03	9.80e-05	0.0	0.0
13	70.823	0.014	0.150	1273.67	18.2	2.88	4.13e-02	525.47	7.5	0.0	0.0
14	71.199	0.014	0.150	6.44	9.22e-02	625.33	9.0	1.42	2.04e-02	0.0	0.0
15	85.384	0.012	0.146	124.73	1.8	9.94	0.1	1.24	1.77e-02	0.0	0.0
16	109.094	0.009	0.141	0.44	6.32e-03	869.17	12.5	11.95	0.2	0.0	0.0
17	161.384	0.006	0.136	420.18	6.0	5.88e-03	8.43e-05	0.26	3.80e-03	0.0	0.0
18	167.740	0.006	0.135	22.94	0.3	4.77e-06	0.0	0.91	1.31e-02	0.0	0.0
19	171.490	0.006	0.135	275.00	3.9	4.46e-04	6.39e-06	7.54	0.1	0.0	0.0
20	214.053	0.005	0.133	0.23	3.23e-03	3.61e-05	0.0	7.99e-03	1.14e-04	0.0	0.0
21	217.516	0.005	0.133	0.30	4.34e-03	2.22e-03	3.19e-05	0.26	3.66e-03	0.0	0.0
22	218.672	0.005	0.133	0.71	1.02e-02	2.91e-05	0.0	5.96e-03	8.53e-05	0.0	0.0
23	220.508	0.005	0.133	0.01	1.53e-04	2.85e-03	4.08e-05	0.01	1.59e-04	0.0	0.0
24	222.858	0.004	0.133	49.50	0.7	7.19e-05	1.03e-06	0.93	1.34e-02	0.0	0.0
25	242.868	0.004	0.132	9.34	0.1	2.05e-06	0.0	0.27	3.93e-03	0.0	0.0
26	270.524	0.004	0.131	6.89e-03	9.86e-05	1.22e-03	1.75e-05	2.34e-05	0.0	0.0	0.0

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
27	299.607	0.003	0.131	0.26	3.65e-03	4.00e-05	0.0	37.22	0.5	0.0	0.0
28	371.014	0.003	0.129	7.36e-04	1.05e-05	232.30	3.3	0.47	6.80e-03	0.0	0.0
29	497.733	0.002	0.128	0.03	3.89e-04	0.0	0.0	9.85	0.1	0.0	0.0
30	585.426	0.002	0.128	6.16e-04	8.83e-06	0.0	0.0	639.96	9.2	0.0	0.0
31	668.023	0.001	0.127	4.29e-04	6.14e-06	1.80e-06	0.0	3.27e-06	0.0	0.0	0.0
32	751.580	0.001	0.127	1.10e-03	1.58e-05	0.0	0.0	3.70e-04	5.30e-06	0.0	0.0
33	842.322	0.001	0.127	0.0	0.0	6.82e-05	0.0	0.0	0.0	0.0	0.0
34	1.2591e+03	7.9422e-04	0.126	4.01e-05	0.0	1.28e-05	0.0	0.0	0.0	0.0	0.0
35	1.5339e+03	6.5191e-04	0.126	9.78e-06	0.0	2.47	3.54e-02	0.11	1.56e-03	0.0	0.0
36	2.0389e+03	4.9047e-04	0.125	9.39e-05	1.35e-06	1.95e-06	0.0	0.0	0.0	0.0	0.0
37	2.4147e+03	4.1413e-04	0.125	0.0	0.0	0.38	5.39e-03	0.19	2.73e-03	0.0	0.0
38	2.9188e+03	3.4261e-04	0.125	0.0	0.0	1.17e-05	0.0	0.0	0.0	0.0	0.0
39	3.0977e+03	3.2282e-04	0.125	0.0	0.0	0.0	0.0	7.47e-05	1.07e-06	0.0	0.0
40	3.9484e+03	2.5327e-04	0.125	2.88e-03	4.12e-05	0.0	0.0	0.0	0.0	0.0	0.0
41	6.0451e+03	1.6542e-04	0.125	5.39e-04	7.72e-06	0.0	0.0	7.81e-06	0.0	0.0	0.0
42	7.2534e+03	1.3787e-04	0.125	0.0	0.0	872.84	12.5	0.0	0.0	0.0	0.0
43	1.0510e+04	9.5146e-05	0.125	1.23e-05	0.0	0.0	0.0	872.82	12.5	0.0	0.0
44	1.2608e+04	7.9313e-05	0.125	785.34	11.3	0.0	0.0	2.75e-05	0.0	0.0	0.0
45	1.4659e+04	6.8217e-05	0.125	0.0	0.0	214.24	3.1	4.41e-05	0.0	0.0	0.0
46	2.1206e+04	4.7157e-05	0.125	0.0	0.0	9.93e-06	0.0	214.40	3.1	0.0	0.0
47	2.5436e+04	3.9315e-05	0.125	193.14	2.8	0.0	0.0	3.01e-06	0.0	0.0	0.0
48	7.1939e+04	1.3901e-05	0.125	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	7.4259e+04	1.3466e-05	0.125	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	1.0369e+05	9.6440e-06	0.125	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	1.0369e+05	9.6438e-06	0.125	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Risulta				6945.76		6941.95		6941.95			
In percentuale				99.51		99.45		99.45			

CDC	Tipo	Sigla Id	Note
10	Edk	CDC=Ed (dinamico SLD) alfa=90.00 (ecc. +)	
			categoria suolo: C
			fattore di sito S = 1.000
			ordinata spettro (tratto Tb-Tc) = 0.354 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.601 sec.
			numero di modi considerati: 51
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	daN	m	m	m	m	m	m			
5.55	2174.48	10.20	0.0	0.07	0.0	10.65	0.0	1.881	0.356	0.0
5.45	76.14	10.65	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.0
2.83	3353.79	4.81	0.0	0.06	0.0	4.80	0.0	1.561	0.011	0.0
2.73	79.57	4.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.10	1296.04	0.0	0.0	0.0	0.0	0.0	0.0	3.000	0.0	0.0
Risulta	6980.02									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.664	0.601	0.220	0.29	4.21e-03	3162.92	45.3	0.28	4.02e-03	0.0	0.0
2	4.264	0.235	0.354	0.20	2.82e-03	463.35	6.6	1.66e-04	2.37e-06	0.0	0.0
3	5.598	0.179	0.354	14.08	0.2	455.26	6.5	0.52	7.38e-03	0.0	0.0
4	12.912	0.077	0.267	1680.22	24.1	0.13	1.88e-03	203.30	2.9	0.0	0.0
5	14.641	0.068	0.250	867.89	12.4	9.88	0.1	739.74	10.6	0.0	0.0
6	19.047	0.053	0.221	339.26	4.9	0.73	1.04e-02	1841.70	26.4	0.0	0.0
7	20.722	0.048	0.213	117.39	1.7	2.50e-04	3.58e-06	251.20	3.6	0.0	0.0
8	22.199	0.045	0.207	84.50	1.2	0.49	7.02e-03	1333.34	19.1	0.0	0.0
9	45.643	0.022	0.165	2.55	3.66e-02	0.01	1.52e-04	0.18	2.53e-03	0.0	0.0
10	49.676	0.020	0.161	3.84	5.50e-02	0.58	8.34e-03	196.72	2.8	0.0	0.0
11	65.302	0.015	0.153	446.85	6.4	3.23	4.62e-02	1.96	2.81e-02	0.0	0.0
12	68.230	0.015	0.151	1400.39	20.1	0.10	1.50e-03	574.12	8.2	0.0	0.0
13	69.847	0.014	0.151	5.51	7.90e-02	18.15	0.3	0.12	1.78e-03	0.0	0.0

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
14	71.202	0.014	0.150	0.21	3.05e-03	624.77	9.0	0.02	3.03e-04	0.0	0.0
15	88.088	0.011	0.145	113.67	1.6	8.06	0.1	1.18	1.69e-02	0.0	0.0
16	112.608	0.009	0.141	0.36	5.20e-03	816.46	11.7	11.24	0.2	0.0	0.0
17	162.260	0.006	0.136	348.44	5.0	9.07e-05	1.30e-06	8.39	0.1	0.0	0.0
18	167.398	0.006	0.135	87.27	1.3	3.80e-03	5.44e-05	1.34	1.92e-02	0.0	0.0
19	170.098	0.006	0.135	282.43	4.0	1.30e-03	1.86e-05	0.03	4.75e-04	0.0	0.0
20	203.433	0.005	0.134	0.04	5.23e-04	7.37e-05	1.06e-06	0.02	2.64e-04	0.0	0.0
21	217.900	0.005	0.133	0.83	1.19e-02	3.98e-03	5.70e-05	0.20	2.93e-03	0.0	0.0
22	222.153	0.005	0.133	39.75	0.6	1.22e-05	0.0	0.80	1.14e-02	0.0	0.0
23	230.511	0.004	0.132	15.77	0.2	1.23e-05	0.0	0.33	4.77e-03	0.0	0.0
24	231.118	0.004	0.132	2.47	3.54e-02	1.07e-03	1.53e-05	7.80e-04	1.12e-05	0.0	0.0
25	232.134	0.004	0.132	0.23	3.34e-03	1.06e-04	1.52e-06	0.05	7.75e-04	0.0	0.0
26	283.723	0.004	0.131	6.32e-03	9.05e-05	2.40e-03	3.44e-05	4.81e-05	0.0	0.0	0.0
27	299.812	0.003	0.131	0.25	3.55e-03	9.22e-05	1.32e-06	37.19	0.5	0.0	0.0
28	332.747	0.003	0.130	9.40e-04	1.35e-05	288.11	4.1	0.62	8.84e-03	0.0	0.0
29	497.881	0.002	0.128	0.03	3.87e-04	0.0	0.0	9.83	0.1	0.0	0.0
30	585.421	0.002	0.128	7.08e-04	1.01e-05	0.0	0.0	640.00	9.2	0.0	0.0
31	704.696	0.001	0.127	1.14e-03	1.63e-05	0.0	0.0	9.13e-04	1.31e-05	0.0	0.0
32	707.615	0.001	0.127	1.35e-04	1.93e-06	1.01e-06	0.0	8.16e-04	1.17e-05	0.0	0.0
33	842.494	0.001	0.127	0.0	0.0	6.86e-05	0.0	0.0	0.0	0.0	0.0
34	1.3205e+03	7.5726e-04	0.126	3.43e-05	0.0	1.10e-05	0.0	0.0	0.0	0.0	0.0
35	1.6166e+03	6.1857e-04	0.126	8.78e-06	0.0	2.22	3.19e-02	0.10	1.40e-03	0.0	0.0
36	2.1384e+03	4.6765e-04	0.125	8.17e-05	1.17e-06	1.12e-05	0.0	4.54e-06	0.0	0.0	0.0
37	2.2936e+03	4.3600e-04	0.125	0.0	0.0	0.44	6.33e-03	0.21	3.01e-03	0.0	0.0
38	2.9188e+03	3.4260e-04	0.125	0.0	0.0	1.17e-05	0.0	0.0	0.0	0.0	0.0
39	3.0978e+03	3.2281e-04	0.125	0.0	0.0	0.0	0.0	7.47e-05	1.07e-06	0.0	0.0
40	4.6578e+03	2.1470e-04	0.125	4.07e-05	0.0	0.0	0.0	4.37e-06	0.0	0.0	0.0
41	4.6645e+03	2.1438e-04	0.125	3.52e-03	5.04e-05	0.0	0.0	4.90e-06	0.0	0.0	0.0
42	7.4904e+03	1.3350e-04	0.125	0.0	0.0	818.47	11.7	0.0	0.0	0.0	0.0
43	1.0510e+04	9.5146e-05	0.125	2.83e-05	0.0	0.0	0.0	872.82	12.5	0.0	0.0
44	1.1961e+04	8.3603e-05	0.125	872.60	12.5	0.0	0.0	4.54e-05	0.0	0.0	0.0
45	1.3093e+04	7.6377e-05	0.125	0.0	0.0	268.56	3.8	3.95e-05	0.0	0.0	0.0
46	2.1206e+04	4.7157e-05	0.125	4.84e-06	0.0	7.06e-06	0.0	214.40	3.1	0.0	0.0
47	2.4130e+04	4.1441e-05	0.125	214.60	3.1	0.0	0.0	7.74e-06	0.0	0.0	0.0
48	7.1939e+04	1.3901e-05	0.125	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	7.4259e+04	1.3466e-05	0.125	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	1.0369e+05	9.6440e-06	0.125	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	1.0369e+05	9.6438e-06	0.125	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Risulta				6941.95		6941.95		6941.95			
In percentuale				99.45		99.45		99.45			

CDC	Tipo	Sigla Id	Note
11	Edk	CDC=Ed (dinamico SLD) alfa=90.00 (ecc. -)	
			categoria suolo: C
			fattore di sito S = 1.000
			ordinata spettro (tratto Tb-Tc) = 0.354 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.619 sec.
			numero di modi considerati: 51
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	daN	m	m	m	m	m	m			
5.55	2174.48	10.20	0.0	-0.07	0.0	10.65	0.0	1.881	0.356	0.0
5.45	76.14	10.65	0.0	-0.07	0.0	0.0	0.0	0.0	0.0	0.0
2.83	3353.79	4.81	0.0	-0.06	0.0	4.80	0.0	1.561	0.011	0.0
2.73	79.57	4.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.10	1296.04	0.0	0.0	0.0	0.0	0.0	0.0	3.000	0.0	0.0
Risulta	6980.02									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
1	1.616	0.619	0.214	0.33	4.73e-03	3167.13	45.4	0.25	3.63e-03	0.0	0.0
2	4.265	0.234	0.354	0.15	2.21e-03	477.47	6.8	2.25e-04	3.22e-06	0.0	0.0
3	5.772	0.173	0.354	13.93	0.2	436.98	6.3	0.60	8.53e-03	0.0	0.0
4	12.890	0.078	0.267	1671.95	24.0	0.47	6.70e-03	204.27	2.9	0.0	0.0
5	14.633	0.068	0.250	864.92	12.4	12.11	0.2	737.82	10.6	0.0	0.0
6	19.019	0.053	0.221	352.99	5.1	0.64	9.15e-03	1807.42	25.9	0.0	0.0
7	20.718	0.048	0.213	117.91	1.7	1.38e-03	1.98e-05	233.58	3.3	0.0	0.0
8	22.143	0.045	0.207	81.68	1.2	0.42	5.95e-03	1384.37	19.8	0.0	0.0
9	45.644	0.022	0.165	2.54	3.64e-02	0.01	1.58e-04	0.18	2.58e-03	0.0	0.0
10	49.709	0.020	0.161	3.85	5.51e-02	0.14	2.00e-03	197.11	2.8	0.0	0.0
11	65.291	0.015	0.153	442.36	6.3	4.24	6.08e-02	2.23	3.20e-02	0.0	0.0
12	68.229	0.015	0.151	1409.80	20.2	0.05	7.27e-04	572.97	8.2	0.0	0.0
13	69.720	0.014	0.151	0.05	7.42e-04	13.77	0.2	1.08	1.55e-02	0.0	0.0
14	71.196	0.014	0.150	0.45	6.38e-03	628.78	9.0	1.04e-03	1.49e-05	0.0	0.0
15	88.020	0.011	0.145	113.59	1.6	15.98	0.2	1.49	2.14e-02	0.0	0.0
16	105.934	0.009	0.142	0.73	1.04e-02	917.22	13.1	12.50	0.2	0.0	0.0
17	162.261	0.006	0.136	348.44	5.0	8.55e-05	1.23e-06	8.39	0.1	0.0	0.0
18	167.407	0.006	0.135	88.19	1.3	3.32e-03	4.76e-05	1.35	1.93e-02	0.0	0.0
19	170.099	0.006	0.135	281.47	4.0	9.56e-04	1.37e-05	0.04	5.11e-04	0.0	0.0
20	207.411	0.005	0.133	0.12	1.73e-03	2.16e-04	3.09e-06	6.83e-03	9.78e-05	0.0	0.0
21	217.898	0.005	0.133	0.85	1.21e-02	3.21e-03	4.60e-05	0.20	2.92e-03	0.0	0.0
22	222.086	0.005	0.133	39.32	0.6	9.98e-06	0.0	0.75	1.07e-02	0.0	0.0
23	226.705	0.004	0.133	0.40	5.76e-03	4.70e-05	0.0	0.08	1.08e-03	0.0	0.0
24	230.514	0.004	0.132	15.89	0.2	7.92e-06	0.0	0.35	4.97e-03	0.0	0.0
25	231.119	0.004	0.132	2.57	3.68e-02	1.01e-03	1.45e-05	2.94e-04	4.21e-06	0.0	0.0
26	283.723	0.004	0.131	6.33e-03	9.06e-05	8.49e-04	1.22e-05	3.62e-05	0.0	0.0	0.0
27	299.405	0.003	0.131	0.26	3.66e-03	2.59e-05	0.0	37.20	0.5	0.0	0.0
28	426.553	0.002	0.129	5.48e-04	7.86e-06	176.40	2.5	0.33	4.79e-03	0.0	0.0
29	497.587	0.002	0.128	0.03	3.89e-04	0.0	0.0	9.88	0.1	0.0	0.0
30	585.421	0.002	0.128	7.08e-04	1.01e-05	0.0	0.0	640.00	9.2	0.0	0.0
31	704.696	0.001	0.127	1.14e-03	1.63e-05	0.0	0.0	9.13e-04	1.31e-05	0.0	0.0
32	707.615	0.001	0.127	1.35e-04	1.93e-06	1.11e-06	0.0	8.16e-04	1.17e-05	0.0	0.0
33	842.150	0.001	0.127	0.0	0.0	6.78e-05	0.0	0.0	0.0	0.0	0.0
34	1.3205e+03	7.5726e-04	0.126	3.42e-05	0.0	4.22e-05	0.0	2.42e-06	0.0	0.0	0.0
35	1.4628e+03	6.8362e-04	0.126	1.08e-05	0.0	2.71	3.89e-02	0.12	1.72e-03	0.0	0.0
36	2.1384e+03	4.6765e-04	0.125	8.17e-05	1.17e-06	1.29e-06	0.0	0.0	0.0	0.0	0.0
37	2.5616e+03	3.9039e-04	0.125	0.0	0.0	0.31	4.39e-03	0.17	2.44e-03	0.0	0.0
38	2.9187e+03	3.4261e-04	0.125	0.0	0.0	1.17e-05	0.0	0.0	0.0	0.0	0.0
39	3.0976e+03	3.2283e-04	0.125	0.0	0.0	0.0	0.0	7.47e-05	1.07e-06	0.0	0.0
40	4.6578e+03	2.1470e-04	0.125	4.07e-05	0.0	0.0	0.0	4.37e-06	0.0	0.0	0.0
41	4.6645e+03	2.1438e-04	0.125	3.52e-03	5.04e-05	0.0	0.0	4.90e-06	0.0	0.0	0.0
42	7.0376e+03	1.4209e-04	0.125	0.0	0.0	927.20	13.3	0.0	0.0	0.0	0.0
43	1.0510e+04	9.5146e-05	0.125	2.83e-05	0.0	0.0	0.0	872.82	12.5	0.0	0.0
44	1.1961e+04	8.3603e-05	0.125	872.60	12.5	0.0	0.0	4.54e-05	0.0	0.0	0.0
45	1.6967e+04	5.8938e-05	0.125	0.0	0.0	159.92	2.3	6.90e-05	0.0	0.0	0.0
46	2.1206e+04	4.7157e-05	0.125	4.83e-06	0.0	2.09e-05	0.0	214.40	3.1	0.0	0.0
47	2.4130e+04	4.1441e-05	0.125	214.60	3.1	0.0	0.0	7.74e-06	0.0	0.0	0.0
48	7.1939e+04	1.3901e-05	0.125	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	7.4259e+04	1.3466e-05	0.125	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	1.0369e+05	9.6440e-06	0.125	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	1.0369e+05	9.6438e-06	0.125	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Risulta				6941.95		6941.95		6941.95			
In percentuale				99.45		99.45		99.45			

CDC	Tipo	Sigla Id	Note
12	Edk	CDC=Ed (dinamico SLU) verticale	
			categoria suolo: C
			fattore di sito S = 1.000
			ordinata spettro (tratto Tb-Tc) = 0.470 g
			fattore q: 1.500
			classe di duttilità CD: ND
			numero di modi considerati: 51
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	daN	m	m	m	m	m	m			

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
5.55	2174.48	10.20	0.0	0.0	0.0	10.65	0.0	1.881	0.356	0.0
5.45	76.14	10.65	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.83	3353.79	4.81	0.0	0.0	0.0	4.80	0.0	1.561	0.011	0.0
2.73	79.57	4.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.10	1296.04	0.0	0.0	0.0	0.0	0.0	0.0	3.000	0.0	0.0
Risulta	6980.02									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.640	0.610	0.116	0.31	4.49e-03	3163.90	45.3	0.27	3.82e-03	0.0	0.0
2	4.265	0.234	0.301	0.17	2.50e-03	470.42	6.7	2.02e-04	2.90e-06	0.0	0.0
3	5.678	0.176	0.400	14.05	0.2	447.25	6.4	0.54	7.76e-03	0.0	0.0
4	12.894	0.078	0.470	1670.92	23.9	0.26	3.74e-03	203.96	2.9	0.0	0.0
5	14.637	0.068	0.470	865.99	12.4	10.97	0.2	738.83	10.6	0.0	0.0
6	19.013	0.053	0.470	354.43	5.1	0.70	1.01e-02	1793.25	25.7	0.0	0.0
7	20.718	0.048	0.463	118.04	1.7	5.52e-05	0.0	229.60	3.3	0.0	0.0
8	22.116	0.045	0.449	79.91	1.1	0.45	6.44e-03	1402.72	20.1	0.0	0.0
9	45.643	0.022	0.348	2.55	3.65e-02	0.01	1.55e-04	0.18	2.54e-03	0.0	0.0
10	49.693	0.020	0.340	3.84	5.50e-02	0.32	4.62e-03	196.92	2.8	0.0	0.0
11	65.296	0.015	0.319	444.57	6.4	3.70	5.30e-02	2.09	3.00e-02	0.0	0.0
12	68.230	0.015	0.317	1406.15	20.1	0.08	1.08e-03	574.08	8.2	0.0	0.0
13	69.732	0.014	0.315	1.79	2.56e-02	14.61	0.2	0.10	1.48e-03	0.0	0.0
14	71.198	0.014	0.314	0.33	4.78e-03	628.14	9.0	7.45e-03	1.07e-04	0.0	0.0
15	88.058	0.011	0.302	113.67	1.6	11.25	0.2	1.31	1.88e-02	0.0	0.0
16	109.108	0.009	0.293	0.50	7.22e-03	867.67	12.4	11.89	0.2	0.0	0.0
17	162.261	0.006	0.280	348.44	5.0	8.79e-05	1.26e-06	8.39	0.1	0.0	0.0
18	167.410	0.006	0.279	88.61	1.3	3.55e-03	5.08e-05	1.34	1.92e-02	0.0	0.0
19	170.104	0.006	0.278	281.07	4.0	1.09e-03	1.56e-05	0.04	5.06e-04	0.0	0.0
20	214.054	0.005	0.273	0.23	3.34e-03	4.14e-05	0.0	9.30e-03	1.33e-04	0.0	0.0
21	217.894	0.005	0.273	0.95	1.36e-02	3.68e-03	5.27e-05	0.20	2.89e-03	0.0	0.0
22	218.647	0.005	0.273	0.84	1.20e-02	5.71e-05	0.0	1.82e-03	2.61e-05	0.0	0.0
23	222.264	0.004	0.272	38.68	0.6	1.14e-06	0.0	0.83	1.19e-02	0.0	0.0
24	230.513	0.004	0.272	15.87	0.2	8.04e-06	0.0	0.34	4.92e-03	0.0	0.0
25	231.119	0.004	0.272	2.55	3.65e-02	1.03e-03	1.47e-05	3.72e-04	5.32e-06	0.0	0.0
26	283.723	0.004	0.268	6.32e-03	9.06e-05	1.28e-03	1.83e-05	3.99e-05	0.0	0.0	0.0
27	299.606	0.003	0.267	0.25	3.60e-03	3.99e-05	0.0	37.20	0.5	0.0	0.0
28	371.014	0.003	0.265	7.37e-04	1.06e-05	232.30	3.3	0.47	6.80e-03	0.0	0.0
29	497.733	0.002	0.262	0.03	3.88e-04	0.0	0.0	9.86	0.1	0.0	0.0
30	585.421	0.002	0.260	7.08e-04	1.01e-05	0.0	0.0	640.00	9.2	0.0	0.0
31	704.696	0.001	0.259	1.14e-03	1.63e-05	0.0	0.0	9.13e-04	1.31e-05	0.0	0.0
32	707.615	0.001	0.259	1.35e-04	1.93e-06	1.05e-06	0.0	8.16e-04	1.17e-05	0.0	0.0
33	842.322	0.001	0.258	0.0	0.0	6.82e-05	0.0	0.0	0.0	0.0	0.0
34	1.3205e+03	7.5726e-04	0.256	3.42e-05	0.0	1.99e-05	0.0	1.24e-06	0.0	0.0	0.0
35	1.5339e+03	6.5191e-04	0.256	9.80e-06	0.0	2.47	3.54e-02	0.11	1.56e-03	0.0	0.0
36	2.1384e+03	4.6765e-04	0.255	8.17e-05	1.17e-06	3.29e-06	0.0	1.12e-06	0.0	0.0	0.0
37	2.4147e+03	4.1413e-04	0.255	0.0	0.0	0.38	5.39e-03	0.19	2.73e-03	0.0	0.0
38	2.9188e+03	3.4261e-04	0.254	0.0	0.0	1.17e-05	0.0	0.0	0.0	0.0	0.0
39	3.0977e+03	3.2282e-04	0.254	0.0	0.0	0.0	0.0	7.47e-05	1.07e-06	0.0	0.0
40	4.6578e+03	2.1470e-04	0.254	4.07e-05	0.0	0.0	0.0	4.37e-06	0.0	0.0	0.0
41	4.6645e+03	2.1438e-04	0.254	3.52e-03	5.04e-05	0.0	0.0	4.90e-06	0.0	0.0	0.0
42	7.2534e+03	1.3787e-04	0.253	0.0	0.0	872.84	12.5	0.0	0.0	0.0	0.0
43	1.0510e+04	9.5146e-05	0.253	2.83e-05	0.0	0.0	0.0	872.82	12.5	0.0	0.0
44	1.1961e+04	8.3603e-05	0.253	872.60	12.5	0.0	0.0	4.54e-05	0.0	0.0	0.0
45	1.4659e+04	6.8217e-05	0.253	0.0	0.0	214.24	3.1	4.41e-05	0.0	0.0	0.0
46	2.1206e+04	4.7157e-05	0.253	4.83e-06	0.0	9.93e-06	0.0	214.40	3.1	0.0	0.0
47	2.4130e+04	4.1441e-05	0.253	214.60	3.1	0.0	0.0	7.74e-06	0.0	0.0	0.0
48	7.1939e+04	1.3901e-05	0.253	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	7.4259e+04	1.3466e-05	0.253	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	1.0369e+05	9.6440e-06	0.253	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	1.0369e+05	9.6438e-06	0.253	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Risulta				6941.95		6941.95		6941.95			
In percentuale				99.45		99.45		99.45			

CDC	Tipo	Sigla Id	Note
13	Edk	CDC=Ed (dinamico SLO) alfa=0.0 (ecc. +)	
			categoria suolo: C

CDC	Tipo	Sigla Id	Note
			fattore di sito S = 1.000
			ordinata spettro (tratto Tb-Tc) = 0.285 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.015 sec.
			numero di modi considerati: 51
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	daN	m	m	m	m	m	m			
5.55	2174.48	10.20	0.0	0.0	-0.06	10.65	0.0	1.881	0.356	0.0
5.45	76.14	10.65	0.0	0.0	-0.06	0.0	0.0	0.0	0.0	0.0
2.83	3353.79	4.81	0.0	0.0	-0.06	4.80	0.0	1.561	0.011	0.0
2.73	79.57	4.80	0.0	0.0	-0.06	0.0	0.0	0.0	0.0	0.0
0.10	1296.04	0.0	0.0	0.0	-0.06	0.0	0.0	3.000	0.0	0.0
Risulta	6980.02									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X	%	M efficace Y	%	M efficace Z	%	Energia	Energia x v
	Hz	sec	g	x g		x g		x g			
				daN		daN		daN			
1	1.640	0.610	0.168	0.22	3.11e-03	3164.27	45.3	0.27	3.80e-03	0.0	0.0
2	4.265	0.234	0.285	0.06	8.18e-04	470.99	6.7	2.36e-04	3.38e-06	0.0	0.0
3	5.686	0.176	0.285	0.18	2.56e-03	446.41	6.4	0.50	7.10e-03	0.0	0.0
4	13.074	0.076	0.218	1357.71	19.5	0.78	1.12e-02	262.92	3.8	0.0	0.0
5	14.854	0.067	0.204	987.79	14.2	10.40	0.1	723.86	10.4	0.0	0.0
6	19.063	0.052	0.181	371.41	5.3	0.83	1.20e-02	1896.17	27.2	0.0	0.0
7	20.898	0.048	0.173	100.18	1.4	0.04	6.18e-04	272.44	3.9	0.0	0.0
8	22.225	0.045	0.169	103.29	1.5	0.39	5.63e-03	1166.36	16.7	0.0	0.0
9	45.629	0.022	0.133	3.44	4.93e-02	0.01	1.48e-04	0.04	5.19e-04	0.0	0.0
10	49.705	0.020	0.130	3.47	4.97e-02	0.30	4.36e-03	196.59	2.8	0.0	0.0
11	65.875	0.015	0.123	2.71	3.88e-02	2.87	4.12e-02	149.18	2.1	0.0	0.0
12	66.083	0.015	0.123	1930.91	27.7	1.15	1.65e-02	473.21	6.8	0.0	0.0
13	69.736	0.014	0.122	2.95	4.22e-02	14.33	0.2	0.05	7.14e-04	0.0	0.0
14	71.198	0.014	0.121	0.25	3.59e-03	628.19	9.0	0.03	3.87e-04	0.0	0.0
15	91.219	0.011	0.116	101.27	1.5	13.67	0.2	1.33	1.91e-02	0.0	0.0
16	109.130	0.009	0.114	0.63	9.03e-03	865.07	12.4	11.81	0.2	0.0	0.0
17	155.211	0.006	0.109	379.39	5.4	2.04e-04	2.92e-06	10.16	0.1	0.0	0.0
18	168.097	0.006	0.109	3.56	5.09e-02	8.89e-04	1.27e-05	0.47	6.78e-03	0.0	0.0
19	177.739	0.006	0.108	329.13	4.7	2.64e-03	3.78e-05	0.20	2.89e-03	0.0	0.0
20	214.055	0.005	0.107	0.23	3.29e-03	4.98e-05	0.0	0.01	1.59e-04	0.0	0.0
21	217.790	0.005	0.106	2.18	3.13e-02	2.67e-03	3.83e-05	0.19	2.68e-03	0.0	0.0
22	218.633	0.005	0.106	1.15	1.65e-02	4.22e-04	6.05e-06	3.34e-04	4.78e-06	0.0	0.0
23	219.817	0.005	0.106	0.07	1.04e-03	6.72e-04	9.62e-06	7.70e-05	1.10e-06	0.0	0.0
24	222.708	0.004	0.106	56.36	0.8	8.99e-06	0.0	1.11	1.59e-02	0.0	0.0
25	243.447	0.004	0.106	3.39	4.86e-02	5.97e-04	8.55e-06	2.67e-04	3.82e-06	0.0	0.0
26	299.065	0.003	0.104	7.08e-03	1.01e-04	1.48e-03	2.12e-05	0.01	1.72e-04	0.0	0.0
27	299.606	0.003	0.104	0.25	3.63e-03	3.22e-05	0.0	37.17	0.5	0.0	0.0
28	371.014	0.003	0.103	7.38e-04	1.06e-05	232.30	3.3	0.47	6.80e-03	0.0	0.0
29	497.733	0.002	0.102	0.03	3.89e-04	0.0	0.0	9.86	0.1	0.0	0.0
30	585.416	0.002	0.102	7.84e-04	1.12e-05	0.0	0.0	640.02	9.2	0.0	0.0
31	668.025	0.001	0.102	9.67e-04	1.38e-05	0.0	0.0	6.80e-03	9.74e-05	0.0	0.0
32	751.581	0.001	0.101	1.03e-04	1.48e-06	1.41e-06	0.0	0.0	0.0	0.0	0.0
33	842.322	0.001	0.101	0.0	0.0	6.82e-05	0.0	0.0	0.0	0.0	0.0
34	1.3920e+03	7.1840e-04	0.100	2.87e-05	0.0	4.15e-05	0.0	2.19e-06	0.0	0.0	0.0
35	1.5339e+03	6.5191e-04	0.100	9.84e-06	0.0	2.47	3.54e-02	0.11	1.56e-03	0.0	0.0
36	2.2540e+03	4.4366e-04	0.100	7.00e-05	1.00e-06	8.48e-06	0.0	3.49e-06	0.0	0.0	0.0
37	2.4147e+03	4.1413e-04	0.100	0.0	0.0	0.38	5.39e-03	0.19	2.73e-03	0.0	0.0
38	2.9188e+03	3.4261e-04	0.100	0.0	0.0	1.17e-05	0.0	0.0	0.0	0.0	0.0
39	3.0977e+03	3.2282e-04	0.100	0.0	0.0	0.0	0.0	7.47e-05	1.07e-06	0.0	0.0
40	3.9486e+03	2.5325e-04	0.100	2.42e-03	3.47e-05	0.0	0.0	1.15e-05	0.0	0.0	0.0
41	6.0445e+03	1.6544e-04	0.100	1.24e-03	1.77e-05	0.0	0.0	0.0	0.0	0.0	0.0
42	7.2534e+03	1.3787e-04	0.100	0.0	0.0	872.84	12.5	0.0	0.0	0.0	0.0
43	1.0510e+04	9.5146e-05	0.099	7.99e-05	1.15e-06	0.0	0.0	872.82	12.5	0.0	0.0
44	1.1405e+04	8.7684e-05	0.099	959.87	13.8	0.0	0.0	9.66e-05	1.38e-06	0.0	0.0
45	1.4659e+04	6.8217e-05	0.099	0.0	0.0	214.24	3.1	4.41e-05	0.0	0.0	0.0
46	2.1206e+04	4.7157e-05	0.099	2.34e-05	0.0	9.93e-06	0.0	214.40	3.1	0.0	0.0
47	2.3007e+04	4.3464e-05	0.099	236.06	3.4	0.0	0.0	2.47e-05	0.0	0.0	0.0
48	7.1939e+04	1.3901e-05	0.099	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
49	7.4259e+04	1.3466e-05	0.099	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	1.0369e+05	9.6440e-06	0.099	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	1.0369e+05	9.6438e-06	0.099	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Risulta				6938.15		6941.95		6941.95			
In percentuale				99.40		99.45		99.45			

CDC	Tipo	Sigla Id	Note
14	Edk	CDC=Ed (dinamico SLO) alfa=0.0 (ecc. -)	
			categoria suolo: C
			fattore di sito S = 1.000
			ordinata spettro (tratto Tb-Tc) = 0.285 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.079 sec.
			numero di modi considerati: 51
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	daN	m	m	m	m	m	m			
5.55	2174.48	10.20	0.0	0.0	0.06	10.65	0.0	1.881	0.356	0.0
5.45	76.14	10.65	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0
2.83	3353.79	4.81	0.0	0.0	0.06	4.80	0.0	1.561	0.011	0.0
2.73	79.57	4.80	0.0	0.0	0.06	0.0	0.0	0.0	0.0	0.0
0.10	1296.04	0.0	0.0	0.0	0.06	0.0	0.0	3.000	0.0	0.0
Risulta	6980.02									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.639	0.610	0.168	2.51	3.60e-02	3163.51	45.3	0.27	3.83e-03	0.0	0.0
2	4.264	0.234	0.285	0.36	5.16e-03	469.81	6.7	1.70e-04	2.44e-06	0.0	0.0
3	5.669	0.176	0.285	50.39	0.7	448.09	6.4	0.59	8.42e-03	0.0	0.0
4	12.709	0.079	0.221	1976.11	28.3	0.02	2.66e-04	155.95	2.2	0.0	0.0
5	14.447	0.069	0.207	731.86	10.5	11.28	0.2	747.10	10.7	0.0	0.0
6	18.961	0.053	0.181	336.09	4.8	0.57	8.23e-03	1689.13	24.2	0.0	0.0
7	20.561	0.049	0.175	130.86	1.9	0.03	3.96e-04	204.98	2.9	0.0	0.0
8	22.065	0.045	0.170	64.85	0.9	0.48	6.86e-03	1619.78	23.2	0.0	0.0
9	45.658	0.022	0.133	1.83	2.62e-02	0.01	1.62e-04	0.42	5.95e-03	0.0	0.0
10	49.681	0.020	0.130	4.18	6.00e-02	0.34	4.87e-03	197.20	2.8	0.0	0.0
11	64.781	0.015	0.123	481.09	6.9	3.56	5.10e-02	1.22	1.75e-02	0.0	0.0
12	69.730	0.014	0.122	3.35	4.80e-02	14.71	0.2	6.84e-03	9.80e-05	0.0	0.0
13	70.823	0.014	0.121	1273.67	18.2	2.88	4.13e-02	525.47	7.5	0.0	0.0
14	71.199	0.014	0.121	6.44	9.22e-02	625.33	9.0	1.42	2.04e-02	0.0	0.0
15	85.384	0.012	0.117	124.73	1.8	9.94	0.1	1.24	1.77e-02	0.0	0.0
16	109.094	0.009	0.114	0.44	6.32e-03	869.17	12.5	11.95	0.2	0.0	0.0
17	161.384	0.006	0.109	420.18	6.0	5.88e-03	8.43e-05	0.26	3.80e-03	0.0	0.0
18	167.740	0.006	0.109	22.94	0.3	4.77e-06	0.0	0.91	1.31e-02	0.0	0.0
19	171.490	0.006	0.108	275.00	3.9	4.46e-04	6.39e-06	7.54	0.1	0.0	0.0
20	214.053	0.005	0.107	0.23	3.23e-03	3.61e-05	0.0	7.99e-03	1.14e-04	0.0	0.0
21	217.516	0.005	0.106	0.30	4.34e-03	2.22e-03	3.19e-05	0.26	3.66e-03	0.0	0.0
22	218.672	0.005	0.106	0.71	1.02e-02	2.91e-05	0.0	5.96e-03	8.53e-05	0.0	0.0
23	220.508	0.005	0.106	0.01	1.53e-04	2.85e-03	4.08e-05	0.01	1.59e-04	0.0	0.0
24	222.858	0.004	0.106	49.50	0.7	7.19e-05	1.03e-06	0.93	1.34e-02	0.0	0.0
25	242.868	0.004	0.106	9.34	0.1	2.05e-06	0.0	0.27	3.93e-03	0.0	0.0
26	270.524	0.004	0.105	6.89e-03	9.86e-05	1.22e-03	1.75e-05	2.34e-05	0.0	0.0	0.0
27	299.607	0.003	0.104	0.26	3.65e-03	4.00e-05	0.0	37.22	0.5	0.0	0.0
28	371.014	0.003	0.103	7.36e-04	1.05e-05	232.30	3.3	0.47	6.80e-03	0.0	0.0
29	497.733	0.002	0.102	0.03	3.89e-04	0.0	0.0	9.85	0.1	0.0	0.0
30	585.426	0.002	0.102	6.16e-04	8.83e-06	0.0	0.0	639.96	9.2	0.0	0.0
31	668.023	0.001	0.102	4.29e-04	6.14e-06	1.80e-06	0.0	3.27e-06	0.0	0.0	0.0
32	751.580	0.001	0.101	1.10e-03	1.58e-05	0.0	0.0	3.70e-04	5.30e-06	0.0	0.0
33	842.322	0.001	0.101	0.0	0.0	6.82e-05	0.0	0.0	0.0	0.0	0.0
34	1.2591e+03	7.9422e-04	0.101	4.01e-05	0.0	1.28e-05	0.0	0.0	0.0	0.0	0.0
35	1.5339e+03	6.5191e-04	0.100	9.78e-06	0.0	2.47	3.54e-02	0.11	1.56e-03	0.0	0.0



Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
36	2.0389e+03	4.9047e-04	0.100	9.39e-05	1.35e-06	1.95e-06	0.0	0.0	0.0	0.0	0.0
37	2.4147e+03	4.1413e-04	0.100	0.0	0.0	0.38	5.39e-03	0.19	2.73e-03	0.0	0.0
38	2.9188e+03	3.4261e-04	0.100	0.0	0.0	1.17e-05	0.0	0.0	0.0	0.0	0.0
39	3.0977e+03	3.2282e-04	0.100	0.0	0.0	0.0	0.0	7.47e-05	1.07e-06	0.0	0.0
40	3.9484e+03	2.5327e-04	0.100	2.88e-03	4.12e-05	0.0	0.0	0.0	0.0	0.0	0.0
41	6.0451e+03	1.6542e-04	0.100	5.39e-04	7.72e-06	0.0	0.0	7.81e-06	0.0	0.0	0.0
42	7.2534e+03	1.3787e-04	0.100	0.0	0.0	872.84	12.5	0.0	0.0	0.0	0.0
43	1.0510e+04	9.5146e-05	0.099	1.23e-05	0.0	0.0	0.0	872.82	12.5	0.0	0.0
44	1.2608e+04	7.9313e-05	0.099	785.34	11.3	0.0	0.0	2.75e-05	0.0	0.0	0.0
45	1.4659e+04	6.8217e-05	0.099	0.0	0.0	214.24	3.1	4.41e-05	0.0	0.0	0.0
46	2.1206e+04	4.7157e-05	0.099	0.0	0.0	9.93e-06	0.0	214.40	3.1	0.0	0.0
47	2.5436e+04	3.9315e-05	0.099	193.14	2.8	0.0	0.0	3.01e-06	0.0	0.0	0.0
48	7.1939e+04	1.3901e-05	0.099	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	7.4259e+04	1.3466e-05	0.099	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	1.0369e+05	9.6440e-06	0.099	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	1.0369e+05	9.6438e-06	0.099	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Risulta				6945.76		6941.95		6941.95			
In				99.51		99.45		99.45			
percentuale											

CDC	Tipo	Sigla Id	Note
15	Edk	CDC=Ed (dinamico SLO) alfa=90.00 (ecc. +)	
			categoria suolo: C
			fattore di sito S = 1.000
			ordinata spettro (tratto Tb-Tc) = 0.285 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.601 sec.
			numero di modi considerati: 51
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	daN	m	m	m	m	m	m			
5.55	2174.48	10.20	0.0	0.07	0.0	10.65	0.0	1.881	0.356	0.0
5.45	76.14	10.65	0.0	0.07	0.0	0.0	0.0	0.0	0.0	0.0
2.83	3353.79	4.81	0.0	0.06	0.0	4.80	0.0	1.561	0.011	0.0
2.73	79.57	4.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.10	1296.04	0.0	0.0	0.0	0.0	0.0	0.0	3.000	0.0	0.0
Risulta	6980.02									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.664	0.601	0.171	0.29	4.21e-03	3162.92	45.3	0.28	4.02e-03	0.0	0.0
2	4.264	0.235	0.285	0.20	2.82e-03	463.35	6.6	1.66e-04	2.37e-06	0.0	0.0
3	5.598	0.179	0.285	14.08	0.2	455.26	6.5	0.52	7.38e-03	0.0	0.0
4	12.912	0.077	0.219	1680.22	24.1	0.13	1.88e-03	203.30	2.9	0.0	0.0
5	14.641	0.068	0.205	867.89	12.4	9.88	0.1	739.74	10.6	0.0	0.0
6	19.047	0.053	0.181	339.26	4.9	0.73	1.04e-02	1841.70	26.4	0.0	0.0
7	20.722	0.048	0.174	117.39	1.7	2.50e-04	3.58e-06	251.20	3.6	0.0	0.0
8	22.199	0.045	0.169	84.50	1.2	0.49	7.02e-03	1333.34	19.1	0.0	0.0
9	45.643	0.022	0.133	2.55	3.66e-02	0.01	1.52e-04	0.18	2.53e-03	0.0	0.0
10	49.676	0.020	0.131	3.84	5.50e-02	0.58	8.34e-03	196.72	2.8	0.0	0.0
11	65.302	0.015	0.123	446.85	6.4	3.23	4.62e-02	1.96	2.81e-02	0.0	0.0
12	68.230	0.015	0.122	1400.39	20.1	0.10	1.50e-03	574.12	8.2	0.0	0.0
13	69.847	0.014	0.121	5.51	7.90e-02	18.15	0.3	0.12	1.78e-03	0.0	0.0
14	71.202	0.014	0.121	0.21	3.05e-03	624.77	9.0	0.02	3.03e-04	0.0	0.0
15	88.088	0.011	0.117	113.67	1.6	8.06	0.1	1.18	1.69e-02	0.0	0.0
16	112.608	0.009	0.113	0.36	5.20e-03	816.46	11.7	11.24	0.2	0.0	0.0
17	162.260	0.006	0.109	348.44	5.0	9.07e-05	1.30e-06	8.39	0.1	0.0	0.0
18	167.398	0.006	0.109	87.27	1.3	3.80e-03	5.44e-05	1.34	1.92e-02	0.0	0.0
19	170.098	0.006	0.108	282.43	4.0	1.30e-03	1.86e-05	0.03	4.75e-04	0.0	0.0
20	203.433	0.005	0.107	0.04	5.23e-04	7.37e-05	1.06e-06	0.02	2.64e-04	0.0	0.0
21	217.900	0.005	0.106	0.83	1.19e-02	3.98e-03	5.70e-05	0.20	2.93e-03	0.0	0.0
22	222.153	0.005	0.106	39.75	0.6	1.22e-05	0.0	0.80	1.14e-02	0.0	0.0



Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
23	230.511	0.004	0.106	15.77	0.2	1.23e-05	0.0	0.33	4.77e-03	0.0	0.0
24	231.118	0.004	0.106	2.47	3.54e-02	1.07e-03	1.53e-05	7.80e-04	1.12e-05	0.0	0.0
25	232.134	0.004	0.106	0.23	3.34e-03	1.06e-04	1.52e-06	0.05	7.75e-04	0.0	0.0
26	283.723	0.004	0.105	6.32e-03	9.05e-05	2.40e-03	3.44e-05	4.81e-05	0.0	0.0	0.0
27	299.812	0.003	0.104	0.25	3.55e-03	9.22e-05	1.32e-06	37.19	0.5	0.0	0.0
28	332.747	0.003	0.104	9.40e-04	1.35e-05	288.11	4.1	0.62	8.84e-03	0.0	0.0
29	497.881	0.002	0.102	0.03	3.87e-04	0.0	0.0	9.83	0.1	0.0	0.0
30	585.421	0.002	0.102	7.08e-04	1.01e-05	0.0	0.0	640.00	9.2	0.0	0.0
31	704.696	0.001	0.101	1.14e-03	1.63e-05	0.0	0.0	9.13e-04	1.31e-05	0.0	0.0
32	707.615	0.001	0.101	1.35e-04	1.93e-06	1.01e-06	0.0	8.16e-04	1.17e-05	0.0	0.0
33	842.494	0.001	0.101	0.0	0.0	6.86e-05	0.0	0.0	0.0	0.0	0.0
34	1.3205e+03	7.5726e-04	0.100	3.43e-05	0.0	1.10e-05	0.0	0.0	0.0	0.0	0.0
35	1.6166e+03	6.1857e-04	0.100	8.78e-06	0.0	2.22	3.19e-02	0.10	1.40e-03	0.0	0.0
36	2.1384e+03	4.6765e-04	0.100	8.17e-05	1.17e-06	1.12e-05	0.0	4.54e-06	0.0	0.0	0.0
37	2.2936e+03	4.3600e-04	0.100	0.0	0.0	0.44	6.33e-03	0.21	3.01e-03	0.0	0.0
38	2.9188e+03	3.4260e-04	0.100	0.0	0.0	1.17e-05	0.0	0.0	0.0	0.0	0.0
39	3.0978e+03	3.2281e-04	0.100	0.0	0.0	0.0	0.0	7.47e-05	1.07e-06	0.0	0.0
40	4.6578e+03	2.1470e-04	0.100	4.07e-05	0.0	0.0	0.0	4.37e-06	0.0	0.0	0.0
41	4.6645e+03	2.1438e-04	0.100	3.52e-03	5.04e-05	0.0	0.0	4.90e-06	0.0	0.0	0.0
42	7.4904e+03	1.3350e-04	0.100	0.0	0.0	818.47	11.7	0.0	0.0	0.0	0.0
43	1.0510e+04	9.5146e-05	0.099	2.83e-05	0.0	0.0	0.0	872.82	12.5	0.0	0.0
44	1.1961e+04	8.3603e-05	0.099	872.60	12.5	0.0	0.0	4.54e-05	0.0	0.0	0.0
45	1.3093e+04	7.6377e-05	0.099	0.0	0.0	268.56	3.8	3.95e-05	0.0	0.0	0.0
46	2.1206e+04	4.7157e-05	0.099	4.84e-06	0.0	7.06e-06	0.0	214.40	3.1	0.0	0.0
47	2.4130e+04	4.1441e-05	0.099	214.60	3.1	0.0	0.0	7.74e-06	0.0	0.0	0.0
48	7.1939e+04	1.3901e-05	0.099	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	7.4259e+04	1.3466e-05	0.099	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	1.0369e+05	9.6440e-06	0.099	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	1.0369e+05	9.6438e-06	0.099	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Risulta				6941.95		6941.95		6941.95			
In percentuale				99.45		99.45		99.45			

CDC	Tipo	Sigla Id	Note
16	Edk	CDC=Ed (dinamico SLO) alfa=90.00 (ecc. -)	
			categoria suolo: C
			fattore di sito S = 1.000
			ordinata spettro (tratto Tb-Tc) = 0.285 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.619 sec.
			numero di modi considerati: 51
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	daN	m	m	m	m	m	m			
5.55	2174.48	10.20	0.0	-0.07	0.0	10.65	0.0	1.881	0.356	0.0
5.45	76.14	10.65	0.0	-0.07	0.0	0.0	0.0	0.0	0.0	0.0
2.83	3353.79	4.81	0.0	-0.06	0.0	4.80	0.0	1.561	0.011	0.0
2.73	79.57	4.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.10	1296.04	0.0	0.0	0.0	0.0	0.0	0.0	3.000	0.0	0.0
Risulta	6980.02									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.616	0.619	0.166	0.33	4.73e-03	3167.13	45.4	0.25	3.63e-03	0.0	0.0
2	4.265	0.234	0.285	0.15	2.21e-03	477.47	6.8	2.25e-04	3.22e-06	0.0	0.0
3	5.772	0.173	0.285	13.93	0.2	436.98	6.3	0.60	8.53e-03	0.0	0.0
4	12.890	0.078	0.220	1671.95	24.0	0.47	6.70e-03	204.27	2.9	0.0	0.0
5	14.633	0.068	0.205	864.92	12.4	12.11	0.2	737.82	10.6	0.0	0.0
6	19.019	0.053	0.181	352.99	5.1	0.64	9.15e-03	1807.42	25.9	0.0	0.0
7	20.718	0.048	0.174	117.91	1.7	1.38e-03	1.98e-05	233.58	3.3	0.0	0.0
8	22.143	0.045	0.169	81.68	1.2	0.42	5.95e-03	1384.37	19.8	0.0	0.0
9	45.644	0.022	0.133	2.54	3.64e-02	0.01	1.58e-04	0.18	2.58e-03	0.0	0.0

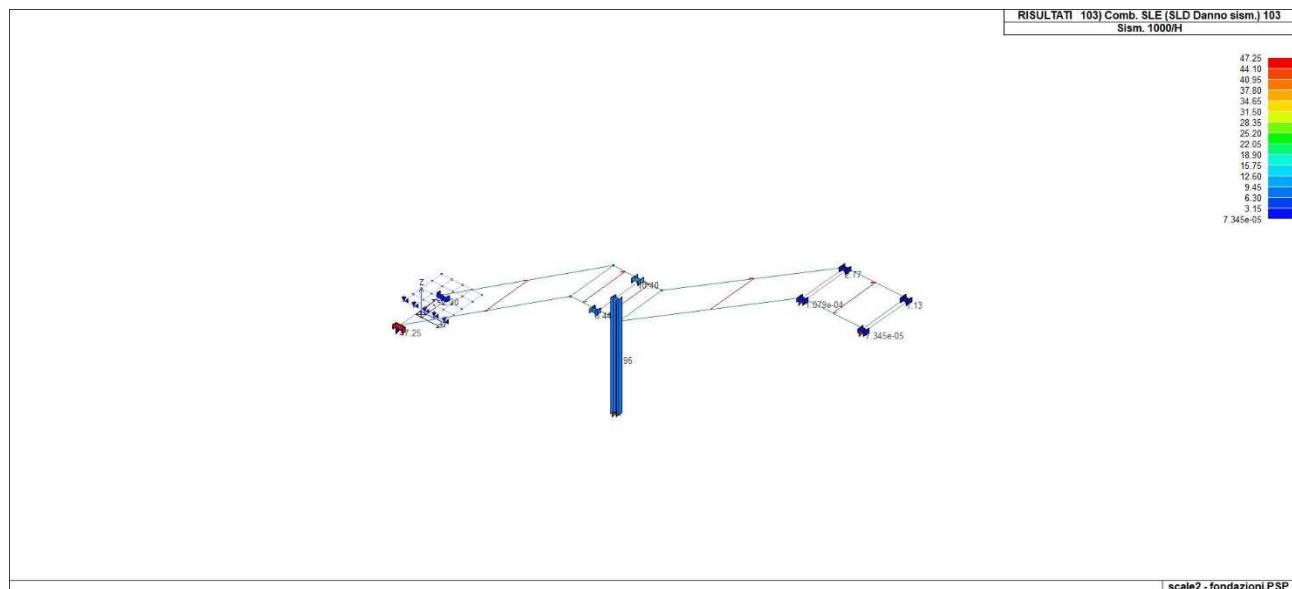
Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
10	49.709	0.020	0.130	3.85	5.51e-02	0.14	2.00e-03	197.11	2.8	0.0	0.0
11	65.291	0.015	0.123	442.36	6.3	4.24	6.08e-02	2.23	3.20e-02	0.0	0.0
12	68.229	0.015	0.122	1409.80	20.2	0.05	7.27e-04	572.97	8.2	0.0	0.0
13	69.720	0.014	0.122	0.05	7.42e-04	13.77	0.2	1.08	1.55e-02	0.0	0.0
14	71.196	0.014	0.121	0.45	6.38e-03	628.78	9.0	1.04e-03	1.49e-05	0.0	0.0
15	88.020	0.011	0.117	113.59	1.6	15.98	0.2	1.49	2.14e-02	0.0	0.0
16	105.934	0.009	0.114	0.73	1.04e-02	917.22	13.1	12.50	0.2	0.0	0.0
17	162.261	0.006	0.109	348.44	5.0	8.55e-05	1.23e-06	8.39	0.1	0.0	0.0
18	167.407	0.006	0.109	88.19	1.3	3.32e-03	4.76e-05	1.35	1.93e-02	0.0	0.0
19	170.099	0.006	0.108	281.47	4.0	9.56e-04	1.37e-05	0.04	5.11e-04	0.0	0.0
20	207.411	0.005	0.107	0.12	1.73e-03	2.16e-04	3.09e-06	6.83e-03	9.78e-05	0.0	0.0
21	217.898	0.005	0.106	0.85	1.21e-02	3.21e-03	4.60e-05	0.20	2.92e-03	0.0	0.0
22	222.086	0.005	0.106	39.32	0.6	9.98e-06	0.0	0.75	1.07e-02	0.0	0.0
23	226.705	0.004	0.106	0.40	5.76e-03	4.70e-05	0.0	0.08	1.08e-03	0.0	0.0
24	230.514	0.004	0.106	15.89	0.2	7.92e-06	0.0	0.35	4.97e-03	0.0	0.0
25	231.119	0.004	0.106	2.57	3.68e-02	1.01e-03	1.45e-05	2.94e-04	4.21e-06	0.0	0.0
26	283.723	0.004	0.105	6.33e-03	9.06e-05	8.49e-04	1.22e-05	3.62e-05	0.0	0.0	0.0
27	299.405	0.003	0.104	0.26	3.66e-03	2.59e-05	0.0	37.20	0.5	0.0	0.0
28	426.553	0.002	0.103	5.48e-04	7.86e-06	176.40	2.5	0.33	4.79e-03	0.0	0.0
29	497.587	0.002	0.102	0.03	3.89e-04	0.0	0.0	9.88	0.1	0.0	0.0
30	585.421	0.002	0.102	7.08e-04	1.01e-05	0.0	0.0	640.00	9.2	0.0	0.0
31	704.696	0.001	0.101	1.14e-03	1.63e-05	0.0	0.0	9.13e-04	1.31e-05	0.0	0.0
32	707.615	0.001	0.101	1.35e-04	1.93e-06	1.11e-06	0.0	8.16e-04	1.17e-05	0.0	0.0
33	842.150	0.001	0.101	0.0	0.0	6.78e-05	0.0	0.0	0.0	0.0	0.0
34	1.3205e+03	7.5726e-04	0.100	3.42e-05	0.0	4.22e-05	0.0	2.42e-06	0.0	0.0	0.0
35	1.4628e+03	6.8362e-04	0.100	1.08e-05	0.0	2.71	3.89e-02	0.12	1.72e-03	0.0	0.0
36	2.1384e+03	4.6765e-04	0.100	8.17e-05	1.17e-06	1.29e-06	0.0	0.0	0.0	0.0	0.0
37	2.5616e+03	3.9039e-04	0.100	0.0	0.0	0.31	4.39e-03	0.17	2.44e-03	0.0	0.0
38	2.9187e+03	3.4261e-04	0.100	0.0	0.0	1.17e-05	0.0	0.0	0.0	0.0	0.0
39	3.0976e+03	3.2283e-04	0.100	0.0	0.0	0.0	0.0	7.47e-05	1.07e-06	0.0	0.0
40	4.6578e+03	2.1470e-04	0.100	4.07e-05	0.0	0.0	0.0	4.37e-06	0.0	0.0	0.0
41	4.6645e+03	2.1438e-04	0.100	3.52e-03	5.04e-05	0.0	0.0	4.90e-06	0.0	0.0	0.0
42	7.0376e+03	1.4209e-04	0.100	0.0	0.0	927.20	13.3	0.0	0.0	0.0	0.0
43	1.0510e+04	9.5146e-05	0.099	2.83e-05	0.0	0.0	0.0	872.82	12.5	0.0	0.0
44	1.1961e+04	8.3603e-05	0.099	872.60	12.5	0.0	0.0	4.54e-05	0.0	0.0	0.0
45	1.6967e+04	5.8938e-05	0.099	0.0	0.0	159.92	2.3	6.90e-05	0.0	0.0	0.0
46	2.1206e+04	4.7157e-05	0.099	4.83e-06	0.0	2.09e-05	0.0	214.40	3.1	0.0	0.0
47	2.4130e+04	4.1441e-05	0.099	214.60	3.1	0.0	0.0	7.74e-06	0.0	0.0	0.0
48	7.1939e+04	1.3901e-05	0.099	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	7.4259e+04	1.3466e-05	0.099	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	1.0369e+05	9.6440e-06	0.099	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	1.0369e+05	9.6438e-06	0.099	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Risulta In percentuale				6941.95 99.45		6941.95 99.45		6941.95 99.45			

Cmb	Pilas.	1000 etaT/h	etaT	inter. h	Pilas.	1000 etaT/h	etaT	inter. h	Pilas.	1000 etaT/h	etaT	inter. h
			mm	cm			mm	cm			mm	cm
75	1	15.15	1.51	10.0	2	1.42	0.14	10.0	8	2.67	0.27	10.0
	9	4.55	0.46	10.0	10	2.37	6.45	272.5	17	1.06e-04	1.06e-05	10.0
	18	1.97	0.20	10.0	19	1.01	0.10	10.0	20	8.07e-05	8.07e-06	10.0
76	1	12.08	1.21	10.0	2	0.62	0.06	10.0	8	2.08	0.21	10.0
	9	0.25	0.03	10.0	10	1.48	4.04	272.5	17	2.46e-04	2.46e-05	10.0
	18	1.58	0.16	10.0	19	0.90	0.09	10.0	20	1.89e-04	1.89e-05	10.0
77	1	14.19	1.42	10.0	2	1.09	0.11	10.0	8	2.78	0.28	10.0
	9	4.68	0.47	10.0	10	2.47	6.74	272.5	17	9.08e-05	9.08e-06	10.0
	18	2.53	0.25	10.0	19	1.02	0.10	10.0	20	2.30e-05	2.30e-06	10.0
78	1	13.02	1.30	10.0	2	0.30	0.03	10.0	8	1.96	0.20	10.0
	9	0.34	0.03	10.0	10	1.37	3.75	272.5	17	2.28e-04	2.28e-05	10.0
	18	2.14	0.21	10.0	19	0.91	0.09	10.0	20	1.27e-04	1.27e-05	10.0
79	1	15.30	1.53	10.0	2	1.43	0.14	10.0	8	2.71	0.27	10.0
	9	4.59	0.46	10.0	10	2.36	6.44	272.5	17	1.05e-04	1.05e-05	10.0
	18	1.97	0.20	10.0	19	1.01	0.10	10.0	20	7.97e-05	7.97e-06	10.0
80	1	12.24	1.22	10.0	2	0.61	0.06	10.0	8	2.12	0.21	10.0
	9	0.30	0.03	10.0	10	1.48	4.03	272.5	17	2.47e-04	2.47e-05	10.0
	18	1.58	0.16	10.0	19	0.90	0.09	10.0	20	1.90e-04	1.90e-05	10.0
81	1	14.34	1.43	10.0	2	1.10	0.11	10.0	8	2.82	0.28	10.0
	9	4.72	0.47	10.0	10	2.47	6.73	272.5	17	8.97e-05	8.97e-06	10.0
	18	2.53	0.25	10.0	19	1.02	0.10	10.0	20	2.22e-05	2.22e-06	10.0

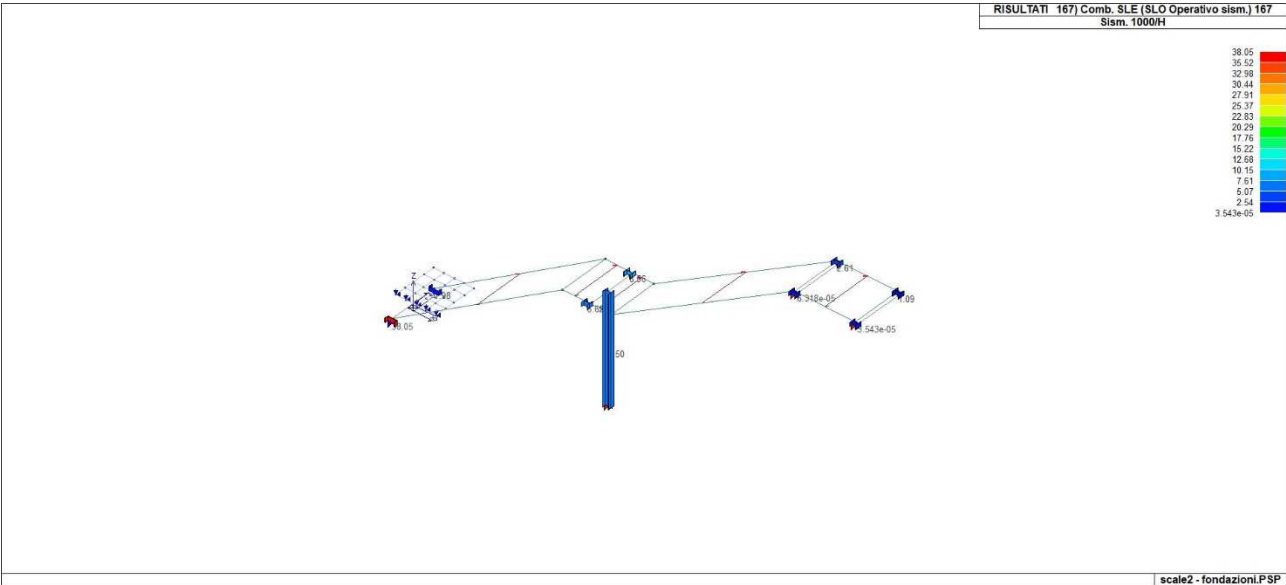
Cmb	Pilas.	1000 etaT/h	etaT	inter. h	Pilas.	1000 etaT/h	etaT	inter. h	Pilas.	1000 etaT/h	etaT	inter. h
82	1	13.17	1.32	10.0	2	0.29	0.03	10.0	8	2.01	0.20	10.0
	9	0.36	0.04	10.0	10	1.37	3.74	272.5	17	2.29e-04	2.29e-05	10.0
	18	2.14	0.21	10.0	19	0.91	0.09	10.0	20	1.28e-04	1.28e-05	10.0
83	1	15.99	1.60	10.0	2	1.47	0.15	10.0	8	2.85	0.29	10.0
	9	4.74	0.47	10.0	10	2.61	7.11	272.5	17	8.17e-05	8.17e-06	10.0
	18	2.48	0.25	10.0	19	0.98	0.10	10.0	20	8.13e-05	8.13e-06	10.0
84	1	11.25	1.13	10.0	2	0.67	0.07	10.0	8	1.89	0.19	10.0
	9	0.06	6.43e-03	10.0	10	1.24	3.39	272.5	17	2.21e-04	2.21e-05	10.0
	18	2.11	0.21	10.0	19	0.86	0.09	10.0	20	1.89e-04	1.89e-05	10.0
85	1	13.35	1.33	10.0	2	1.03	0.10	10.0	8	2.59	0.26	10.0
	9	4.49	0.45	10.0	10	2.23	6.08	272.5	17	1.15e-04	1.15e-05	10.0
	18	2.00	0.20	10.0	19	0.98	0.10	10.0	20	2.26e-05	2.26e-06	10.0
86	1	13.85	1.39	10.0	2	0.25	0.03	10.0	8	2.15	0.22	10.0
	9	0.45	0.05	10.0	10	1.62	4.40	272.5	17	2.53e-04	2.53e-05	10.0
	18	1.61	0.16	10.0	19	0.94	0.09	10.0	20	1.26e-04	1.26e-05	10.0
87	1	16.14	1.61	10.0	2	1.48	0.15	10.0	8	2.90	0.29	10.0
	9	4.79	0.48	10.0	10	2.60	7.10	272.5	17	8.06e-05	8.06e-06	10.0
	18	2.48	0.25	10.0	19	0.98	0.10	10.0	20	8.02e-05	8.02e-06	10.0
88	1	11.40	1.14	10.0	2	0.66	0.07	10.0	8	1.94	0.19	10.0
	9	0.11	0.01	10.0	10	1.24	3.38	272.5	17	2.22e-04	2.22e-05	10.0
	18	2.11	0.21	10.0	19	0.87	0.09	10.0	20	1.90e-04	1.90e-05	10.0
89	1	13.50	1.35	10.0	2	1.04	0.10	10.0	8	2.64	0.26	10.0
	9	4.53	0.45	10.0	10	2.23	6.07	272.5	17	1.14e-04	1.14e-05	10.0
	18	2.03	0.20	10.0	19	1.06	0.11	10.0	20	2.18e-05	2.18e-06	10.0
90	1	14.01	1.40	10.0	2	0.24	0.02	10.0	8	2.20	0.22	10.0
	9	0.48	0.05	10.0	10	1.61	4.39	272.5	17	2.54e-04	2.54e-05	10.0
	18	1.61	0.16	10.0	19	0.95	0.09	10.0	20	1.27e-04	1.27e-05	10.0
91	1	46.48	4.65	10.0	2	2.25	0.22	10.0	8	8.24	0.82	10.0
	9	10.19	1.02	10.0	10	6.89	18.77	272.5	17	1.01e-04	1.01e-05	10.0
	18	2.63	0.26	10.0	19	1.15	0.11	10.0	20	7.01e-05	7.01e-06	10.0
92	1	44.07	4.41	10.0	2	0.51	0.05	10.0	8	7.57	0.76	10.0
	9	5.81	0.58	10.0	10	5.93	16.16	272.5	17	4.09e-04	4.09e-05	10.0
	18	1.32	0.13	10.0	19	0.77	0.08	10.0	20	2.93e-04	2.93e-05	10.0
93	1	46.19	4.62	10.0	2	2.15	0.21	10.0	8	8.27	0.83	10.0
	9	10.23	1.02	10.0	10	6.92	18.86	272.5	17	1.05e-04	1.05e-05	10.0
	18	2.79	0.28	10.0	19	1.15	0.11	10.0	20	8.86e-05	8.86e-06	10.0
94	1	44.36	4.44	10.0	2	0.59	0.06	10.0	8	7.54	0.75	10.0
	9	5.78	0.58	10.0	10	5.90	16.07	272.5	17	4.04e-04	4.04e-05	10.0
	18	1.49	0.15	10.0	19	0.77	0.08	10.0	20	2.75e-04	2.75e-05	10.0
95	1	46.73	4.67	10.0	2	2.26	0.23	10.0	8	8.29	0.83	10.0
	9	10.25	1.03	10.0	10	6.96	18.97	272.5	17	1.06e-04	1.06e-05	10.0
	18	2.77	0.28	10.0	19	1.14	0.11	10.0	20	6.99e-05	6.99e-06	10.0
96	1	43.82	4.38	10.0	2	0.49	0.05	10.0	8	7.52	0.75	10.0
	9	5.75	0.58	10.0	10	5.86	15.96	272.5	17	4.02e-04	4.02e-05	10.0
	18	1.49	0.15	10.0	19	0.76	0.08	10.0	20	2.93e-04	2.93e-05	10.0
97	1	45.94	4.59	10.0	2	2.13	0.21	10.0	8	8.22	0.82	10.0
	9	10.17	1.02	10.0	10	6.85	18.66	272.5	17	1.00e-04	1.00e-05	10.0
	18	2.65	0.26	10.0	19	1.16	0.12	10.0	20	8.88e-05	8.88e-06	10.0
98	1	44.61	4.46	10.0	2	0.61	0.06	10.0	8	7.59	0.76	10.0
	9	5.84	0.58	10.0	10	5.97	16.27	272.5	17	4.12e-04	4.12e-05	10.0
	18	1.32	0.13	10.0	19	0.79	0.08	10.0	20	2.74e-04	2.74e-05	10.0
99	1	46.99	4.70	10.0	2	2.28	0.23	10.0	8	8.38	0.84	10.0
	9	10.34	1.03	10.0	10	6.88	18.74	272.5	17	1.03e-04	1.03e-05	10.0
	18	2.63	0.26	10.0	19	1.14	0.11	10.0	20	7.36e-05	7.36e-06	10.0
100	1	44.59	4.46	10.0	2	0.54	0.05	10.0	8	7.72	0.77	10.0
	9	5.96	0.60	10.0	10	5.92	16.13	272.5	17	4.13e-04	4.13e-05	10.0
	18	1.32	0.13	10.0	19	0.78	0.08	10.0	20	2.97e-04	2.97e-05	10.0
101	1	46.71	4.67	10.0	2	2.18	0.22	10.0	8	8.42	0.84	10.0
	9	10.38	1.04	10.0	10	6.91	18.83	272.5	17	1.07e-04	1.07e-05	10.0
	18	2.79	0.28	10.0	19	1.14	0.11	10.0	20	9.21e-05	9.21e-06	10.0
102	1	44.87	4.49	10.0	2	0.63	0.06	10.0	8	7.68	0.77	10.0
	9	5.93	0.59	10.0	10	5.89	16.04	272.5	17	4.08e-04	4.08e-05	10.0
	18	1.49	0.15	10.0	19	0.78	0.08	10.0	20	2.78e-04	2.78e-05	10.0
103	1	47.25	4.72	10.0	2	2.30	0.23	10.0	8	8.44	0.84	10.0
	9	10.40	1.04	10.0	10	6.95	18.94	272.5	17	1.08e-04	1.08e-05	10.0
	18	2.77	0.28	10.0	19	1.13	0.11	10.0	20	7.34e-05	7.34e-06	10.0
104	1	44.34	4.43	10.0	2	0.52	0.05	10.0	8	7.66	0.77	10.0
	9	5.90	0.59	10.0	10	5.85	15.93	272.5	17	4.05e-04	4.05e-05	10.0
	18	1.49	0.15	10.0	19	0.76	0.08	10.0	20	2.97e-04	2.97e-05	10.0
105	1	46.46	4.65	10.0	2	2.16	0.22	10.0	8	8.36	0.84	10.0
	9	10.32	1.03	10.0	10	6.84	18.63	272.5	17	1.02e-04	1.02e-05	10.0

Cmb	Pilas.	1000 etaT/h	etaT	inter. h	Pilas.	1000 etaT/h	etaT	inter. h	Pilas.	1000 etaT/h	etaT	inter. h
	18	2.65	0.26	10.0	19	1.16	0.12	10.0	20	9.23e-05	9.23e-06	10.0
106	1	45.12	4.51	10.0	2	0.64	0.06	10.0	8	7.74	0.77	10.0
	9	5.98	0.60	10.0	10	5.96	16.24	272.5	17	4.15e-04	4.15e-05	10.0
	18	1.32	0.13	10.0	19	0.79	0.08	10.0	20	2.78e-04	2.78e-05	10.0
139	1	12.35	1.24	10.0	2	1.30	0.13	10.0	8	2.15	0.21	10.0
	9	4.03	0.40	10.0	10	1.95	5.31	272.5	17	1.19e-04	1.19e-05	10.0
	18	1.98	0.20	10.0	19	1.00	0.10	10.0	20	8.72e-05	8.72e-06	10.0
140	1	9.48	0.95	10.0	2	0.68	0.07	10.0	8	1.54	0.15	10.0
	9	0.31	0.03	10.0	10	1.04	2.84	272.5	17	2.28e-04	2.28e-05	10.0
	18	1.67	0.17	10.0	19	0.91	0.09	10.0	20	1.71e-04	1.71e-05	10.0
141	1	11.59	1.16	10.0	2	1.03	0.10	10.0	8	2.24	0.22	10.0
	9	4.13	0.41	10.0	10	2.03	5.53	272.5	17	1.06e-04	1.06e-05	10.0
	18	2.44	0.24	10.0	19	1.01	0.10	10.0	20	3.81e-05	3.81e-06	10.0
142	1	10.23	1.02	10.0	2	0.41	0.04	10.0	8	1.45	0.14	10.0
	9	0.48	0.05	10.0	10	0.96	2.61	272.5	17	2.14e-04	2.14e-05	10.0
	18	2.13	0.21	10.0	19	0.92	0.09	10.0	20	1.20e-04	1.20e-05	10.0
143	1	12.48	1.25	10.0	2	1.31	0.13	10.0	8	2.18	0.22	10.0
	9	4.06	0.41	10.0	10	1.94	5.30	272.5	17	1.18e-04	1.18e-05	10.0
	18	1.98	0.20	10.0	19	1.00	0.10	10.0	20	8.64e-05	8.64e-06	10.0
144	1	9.60	0.96	10.0	2	0.67	0.07	10.0	8	1.57	0.16	10.0
	9	0.27	0.03	10.0	10	1.04	2.83	272.5	17	2.29e-04	2.29e-05	10.0
	18	1.67	0.17	10.0	19	0.92	0.09	10.0	20	1.72e-04	1.72e-05	10.0
145	1	11.71	1.17	10.0	2	1.03	0.10	10.0	8	2.27	0.23	10.0
	9	4.16	0.42	10.0	10	2.03	5.52	272.5	17	1.05e-04	1.05e-05	10.0
	18	2.43	0.24	10.0	19	1.00	0.10	10.0	20	3.73e-05	3.73e-06	10.0
146	1	10.35	1.04	10.0	2	0.41	0.04	10.0	8	1.48	0.15	10.0
	9	0.46	0.05	10.0	10	0.95	2.60	272.5	17	2.15e-04	2.15e-05	10.0
	18	2.13	0.21	10.0	19	0.92	0.09	10.0	20	1.21e-04	1.21e-05	10.0
147	1	13.03	1.30	10.0	2	1.34	0.13	10.0	8	2.29	0.23	10.0
	9	4.17	0.42	10.0	10	2.14	5.82	272.5	17	9.92e-05	9.92e-06	10.0
	18	2.39	0.24	10.0	19	0.97	0.10	10.0	20	8.76e-05	8.76e-06	10.0
148	1	8.82	0.88	10.0	2	0.72	0.07	10.0	8	1.40	0.14	10.0
	9	0.45	0.04	10.0	10	0.85	2.33	272.5	17	2.08e-04	2.08e-05	10.0
	18	2.11	0.21	10.0	19	0.88	0.09	10.0	20	1.71e-04	1.71e-05	10.0
149	1	10.91	1.09	10.0	2	0.98	0.10	10.0	8	2.10	0.21	10.0
	9	3.99	0.40	10.0	10	1.84	5.02	272.5	17	1.26e-04	1.26e-05	10.0
	18	2.02	0.20	10.0	19	1.04	0.10	10.0	20	3.77e-05	3.77e-06	10.0
150	1	10.89	1.09	10.0	2	0.37	0.04	10.0	8	1.59	0.16	10.0
	9	0.38	0.04	10.0	10	1.14	3.12	272.5	17	2.34e-04	2.34e-05	10.0
	18	1.70	0.17	10.0	19	0.95	0.09	10.0	20	1.20e-04	1.20e-05	10.0
151	1	13.15	1.32	10.0	2	1.35	0.13	10.0	8	2.32	0.23	10.0
	9	4.20	0.42	10.0	10	2.13	5.81	272.5	17	9.83e-05	9.83e-06	10.0
	18	2.39	0.24	10.0	19	0.97	0.10	10.0	20	8.68e-05	8.68e-06	10.0
152	1	8.94	0.89	10.0	2	0.71	0.07	10.0	8	1.43	0.14	10.0
	9	0.41	0.04	10.0	10	0.85	2.32	272.5	17	2.08e-04	2.08e-05	10.0
	18	2.11	0.21	10.0	19	0.88	0.09	10.0	20	1.72e-04	1.72e-05	10.0
153	1	11.04	1.10	10.0	2	0.99	0.10	10.0	8	2.13	0.21	10.0
	9	4.02	0.40	10.0	10	1.84	5.01	272.5	17	1.25e-04	1.25e-05	10.0
	18	2.02	0.20	10.0	19	1.04	0.10	10.0	20	3.70e-05	3.70e-06	10.0
154	1	11.02	1.10	10.0	2	0.36	0.04	10.0	8	1.62	0.16	10.0
	9	0.36	0.04	10.0	10	1.14	3.11	272.5	17	2.35e-04	2.35e-05	10.0
	18	1.70	0.17	10.0	19	0.95	0.10	10.0	20	1.21e-04	1.21e-05	10.0
155	1	37.44	3.74	10.0	2	1.94	0.19	10.0	8	6.47	0.65	10.0
	9	8.41	0.84	10.0	10	5.46	14.88	272.5	17	6.10e-05	6.10e-06	10.0
	18	2.49	0.25	10.0	19	1.10	0.11	10.0	20	3.31e-05	3.31e-06	10.0
156	1	35.09	3.51	10.0	2	0.26	0.03	10.0	8	5.80	0.58	10.0
	9	4.02	0.40	10.0	10	4.49	12.24	272.5	17	3.55e-04	3.55e-05	10.0
	18	1.47	0.15	10.0	19	0.81	0.08	10.0	20	2.51e-04	2.51e-05	10.0
157	1	37.21	3.72	10.0	2	1.85	0.19	10.0	8	6.50	0.65	10.0
	9	8.44	0.84	10.0	10	5.48	14.94	272.5	17	6.32e-05	6.32e-06	10.0
	18	2.63	0.26	10.0	19	1.11	0.11	10.0	20	4.76e-05	4.76e-06	10.0
158	1	35.32	3.53	10.0	2	0.31	0.03	10.0	8	5.77	0.58	10.0
	9	3.99	0.40	10.0	10	4.47	12.18	272.5	17	3.50e-04	3.50e-05	10.0
	18	1.62	0.16	10.0	19	0.82	0.08	10.0	20	2.36e-04	2.36e-05	10.0
159	1	37.64	3.76	10.0	2	1.95	0.19	10.0	8	6.51	0.65	10.0
	9	8.45	0.85	10.0	10	5.52	15.03	272.5	17	6.27e-05	6.27e-06	10.0
	18	2.61	0.26	10.0	19	1.10	0.11	10.0	20	3.30e-05	3.30e-06	10.0
160	1	34.89	3.49	10.0	2	0.25	0.03	10.0	8	5.76	0.58	10.0
	9	3.98	0.40	10.0	10	4.44	12.09	272.5	17	3.48e-04	3.48e-05	10.0
	18	1.61	0.16	10.0	19	0.80	0.08	10.0	20	2.51e-04	2.51e-05	10.0
161	1	37.01	3.70	10.0	2	1.84	0.18	10.0	8	6.46	0.65	10.0

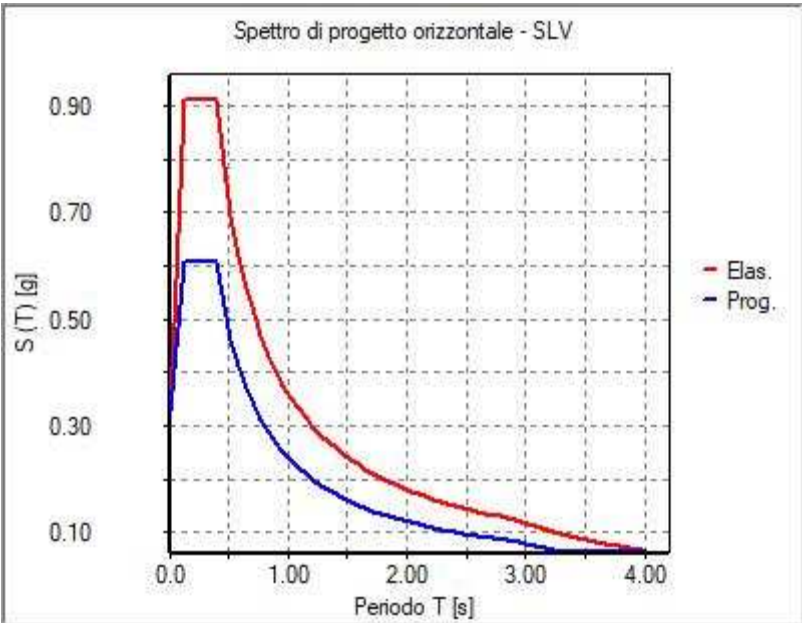
Cmb	Pilas.	1000 etaT/h	etaT	inter. h	Pilas.	1000 etaT/h	etaT	inter. h	Pilas.	1000 etaT/h	etaT	inter. h
	9	8.39	0.84	10.0	10	5.43	14.79	272.5	17	6.17e-05	6.17e-06	10.0
	18	2.51	0.25	10.0	19	1.12	0.11	10.0	20	4.77e-05	4.77e-06	10.0
162	1	35.52	3.55	10.0	2	0.32	0.03	10.0	8	5.81	0.58	10.0
	9	4.04	0.40	10.0	10	4.52	12.33	272.5	17	3.56e-04	3.56e-05	10.0
	18	1.48	0.15	10.0	19	0.82	0.08	10.0	20	2.36e-04	2.36e-05	10.0
163	1	37.85	3.79	10.0	2	1.96	0.20	10.0	8	6.58	0.66	10.0
	9	8.52	0.85	10.0	10	5.45	14.84	272.5	17	6.12e-05	6.12e-06	10.0
	18	2.49	0.25	10.0	19	1.10	0.11	10.0	20	3.55e-05	3.55e-06	10.0
164	1	35.50	3.55	10.0	2	0.27	0.03	10.0	8	5.91	0.59	10.0
	9	4.13	0.41	10.0	10	4.48	12.21	272.5	17	3.57e-04	3.57e-05	10.0
	18	1.47	0.15	10.0	19	0.82	0.08	10.0	20	2.54e-04	2.54e-05	10.0
165	1	37.62	3.76	10.0	2	1.88	0.19	10.0	8	6.61	0.66	10.0
	9	8.54	0.85	10.0	10	5.47	14.91	272.5	17	6.36e-05	6.36e-06	10.0
	18	2.63	0.26	10.0	19	1.10	0.11	10.0	20	5.02e-05	5.02e-06	10.0
166	1	35.73	3.57	10.0	2	0.33	0.03	10.0	8	5.88	0.59	10.0
	9	4.10	0.41	10.0	10	4.46	12.14	272.5	17	3.53e-04	3.53e-05	10.0
	18	1.61	0.16	10.0	19	0.82	0.08	10.0	20	2.39e-04	2.39e-05	10.0
167	1	38.05	3.81	10.0	2	1.98	0.20	10.0	8	6.62	0.66	10.0
	9	8.56	0.86	10.0	10	5.50	14.99	272.5	17	6.32e-05	6.32e-06	10.0
	18	2.61	0.26	10.0	19	1.09	0.11	10.0	20	3.54e-05	3.54e-06	10.0
168	1	35.30	3.53	10.0	2	0.27	0.03	10.0	8	5.86	0.59	10.0
	9	4.08	0.41	10.0	10	4.42	12.06	272.5	17	3.51e-04	3.51e-05	10.0
	18	1.61	0.16	10.0	19	0.81	0.08	10.0	20	2.54e-04	2.54e-05	10.0
169	1	37.42	3.74	10.0	2	1.87	0.19	10.0	8	6.57	0.66	10.0
	9	8.50	0.85	10.0	10	5.41	14.76	272.5	17	6.18e-05	6.18e-06	10.0
	18	2.51	0.25	10.0	19	1.11	0.11	10.0	20	5.03e-05	5.03e-06	10.0
170	1	35.93	3.59	10.0	2	0.34	0.03	10.0	8	5.92	0.59	10.0
	9	4.15	0.41	10.0	10	4.51	12.29	272.5	17	3.59e-04	3.59e-05	10.0
	18	1.48	0.15	10.0	19	0.83	0.08	10.0	20	2.39e-04	2.39e-05	10.0
Cmb		1000 etaT/h										
		47.25										



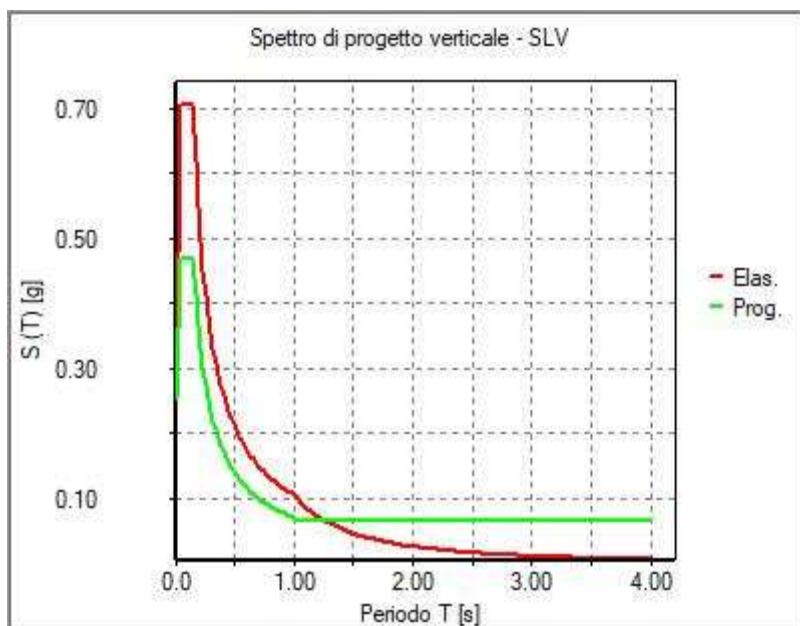
31\_RIS\_SLE\_103\_Comb. SLE (SLD Danno sism.) 103



31\_RIS\_SLE\_167\_Comb. SLE (SLO Operativo sism.) 167



31\_RIS\_SPETTRI\_PROGETTO\_SLV\_O



31\_RIS\_SPETTRI\_PROGETTO\_SLV\_V

## RISULTATI NODALI

### LEGENDA RISULTATI NODALI

Il controllo dei risultati delle analisi condotte, per quanto concerne i nodi strutturali, è possibile in relazione alle tabelle sottoriportate.

Una prima tabella riporta infatti per ogni nodo e per ogni combinazione (o caso di carico) gli spostamenti nodali.

Una seconda tabella riporta per ogni nodo a cui sia associato un vincolo rigido e/o elastico o una fondazione speciale e per ogni combinazione (o caso di carico) i valori delle azioni esercitate dalla struttura sui vincoli (reazioni vincolari cambiate di segno).

Una terza tabella, infine riassume per ogni nodo le sei combinazioni in cui si attingono i valori minimi e massimi della reazione Fz, della reazione Mx e della reazione My.

Nodo	Cmb	Azione X	Azione Y	Azione Z	Azione RX	Azione RY	Azione RZ
		kN	kN	kN	kN m	kN m	kN m
1	1	-1.33	-0.01	-2.83	0.0	0.0	0.0
1	2	-8.88	9.90e-04	-17.65	0.0	0.0	0.0
1	3	-1.02	-9.41e-03	-2.18	0.0	0.0	0.0
1	5	-1.02	-9.41e-03	-2.18	0.0	0.0	0.0
1	6	-6.06	-5.95e-04	-12.06	0.0	0.0	0.0
1	7	-1.02	-9.41e-03	-2.18	0.0	0.0	0.0
1	8	-4.55	-3.24e-03	-9.09	0.0	0.0	0.0
1	9	-1.02	-9.41e-03	-2.18	0.0	0.0	0.0
1	10	-4.04	-4.12e-03	-8.11	0.0	0.0	0.0
1	11	5.30	1.02	-1.79	0.0	0.0	0.0
1	43	16.07	3.30	6.70	0.0	0.0	0.0
1	50	-24.16	-3.31	-22.91	0.0	0.0	0.0
1	75	0.34	0.59	-5.17	0.0	0.0	0.0
1	91	6.52	1.92	-0.38	0.0	0.0	0.0
1	94	-14.61	-1.92	-15.83	0.0	0.0	0.0
1	139	-0.60	0.48	-5.80	0.0	0.0	0.0
1	155	4.17	1.54	-2.10	0.0	0.0	0.0
1	158	-12.26	-1.55	-14.11	0.0	0.0	0.0
6	2	0.12	-0.53	-76.39	-0.47	0.34	-1.49e-03
6	3	-0.04	-0.10	-11.73	-0.10	-0.11	8.60e-05

Nodo	Cmb	Azione X	Azione Y	Azione Z	Azione RX	Azione RY	Azione RZ
6	4	0.14	-0.50	-72.88	-0.44	0.37	-1.52e-03
6	5	-0.04	-0.10	-11.73	-0.10	-0.11	8.60e-05
6	6	0.08	-0.37	-52.49	-0.32	0.21	-9.82e-04
6	7	-0.04	-0.10	-11.73	-0.10	-0.11	8.60e-05
6	8	0.04	-0.29	-40.26	-0.26	0.12	-6.62e-04
6	9	-0.04	-0.10	-11.73	-0.10	-0.11	8.60e-05
6	10	0.03	-0.26	-36.19	-0.23	0.08	-5.55e-04
6	36	0.25	3.32	-48.65	-7.06	0.67	-0.01
6	52	0.16	9.30	-45.36	-20.02	0.43	-0.03
6	87	0.14	1.76	-40.79	-3.97	0.37	-7.17e-03
6	90	-0.08	-2.28	-31.59	3.51	-0.20	6.06e-03
6	95	0.09	5.04	-39.09	-11.08	0.25	-0.02
6	132	0.17	2.56	-52.09	-6.44	0.46	-0.01
6	137	-0.11	-3.08	-20.29	5.98	-0.29	0.01
6	151	0.12	1.32	-39.94	-3.15	0.32	-5.71e-03
6	154	-0.06	-1.85	-32.43	2.69	-0.15	4.60e-03
6	159	0.08	3.87	-38.50	-8.66	0.21	-0.01
13	2	8.93	1.66	-34.28	-21.59	-11.94	-2.13
13	3	0.16	-0.05	-5.15	-3.31	-1.37	0.21
13	5	0.16	-0.05	-5.15	-3.31	-1.37	0.21
13	6	5.97	1.10	-23.54	-14.84	-8.14	-1.39
13	7	0.16	-0.05	-5.15	-3.31	-1.37	0.21
13	8	4.23	0.76	-18.02	-11.38	-6.11	-0.91
13	9	0.16	-0.05	-5.15	-3.31	-1.37	0.21
13	10	3.65	0.64	-16.18	-10.23	-5.43	-0.75
13	56	-16.29	6.55	-28.93	-15.88	7.96	-4.95
13	69	24.23	-5.65	-3.13	-4.60	-19.03	3.56
13	72	-16.94	6.93	-29.24	-15.85	8.16	-5.06
13	74	23.10	-5.74	-7.21	-8.35	-19.82	4.06
13	97	-7.73	3.39	-22.58	-12.82	1.99	-2.94
13	104	15.37	-2.24	-9.62	-7.65	-12.96	1.50
13	105	-8.08	3.52	-22.74	-12.80	2.10	-3.00
13	106	13.92	-2.57	-10.65	-8.69	-13.28	2.01
13	161	-5.22	2.79	-21.17	-12.27	0.33	-2.44
13	168	12.78	-1.61	-11.07	-8.20	-11.27	0.98
13	169	-5.48	2.89	-21.30	-12.25	0.41	-2.49
13	170	11.59	-1.88	-11.91	-9.05	-11.53	1.40
15	2	2.48	-1.12	-7.45	-3.36	-1.06	-2.36
15	3	-0.39	0.18	-1.80	-1.12	-0.16	0.32
15	5	-0.39	0.18	-1.80	-1.12	-0.16	0.32
15	6	1.60	-0.72	-5.21	-2.39	-0.73	-1.53
15	7	-0.39	0.18	-1.80	-1.12	-0.16	0.32
15	8	1.01	-0.45	-4.19	-2.01	-0.56	-0.98
15	9	-0.39	0.18	-1.80	-1.12	-0.16	0.32
15	10	0.81	-0.36	-3.85	-1.88	-0.50	-0.79
15	66	-3.80	2.38	-8.63	-8.08	-0.64	3.09
15	70	-2.47	1.80	-9.16	-8.73	-0.58	1.97
15	71	4.09	-2.52	1.47	4.97	-0.42	-3.55
15	104	-1.19	0.88	-6.55	-5.40	-0.54	0.89
15	105	2.80	-1.59	-1.14	1.64	-0.46	-2.47
15	106	-1.94	1.22	-6.26	-5.05	-0.57	1.55
15	168	-0.73	0.59	-5.95	-4.62	-0.53	0.50
15	169	2.34	-1.31	-1.74	0.86	-0.47	-2.08
15	170	-1.35	0.88	-5.72	-4.33	-0.55	1.05
27	1	0.21	-0.63	-0.11	0.0	0.0	0.0
27	2	-0.33	1.00	-0.30	0.0	0.0	0.0
27	3	0.16	-0.48	-0.08	0.0	0.0	0.0
27	5	0.16	-0.48	-0.08	0.0	0.0	0.0
27	6	-0.20	0.60	-0.21	0.0	0.0	0.0
27	7	0.16	-0.48	-0.08	0.0	0.0	0.0
27	8	-0.09	0.27	-0.17	0.0	0.0	0.0
27	9	0.16	-0.48	-0.08	0.0	0.0	0.0
27	10	-0.05	0.17	-0.16	0.0	0.0	0.0
27	11	0.59	-1.25	-0.16	0.0	0.0	0.0
27	69	0.93	-2.82	-0.02	0.0	0.0	0.0
27	72	-1.04	3.15	-0.30	0.0	0.0	0.0
27	75	0.23	-0.46	-0.16	0.0	0.0	0.0
27	104	0.44	-1.36	-0.09	0.0	0.0	0.0
27	105	-0.55	1.69	-0.23	0.0	0.0	0.0
27	139	0.19	-0.36	-0.16	0.0	0.0	0.0
27	168	0.34	-1.04	-0.10	0.0	0.0	0.0



Nodo	Cmb	Azione X	Azione Y	Azione Z	Azione RX	Azione RY	Azione RZ
27	169	-0.45	1.37	-0.22	0.0	0.0	0.0
30	1	0.20	0.61	-0.08	0.0	0.0	0.0
30	2	-0.32	-0.98	-0.12	0.0	0.0	0.0
30	3	0.15	0.47	-0.06	0.0	0.0	0.0
30	5	0.15	0.47	-0.06	0.0	0.0	0.0
30	6	-0.19	-0.59	-0.09	0.0	0.0	0.0
30	7	0.15	0.47	-0.06	0.0	0.0	0.0
30	8	-0.09	-0.27	-0.08	0.0	0.0	0.0
30	9	0.15	0.47	-0.06	0.0	0.0	0.0
30	10	-0.05	-0.17	-0.08	0.0	0.0	0.0
30	11	0.57	1.29	0.02	0.0	0.0	0.0
30	67	-0.26	-1.13	0.07	0.0	0.0	0.0
30	74	0.16	0.79	-0.22	0.0	0.0	0.0
30	75	0.23	0.48	-0.03	0.0	0.0	0.0
30	103	-0.21	-0.81	-2.40e-05	0.0	0.0	0.0
30	106	0.11	0.47	-0.15	0.0	0.0	0.0
30	139	0.18	0.38	-0.04	0.0	0.0	0.0
30	167	-0.17	-0.65	-0.02	0.0	0.0	0.0
30	170	0.07	0.31	-0.14	0.0	0.0	0.0
32	1	0.39	-0.51	-0.10	0.0	0.0	0.0
32	2	-0.62	0.81	-0.25	0.0	0.0	0.0
32	3	0.30	-0.39	-0.08	0.0	0.0	0.0
32	5	0.30	-0.39	-0.08	0.0	0.0	0.0
32	6	-0.37	0.49	-0.18	0.0	0.0	0.0
32	7	0.30	-0.39	-0.08	0.0	0.0	0.0
32	8	-0.17	0.22	-0.15	0.0	0.0	0.0
32	9	0.30	-0.39	-0.08	0.0	0.0	0.0
32	10	-0.10	0.13	-0.14	0.0	0.0	0.0
32	11	0.99	-0.76	-0.11	0.0	0.0	0.0
32	53	1.37	-2.74	-0.06	0.0	0.0	0.0
32	56	-1.58	3.01	-0.22	0.0	0.0	0.0
32	75	0.39	-0.24	-0.13	0.0	0.0	0.0
32	96	0.64	-1.35	-0.10	0.0	0.0	0.0
32	97	-0.84	1.61	-0.18	0.0	0.0	0.0
32	139	0.31	-0.19	-0.13	0.0	0.0	0.0
32	160	0.49	-1.03	-0.11	0.0	0.0	0.0
32	161	-0.69	1.30	-0.17	0.0	0.0	0.0
36	1	0.42	0.52	-0.09	0.0	0.0	0.0
36	2	-0.66	-0.84	-0.16	0.0	0.0	0.0
36	3	0.32	0.40	-0.07	0.0	0.0	0.0
36	5	0.32	0.40	-0.07	0.0	0.0	0.0
36	6	-0.40	-0.51	-0.12	0.0	0.0	0.0
36	7	0.32	0.40	-0.07	0.0	0.0	0.0
36	8	-0.18	-0.24	-0.10	0.0	0.0	0.0
36	9	0.32	0.40	-0.07	0.0	0.0	0.0
36	10	-0.11	-0.15	-0.10	0.0	0.0	0.0
36	11	1.06	0.92	-0.02	0.0	0.0	0.0
36	67	-0.25	-1.14	-0.01	0.0	0.0	0.0
36	74	0.03	0.85	-0.18	0.0	0.0	0.0
36	75	0.42	0.33	-0.06	0.0	0.0	0.0
36	103	-0.27	-0.76	-0.05	0.0	0.0	0.0
36	106	0.05	0.47	-0.14	0.0	0.0	0.0
36	139	0.33	0.25	-0.07	0.0	0.0	0.0
36	151	0.50	0.44	-0.06	0.0	0.0	0.0
36	154	-0.72	-0.74	-0.13	0.0	0.0	0.0
38	1	0.46	-8.97e-03	-0.09	0.0	0.0	0.0
38	2	-0.73	-4.13e-04	-0.21	0.0	0.0	0.0
38	3	0.36	-6.90e-03	-0.07	0.0	0.0	0.0
38	5	0.36	-6.90e-03	-0.07	0.0	0.0	0.0
38	6	-0.44	-1.19e-03	-0.15	0.0	0.0	0.0
38	7	0.36	-6.90e-03	-0.07	0.0	0.0	0.0
38	8	-0.20	-2.91e-03	-0.13	0.0	0.0	0.0
38	9	0.36	-6.90e-03	-0.07	0.0	0.0	0.0
38	10	-0.12	-3.48e-03	-0.12	0.0	0.0	0.0
38	11	0.89	0.23	-0.07	0.0	0.0	0.0
38	29	1.48	-0.18	-0.06	0.0	0.0	0.0
38	32	-1.72	0.18	-0.18	0.0	0.0	0.0
38	75	0.35	0.10	-0.10	0.0	0.0	0.0
38	84	0.68	-0.09	-0.09	0.0	0.0	0.0
38	85	-0.92	0.08	-0.15	0.0	0.0	0.0
38	139	0.27	0.08	-0.10	0.0	0.0	0.0

Nodo	Cmb	Azione X	Azione Y	Azione Z	Azione RX	Azione RY	Azione RZ
38	148	0.53	-0.07	-0.10	0.0	0.0	0.0
38	149	-0.77	0.06	-0.14	0.0	0.0	0.0
Nodo		Azione X	Azione Y	Azione Z	Azione RX	Azione RY	Azione RZ
		-24.16	-5.74	-76.39	-21.59	-19.82	-5.06
		24.23	9.30	6.70	5.98	8.16	4.06

Nodo	Cmb	Azione X	Azione Y	Azione Z	Azione RX	Azione RY	Azione RZ
		kN	kN	kN	kN m	kN m	kN m
1	50	-24.16	-3.31	-22.91	0.0	0.0	0.0
	43	16.07	3.30	6.70	0.0	0.0	0.0
	1	-1.33	-0.01	-2.83	0.0	0.0	0.0
	1	-1.33	-0.01	-2.83	0.0	0.0	0.0
	1	-1.33	-0.01	-2.83	0.0	0.0	0.0
	1	-1.33	-0.01	-2.83	0.0	0.0	0.0
6	2	0.12	-0.53	-76.39	-0.47	0.34	-1.49e-03
	3	-0.04	-0.10	-11.73	-0.10	-0.11	8.60e-05
	52	0.16	9.30	-45.36	-20.02	0.43	-0.03
	57	-0.10	-9.82	-27.02	19.55	-0.26	0.03
	41	-0.19	-3.84	-23.73	6.59	-0.50	0.01
	36	0.25	3.32	-48.65	-7.06	0.67	-0.01
13	2	8.93	1.66	-34.28	-21.59	-11.94	-2.13
	69	24.23	-5.65	-3.13	-4.60	-19.03	3.56
	2	8.93	1.66	-34.28	-21.59	-11.94	-2.13
	3	0.16	-0.05	-5.15	-3.31	-1.37	0.21
	74	23.10	-5.74	-7.21	-8.35	-19.82	4.06
	67	-15.81	7.02	-25.16	-12.10	8.96	-5.56
15	70	-2.47	1.80	-9.16	-8.73	-0.58	1.97
	71	4.09	-2.52	1.47	4.97	-0.42	-3.55
	70	-2.47	1.80	-9.16	-8.73	-0.58	1.97
	71	4.09	-2.52	1.47	4.97	-0.42	-3.55
	2	2.48	-1.12	-7.45	-3.36	-1.06	-2.36
	3	-0.39	0.18	-1.80	-1.12	-0.16	0.32
27	2	-0.33	1.00	-0.30	0.0	0.0	0.0
	69	0.93	-2.82	-0.02	0.0	0.0	0.0
	1	0.21	-0.63	-0.11	0.0	0.0	0.0
	1	0.21	-0.63	-0.11	0.0	0.0	0.0
	1	0.21	-0.63	-0.11	0.0	0.0	0.0
	1	0.21	-0.63	-0.11	0.0	0.0	0.0
30	74	0.16	0.79	-0.22	0.0	0.0	0.0
	67	-0.26	-1.13	0.07	0.0	0.0	0.0
	1	0.20	0.61	-0.08	0.0	0.0	0.0
	1	0.20	0.61	-0.08	0.0	0.0	0.0
	1	0.20	0.61	-0.08	0.0	0.0	0.0
	1	0.20	0.61	-0.08	0.0	0.0	0.0
32	2	-0.62	0.81	-0.25	0.0	0.0	0.0
	53	1.37	-2.74	-0.06	0.0	0.0	0.0
	1	0.39	-0.51	-0.10	0.0	0.0	0.0
	1	0.39	-0.51	-0.10	0.0	0.0	0.0
	1	0.39	-0.51	-0.10	0.0	0.0	0.0
	1	0.39	-0.51	-0.10	0.0	0.0	0.0
36	74	0.03	0.85	-0.18	0.0	0.0	0.0
	67	-0.25	-1.14	-0.01	0.0	0.0	0.0
	1	0.42	0.52	-0.09	0.0	0.0	0.0
	1	0.42	0.52	-0.09	0.0	0.0	0.0
	1	0.42	0.52	-0.09	0.0	0.0	0.0
	1	0.42	0.52	-0.09	0.0	0.0	0.0
38	2	-0.73	-4.13e-04	-0.21	0.0	0.0	0.0
	29	1.48	-0.18	-0.06	0.0	0.0	0.0
	1	0.46	-8.97e-03	-0.09	0.0	0.0	0.0
	1	0.46	-8.97e-03	-0.09	0.0	0.0	0.0
	1	0.46	-8.97e-03	-0.09	0.0	0.0	0.0
	1	0.46	-8.97e-03	-0.09	0.0	0.0	0.0

# RISULTATI OPERE DI FONDAZIONE

## LEGENDA RISULTATI OPERE DI FONDAZIONE

Il controllo dei risultati delle analisi condotte, per quanto concerne le opere di fondazione, è possibile in relazione alle tabelle sotto riportate.

La prima tabella è riferita alle fondazioni tipo palo e plinto su pali.

Per questo tipo di fondazione vengono riportate le sei componenti di sollecitazione (esprese nel riferimento globale della struttura) per ogni palo componente l'opera.

In particolare viene riportato:

<b>Nodo</b>	numero del nodo a cui è applicato il plinto
<b>Tipo</b>	codice corrispondente al nome assegnato al tipo di plinto di fondazione: 3) palo singolo ( <i>PALO</i> ) 4) plinto su palo 5) plinto su due pali ( <i>PL.2P</i> ) 6) plinto su tre pali ( <i>PL.3P</i> ) 7) plinto su quattro pali ( <i>PL.4P</i> ) 8) plinto rettangolare su cinque pali ( <i>PL.5P.R</i> ) 9) plinto pentagonale su cinque pali ( <i>PL.5P</i> ) 10) plinto su sei pali ( <i>PL.6P</i> )
<b>Palo</b>	numero del palo
<b>Comb.</b>	combinazione di carico in cui si verificano le sei componenti di sollecitazione.
<b>Quota</b>	quota assoluta della sezione del palo per cui si riportano le sei componenti di sollecitazione.

L'azione  $F_z$  ( corrispondente allo sforzo normale nel palo) è costante poiché il peso del palo stesso non è considerato nella modellazione.

La seconda tabella è riferita alle fondazioni tipo plinto su suolo elastico.

Per questo tipo di fondazione vengono riportate le pressioni nei quattro vertici dell'impronta sul terreno.

In particolare viene riportato:

<b>Nodo</b>	numero del nodo a cui è applicato il plinto
<b>Tipo</b>	Codice identificativo del nome assegnato al plinto
<b>area</b>	area dell'impronta del plinto
<b>Wink O      Wink V</b>	coefficienti di Winkler (orizzontale e verticale) adottati
<b>Comb</b>	Combinazione di carico in cui si verificano i valori riportati
<b>Pt (P1 P2 P3 P4)</b>	valori di pressione nei vertici

La terza tabella è riferita alle fondazioni tipo platea su suolo elastico.

Per questo tipo di fondazione vengono riportate le pressioni in ogni vertice (nodo) degli elementi costituenti la platea.

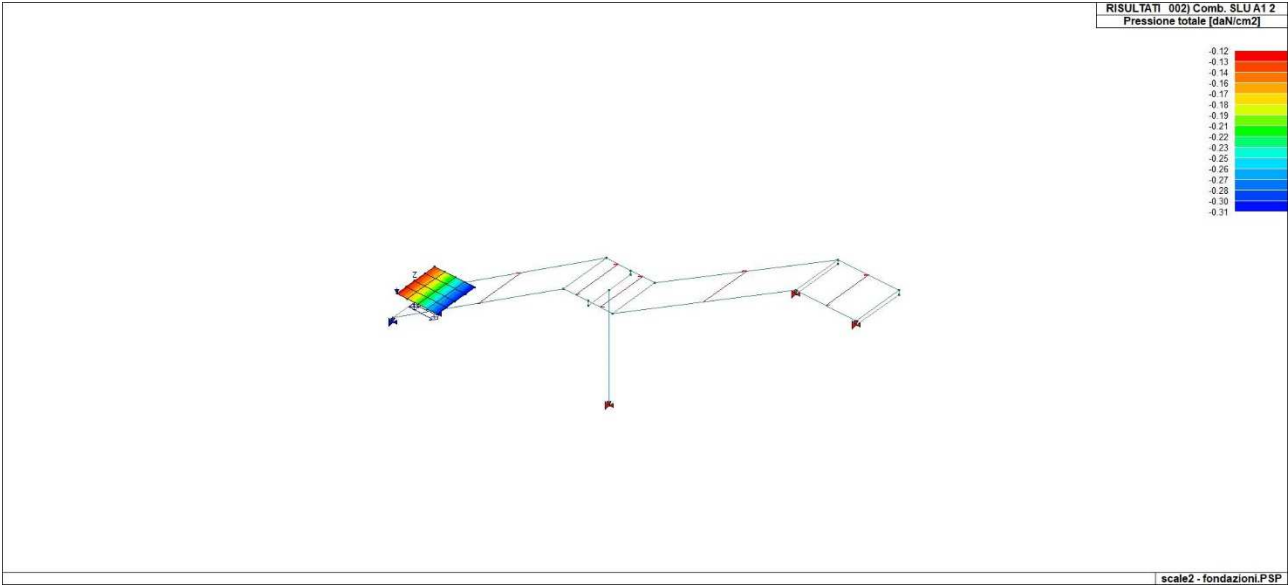
La quarta tabella è riferita alle fondazioni tipo trave su suolo elastico.

Per questo tipo di fondazione vengono riportate le pressioni alle estremità dell'elemento e la massima (in valore assoluto) pressione lungo lo sviluppo dell'elemento.

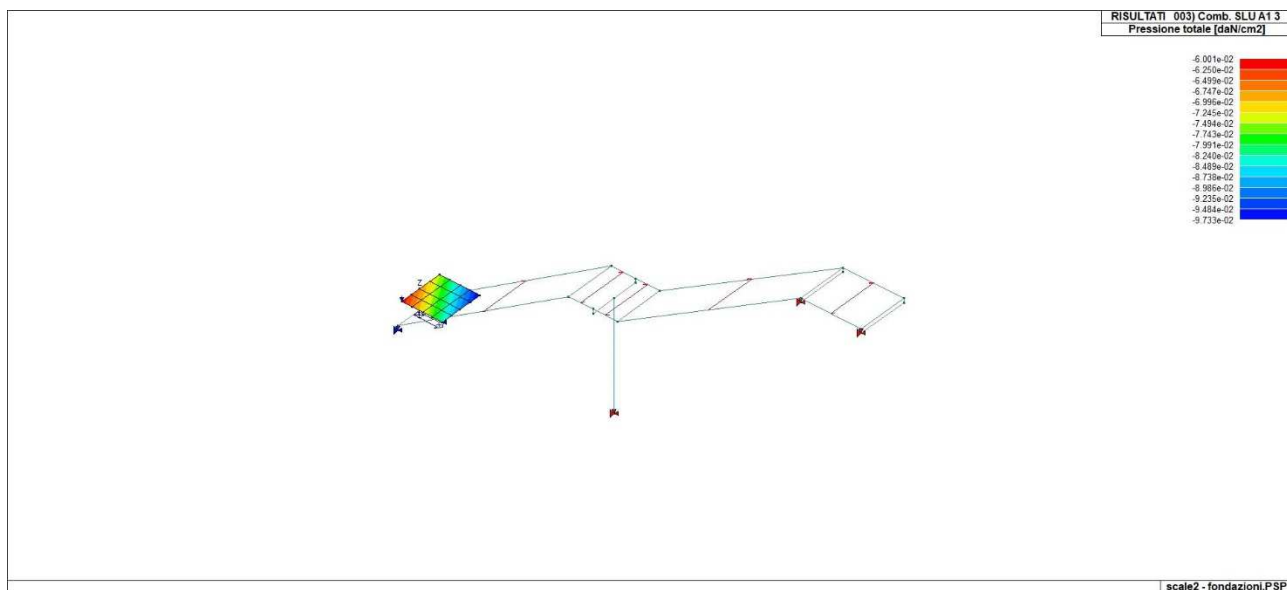
Vengono inoltre riportati, con funzione statistica, i valori massimo e minimo delle pressioni che compaiono nella tabella.

Nodo (G)	Pt 1/12	Pt 2/13	Pt 3...	Pt 4...							
	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2
2	-0.22	-0.16	-0.13	-0.12	-0.19	-0.16	-0.15				
23	-0.17	-0.12	-0.10	-0.10	-0.18	-0.14	-0.13				
24	-0.26	-0.19	-0.16	-0.15	-0.31	-0.23	-0.21				

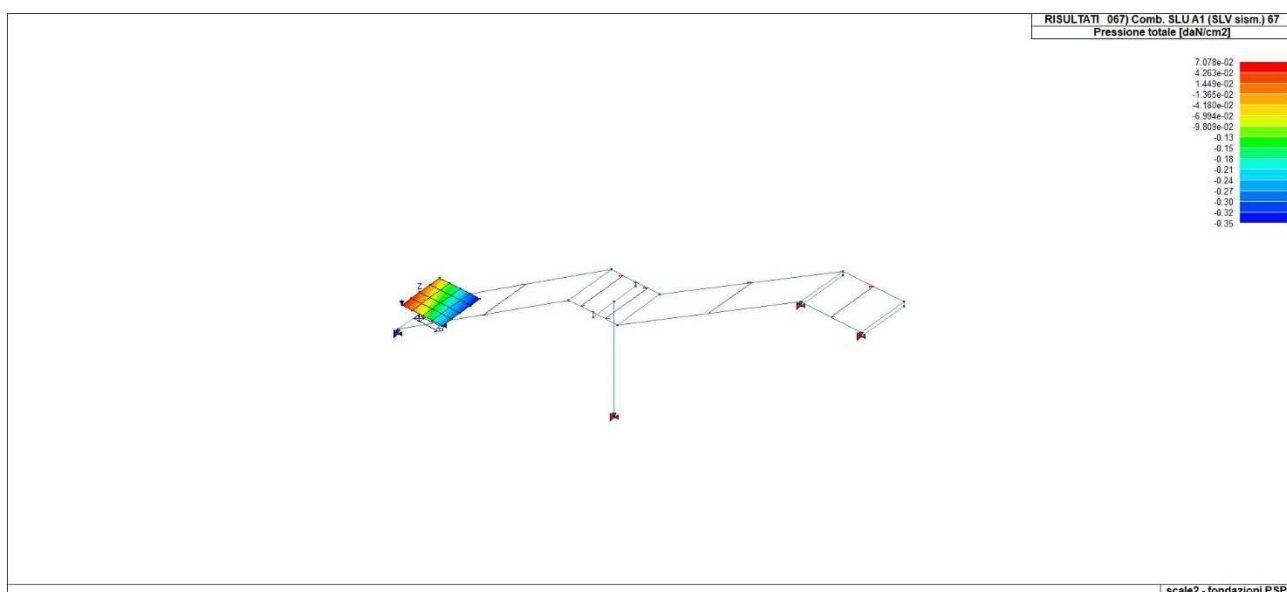
Nodo (G)	Pt 1/12	Pt 2/13	Pt 3...	Pt 4...							
25	-0.12	-0.09	-0.08	-0.08	-0.21	-0.14	-0.13				
26	-0.22	-0.16	-0.14	-0.13	-0.24	-0.19	-0.17				
27	-0.30	-0.21	-0.17	-0.16	-0.30	-0.23	-0.22				
28	-0.13	-0.10	-0.09	-0.09	-0.17	-0.13	-0.12				
29	-0.31	-0.22	-0.18	-0.17	-0.39	-0.28	-0.26				
30	-0.12	-0.09	-0.08	-0.08	-0.22	-0.15	-0.14				
31	-0.22	-0.15	-0.13	-0.12	-0.19	-0.15	-0.15				
32	-0.25	-0.18	-0.15	-0.14	-0.22	-0.18	-0.17				
33	-0.26	-0.18	-0.15	-0.14	-0.24	-0.19	-0.18				
34	-0.30	-0.21	-0.18	-0.16	-0.32	-0.24	-0.23				
35	-0.17	-0.12	-0.11	-0.10	-0.17	-0.14	-0.13				
36	-0.16	-0.12	-0.10	-0.10	-0.18	-0.14	-0.13				
37	-0.12	-0.09	-0.08	-0.08	-0.19	-0.14	-0.13				
38	-0.21	-0.15	-0.13	-0.12	-0.18	-0.15	-0.14				
39	-0.26	-0.18	-0.15	-0.14	-0.26	-0.20	-0.19				
40	-0.30	-0.22	-0.18	-0.16	-0.34	-0.26	-0.24				
41	-0.17	-0.12	-0.11	-0.11	-0.17	-0.14	-0.13				
42	-0.13	-0.09	-0.09	-0.08	-0.17	-0.13	-0.12				
43	-0.22	-0.16	-0.14	-0.13	-0.22	-0.17	-0.16				
44	-0.26	-0.19	-0.16	-0.15	-0.29	-0.22	-0.20				
45	-0.31	-0.22	-0.18	-0.17	-0.36	-0.27	-0.25				
46	-0.17	-0.13	-0.11	-0.11	-0.18	-0.14	-0.14				
Nodo (G)	Pt 1/12	Pt 2/13	Pt 3...	Pt 4...							
	-0.39										
	-0.08										



46\_RIS\_PRESSIONI\_002\_Comb. SLU A1 2



46\_RIS\_PRESSIONI\_003\_Comb. SLU A1 3



46\_RIS\_PRESSIONI\_067\_Comb. SLU A1 (SLV sism.) 67

## RISULTATI ELEMENTI TIPO TRAVE

### LEGENDA RISULTATI ELEMENTI TIPO TRAVE

Il controllo dei risultati delle analisi condotte, per quanto concerne gli elementi tipo trave, è possibile in relazione alle tabelle sotto riportate.

Gli elementi vengono suddivisi in relazione alle proprietà in elementi:

- tipo **pilastro**
- tipo **trave in elevazione**
- tipo **trave in fondazione**

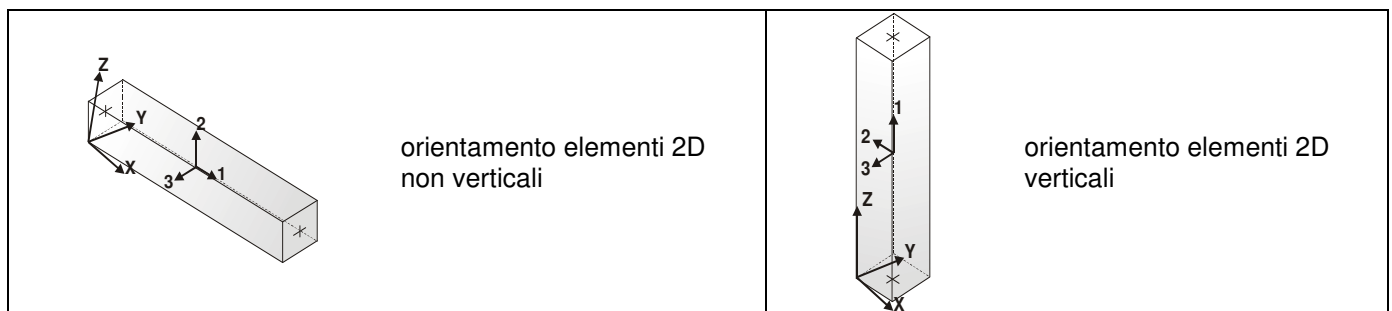
Per ogni elemento e per ogni combinazione (o caso di carico) vengono riportati i risultati più significativi.

Per gli elementi tipo *pilastro* sono riportati in tabella i seguenti valori:

<b>Pilas.</b>	numero dell'elemento pilastro
<b>Cmb</b>	combinazione in cui si verificano i valori riportati
<b>M3 mx/mn</b>	momento flettente in campata M3 max (prima riga) / min (seconda riga)
<b>M2 mx/mn</b>	momento flettente in campata M2 max (prima riga) / min (seconda riga)
<b>D2/D3</b>	freccia massima in direzione 2 (prima riga) / direzione 3 (seconda riga)
<b>Q2/Q3</b>	carico totale in direzione 2 (prima riga) / direzione 3 (seconda riga)
<b>Pos.</b>	ascissa del punto iniziale e finale dell'elemento
<b>N, V2, ecc..</b>	sei componenti di sollecitazione al piede ed in sommità dell'elemento

Per gli elementi tipo *trave in elevazione* sono riportati, oltre al numero dell'elemento, i medesimi risultati visti per i pilastri.

Per gli elementi tipo *trave in fondazione* (trave f.) sono riportati, oltre al numero dell'elemento, i medesimi risultati visti per i pilastri e la massima pressione sul terreno.



Pilas.	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		kN m	kN m	m	kN	cm	kN	kN	kN	kN m	kN m	kN m
1	1	0.0	0.0	-2.77e-05	0.0	0.0	-2.83	-1.33	-0.01	0.0	0.0	0.0
		-0.13	-1.22e-03	-2.98e-05	0.0	10.0	-2.79	-1.33	-0.01	0.0	-1.22e-03	-0.13
1	2	0.0	9.90e-05	-1.88e-04	0.0	0.0	-17.65	-8.88	9.90e-04	0.0	0.0	0.0
		-0.89	0.0	-2.44e-04	0.0	10.0	-17.61	-8.88	9.90e-04	0.0	9.90e-05	-0.89
1	3	0.0	0.0	-2.13e-05	0.0	0.0	-2.18	-1.02	-9.41e-03	0.0	0.0	0.0
		-0.10	-9.41e-04	-2.30e-05	0.0	10.0	-2.15	-1.02	-9.41e-03	0.0	-9.41e-04	-0.10
1	4	0.0	3.81e-04	-1.82e-04	0.0	0.0	-17.00	-8.57	3.81e-03	0.0	0.0	0.0
		-0.86	0.0	-2.37e-04	0.0	10.0	-16.96	-8.57	3.81e-03	0.0	3.81e-04	-0.86
1	5	0.0	0.0	-2.13e-05	0.0	0.0	-2.18	-1.02	-9.41e-03	0.0	0.0	0.0
		-0.10	-9.41e-04	-2.30e-05	0.0	10.0	-2.15	-1.02	-9.41e-03	0.0	-9.41e-04	-0.10
1	6	0.0	0.0	-1.28e-04	0.0	0.0	-12.06	-6.06	-5.95e-04	0.0	0.0	0.0
		-0.61	-5.95e-05	-1.65e-04	0.0	10.0	-12.02	-6.06	-5.95e-04	0.0	-5.95e-05	-0.61
1	7	0.0	0.0	-2.13e-05	0.0	0.0	-2.18	-1.02	-9.41e-03	0.0	0.0	0.0
		-0.10	-9.41e-04	-2.30e-05	0.0	10.0	-2.15	-1.02	-9.41e-03	0.0	-9.41e-04	-0.10
1	8	0.0	0.0	-9.63e-05	0.0	0.0	-9.09	-4.55	-3.24e-03	0.0	0.0	0.0
		-0.45	-3.24e-04	-1.23e-04	0.0	10.0	-9.06	-4.55	-3.24e-03	0.0	-3.24e-04	-0.45
1	9	0.0	0.0	-2.13e-05	0.0	0.0	-2.18	-1.02	-9.41e-03	0.0	0.0	0.0
		-0.10	-9.41e-04	-2.30e-05	0.0	10.0	-2.15	-1.02	-9.41e-03	0.0	-9.41e-04	-0.10
1	10	0.0	0.0	-8.56e-05	0.0	0.0	-8.11	-4.04	-4.12e-03	0.0	0.0	0.0
		-0.40	-4.12e-04	-1.08e-04	0.0	10.0	-8.07	-4.04	-4.12e-03	0.0	-4.12e-04	-0.40
1	43	1.61	0.33	1.35e-04	0.0	0.0	6.70	16.07	3.30	0.0	0.0	0.0
		0.0	0.0	-8.00e-03	0.0	10.0	6.73	16.07	3.30	0.0	0.33	1.61
1	50	0.0	0.0	-3.06e-04	0.0	0.0	-22.91	-24.16	-3.31	0.0	0.0	0.0
		-2.42	-0.33	7.78e-03	0.0	10.0	-22.88	-24.16	-3.31	0.0	-0.33	-2.42
1	68	1.46	0.34	1.31e-04	0.0	0.0	5.39	14.59	3.37	0.0	0.0	0.0
		0.0	0.0	-8.14e-03	0.0	10.0	5.42	14.59	3.37	0.0	0.34	1.46
1	73	0.0	0.0	-3.02e-04	0.0	0.0	-21.60	-22.67	-3.38	0.0	0.0	0.0
		-2.27	-0.34	7.92e-03	0.0	10.0	-21.57	-22.67	-3.38	0.0	-0.34	-2.27
1	91	0.65	0.19	3.39e-05	0.0	0.0	-0.38	6.52	1.92	0.0	0.0	0.0
		0.0	0.0	-4.65e-03	0.0	10.0	-0.35	6.52	1.92	0.0	0.19	0.65
1	94	0.0	0.0	-2.05e-04	0.0	0.0	-15.83	-14.61	-1.92	0.0	0.0	0.0
		-1.46	-0.19	4.43e-03	0.0	10.0	-15.80	-14.61	-1.92	0.0	-0.19	-1.46

Pilas.	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
1	103	0.64	0.20	3.53e-05	0.0	0.0	-0.40	6.44	1.95	0.0	0.0	0.0
		0.0	0.0	-4.72e-03	0.0	10.0	-0.37	6.44	1.95	0.0	0.20	0.64
1	106	0.0	0.0	-2.06e-04	0.0	0.0	-15.81	-14.53	-1.96	0.0	0.0	0.0
		-1.45	-0.20	4.51e-03	0.0	10.0	-15.78	-14.53	-1.96	0.0	-0.20	-1.45
1	155	0.42	0.15	7.20e-06	0.0	0.0	-2.10	4.17	1.54	0.0	0.0	0.0
		0.0	0.0	-3.74e-03	0.0	10.0	-2.07	4.17	1.54	0.0	0.15	0.42
1	158	0.0	0.0	-1.78e-04	0.0	0.0	-14.11	-12.26	-1.55	0.0	0.0	0.0
		-1.23	-0.16	3.53e-03	0.0	10.0	-14.08	-12.26	-1.55	0.0	-0.16	-1.23
1	167	0.41	0.16	8.15e-06	0.0	0.0	-2.12	4.10	1.57	0.0	0.0	0.0
		0.0	0.0	-3.81e-03	0.0	10.0	-2.09	4.10	1.57	0.0	0.16	0.41
1	170	0.0	0.0	-1.79e-04	0.0	0.0	-14.09	-12.19	-1.58	0.0	0.0	0.0
		-1.22	-0.16	3.59e-03	0.0	10.0	-14.06	-12.19	-1.58	0.0	-0.16	-1.22
2	1	0.31	-6.03e-03	3.02e-05	0.0	0.0	-0.99	-1.68	0.02	-0.01	-8.32e-03	0.31
		0.14	-8.32e-03	1.69e-05	0.0	10.0	-0.95	-1.68	0.02	-0.01	-6.03e-03	0.14
2	2	1.98	0.03	1.84e-04	0.0	0.0	-13.90	2.66	0.02	0.04	0.03	1.72
		1.72	0.03	9.97e-06	0.0	10.0	-13.85	2.66	0.02	0.04	0.03	1.98
2	3	0.24	-4.64e-03	2.33e-05	0.0	0.0	-0.76	-1.29	0.02	-8.88e-03	-6.40e-03	0.24
		0.11	-6.40e-03	1.30e-05	0.0	10.0	-0.73	-1.29	0.02	-8.88e-03	-4.64e-03	0.11
2	4	1.95	0.03	1.77e-04	0.0	0.0	-13.67	3.04	0.02	0.04	0.03	1.65
		1.65	0.03	6.06e-06	0.0	10.0	-13.63	3.04	0.02	0.04	0.03	1.95
2	5	0.24	-4.64e-03	2.33e-05	0.0	0.0	-0.76	-1.29	0.02	-8.88e-03	-6.40e-03	0.24
		0.11	-6.40e-03	1.30e-05	0.0	10.0	-0.73	-1.29	0.02	-8.88e-03	-4.64e-03	0.11
2	6	1.34	0.02	1.26e-04	0.0	0.0	-9.37	1.60	0.02	0.02	0.02	1.18
		1.18	0.02	8.39e-06	0.0	10.0	-9.33	1.60	0.02	0.02	0.02	1.34
2	7	0.24	-4.64e-03	2.33e-05	0.0	0.0	-0.76	-1.29	0.02	-8.88e-03	-6.40e-03	0.24
		0.11	-6.40e-03	1.30e-05	0.0	10.0	-0.73	-1.29	0.02	-8.88e-03	-4.64e-03	0.11
2	8	0.97	0.01	9.52e-05	0.0	0.0	-6.79	0.73	0.02	0.01	0.01	0.89
		0.89	0.01	9.78e-06	0.0	10.0	-6.75	0.73	0.02	0.01	0.01	0.97
2	9	0.24	-4.64e-03	2.33e-05	0.0	0.0	-0.76	-1.29	0.02	-8.88e-03	-6.40e-03	0.24
		0.11	-6.40e-03	1.30e-05	0.0	10.0	-0.73	-1.29	0.02	-8.88e-03	-4.64e-03	0.11
2	10	0.84	0.01	8.49e-05	0.0	0.0	-5.92	0.44	0.02	0.01	8.94e-03	0.80
		0.80	8.94e-03	1.02e-05	0.0	10.0	-5.89	0.44	0.02	0.01	0.01	0.84
2	29	0.62	-0.24	4.88e-05	0.0	0.0	1.88	-7.59	0.67	-0.35	-0.27	0.62
		-0.23	-0.27	-6.99e-06	0.0	10.0	1.92	-7.59	0.67	-0.35	-0.24	-0.23
2	32	1.92	0.29	1.21e-04	0.0	0.0	-13.73	8.47	-0.63	0.37	0.29	0.98
		0.98	0.26	2.75e-05	0.0	10.0	-13.70	8.47	-0.63	0.37	0.26	1.92
2	68	3.51	1.08	3.41e-04	0.0	0.0	-9.72	2.07	-2.48	1.35	1.08	3.42
		3.42	0.96	9.36e-05	0.0	10.0	-9.69	2.07	-2.48	1.35	0.96	3.51
2	70	-1.60	-0.91	-1.40e-04	0.0	0.0	-0.69	-4.12	2.49	-1.29	-1.03	-1.60
		-2.04	-1.03	-7.13e-05	0.0	10.0	-0.66	-4.12	2.49	-1.29	-0.91	-2.04
2	71	3.73	1.05	3.10e-04	0.0	0.0	-11.16	5.00	-2.46	1.32	1.05	3.20
		3.20	0.93	9.18e-05	0.0	10.0	-11.12	5.00	-2.46	1.32	0.93	3.73
2	73	-1.82	-0.94	-1.71e-04	0.0	0.0	-2.13	-1.18	2.51	-1.33	-1.06	-1.82
		-1.82	-1.06	-7.32e-05	0.0	10.0	-2.10	-1.18	2.51	-1.33	-0.94	-1.82
2	84	0.68	-0.13	6.72e-05	0.0	0.0	-2.18	-3.57	0.31	-0.18	-0.14	0.68
		0.26	-0.14	0.0	0.0	10.0	-2.15	-3.57	0.31	-0.18	-0.13	0.26
2	85	1.43	0.16	1.03e-04	0.0	0.0	-9.67	4.45	-0.27	0.20	0.16	0.92
		0.92	0.15	2.01e-05	0.0	10.0	-9.63	4.45	-0.27	0.20	0.15	1.43
2	103	2.33	0.59	2.23e-04	0.0	0.0	-7.52	1.14	-1.09	0.74	0.59	2.27
		2.27	0.53	5.61e-05	0.0	10.0	-7.49	1.14	-1.09	0.74	0.53	2.33
2	104	-0.50	-0.50	-4.10e-05	0.0	0.0	-2.56	-2.30	1.10	-0.71	-0.56	-0.50
		-0.72	-0.56	-3.36e-05	0.0	10.0	-2.53	-2.30	1.10	-0.71	-0.50	-0.72
2	105	2.41	0.58	2.11e-04	0.0	0.0	-9.29	3.18	-1.07	0.73	0.58	2.10
		2.10	0.52	5.41e-05	0.0	10.0	-9.25	3.18	-1.07	0.73	0.52	2.41
2	106	-0.64	-0.51	-5.35e-05	0.0	0.0	-4.33	-0.25	1.13	-0.72	-0.57	-0.66
		-0.66	-0.57	-3.56e-05	0.0	10.0	-4.30	-0.25	1.13	-0.72	-0.51	-0.64
2	148	0.72	-0.10	7.20e-05	0.0	0.0	-2.88	-2.83	0.25	-0.14	-0.11	0.72
		0.39	-0.11	2.68e-06	0.0	10.0	-2.85	-2.83	0.25	-0.14	-0.10	0.39
2	149	1.30	0.13	9.78e-05	0.0	0.0	-8.97	3.71	-0.21	0.16	0.13	0.88
		0.88	0.12	1.78e-05	0.0	10.0	-8.93	3.71	-0.21	0.16	0.12	1.30
2	167	1.99	0.46	1.93e-04	0.0	0.0	-7.12	0.95	-0.87	0.58	0.46	1.94
		1.94	0.41	4.59e-05	0.0	10.0	-7.09	0.95	-0.87	0.58	0.41	1.99
2	168	-0.20	-0.38	-1.26e-05	0.0	0.0	-3.27	-1.74	0.88	-0.55	-0.43	-0.20
		-0.37	-0.43	-2.37e-05	0.0	10.0	-3.24	-1.74	0.88	-0.55	-0.38	-0.37
2	169	2.06	0.45	1.82e-04	0.0	0.0	-8.58	2.62	-0.85	0.57	0.45	1.80
		1.80	0.41	4.42e-05	0.0	10.0	-8.54	2.62	-0.85	0.57	0.41	2.06
2	170	-0.30	-0.39	-2.29e-05	0.0	0.0	-4.73	-0.06	0.90	-0.56	-0.44	-0.34
		-0.34	-0.44	-2.54e-05	0.0	10.0	-4.69	-0.06	0.90	-0.56	-0.39	-0.30
8	1	8.79e-03	-0.02	0.0	0.0	0.0	-6.43	0.10	0.76	-0.07	-0.10	-1.01e-03
		-1.01e-03	-0.10	-3.09e-05	0.0	10.0	-6.43	0.10	0.76	-0.07	-0.02	8.79e-03
8	2	0.05	-0.11	-9.92e-06	0.0	0.0	-35.84	0.48	4.30	-0.28	-0.54	5.54e-04

Pilas.	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		5.54e-04	-0.54	-5.96e-05	0.0	10.0	-35.84	0.48	4.30	-0.28	-0.11	0.05
8	3	6.76e-03	-0.02	0.0	0.0	0.0	-4.95	0.08	0.59	-0.06	-0.07	-7.79e-04
		-7.79e-04	-0.07	-2.37e-05	0.0	10.0	-4.95	0.08	0.59	-0.06	-0.02	6.76e-03
8	5	6.76e-03	-0.02	0.0	0.0	0.0	-4.95	0.08	0.59	-0.06	-0.07	-7.79e-04
		-7.79e-04	-0.07	-2.37e-05	0.0	10.0	-4.95	0.08	0.59	-0.06	-0.02	6.76e-03
8	6	0.03	-0.07	-6.71e-06	0.0	0.0	-24.56	0.33	2.94	-0.20	-0.37	2.65e-04
		2.65e-04	-0.37	-4.29e-05	0.0	10.0	-24.56	0.33	2.94	-0.20	-0.07	0.03
8	7	6.76e-03	-0.02	0.0	0.0	0.0	-4.95	0.08	0.59	-0.06	-0.07	-7.79e-04
		-7.79e-04	-0.07	-2.37e-05	0.0	10.0	-4.95	0.08	0.59	-0.06	-0.02	6.76e-03
8	8	0.03	-0.06	-4.92e-06	0.0	0.0	-18.67	0.25	2.24	-0.15	-0.28	-4.81e-05
		-4.81e-05	-0.28	-3.71e-05	0.0	10.0	-18.67	0.25	2.24	-0.15	-0.06	0.03
8	9	6.76e-03	-0.02	0.0	0.0	0.0	-4.95	0.08	0.59	-0.06	-0.07	-7.79e-04
		-7.79e-04	-0.07	-2.37e-05	0.0	10.0	-4.95	0.08	0.59	-0.06	-0.02	6.76e-03
8	10	0.02	-0.05	-4.32e-06	0.0	0.0	-16.71	0.23	2.00	-0.14	-0.25	-1.52e-04
		-1.52e-04	-0.25	-3.52e-05	0.0	10.0	-16.71	0.23	2.00	-0.14	-0.05	0.02
8	52	0.13	-0.04	3.97e-05	0.0	0.0	-27.06	1.25	6.45	0.24	-0.69	8.56e-03
		8.56e-03	-0.69	-1.49e-03	0.0	10.0	-27.06	1.25	6.45	0.24	-0.04	0.13
8	57	-8.86e-03	0.19	-4.83e-05	0.0	0.0	-6.36	-0.79	-2.45	-0.52	0.19	-8.86e-03
		-0.08	-0.05	1.42e-03	0.0	10.0	-6.36	-0.79	-2.45	-0.52	-0.05	-0.08
8	95	0.06	-0.04	2.01e-05	0.0	0.0	-21.40	0.56	4.34	0.24	-0.48	4.47e-03
		4.47e-03	-0.48	-8.29e-04	0.0	10.0	-21.40	0.56	4.34	0.24	-0.04	0.06
8	98	-4.78e-03	-0.02	-2.88e-05	0.0	0.0	-12.02	-0.10	-0.34	-0.52	-0.02	-4.78e-03
		-0.01	-0.05	7.59e-04	0.0	10.0	-12.02	-0.10	-0.34	-0.52	-0.05	-0.01
8	104	-4.07e-03	-0.06	-2.80e-05	0.0	0.0	-13.68	-0.55	-8.16e-03	0.32	-0.06	-4.07e-03
		-0.06	-0.06	7.66e-04	0.0	10.0	-13.68	-0.55	-8.16e-03	0.32	-0.06	-0.06
8	105	0.10	-0.04	1.93e-05	0.0	0.0	-19.74	1.01	4.01	-0.60	-0.44	3.76e-03
		3.76e-03	-0.44	-8.36e-04	0.0	10.0	-19.74	1.01	4.01	-0.60	-0.04	0.10
8	133	-2.72e-03	-0.04	-1.51e-05	0.0	0.0	-9.83	-1.99	0.36	1.23	-0.07	-2.72e-03
		-0.20	-0.07	4.05e-04	0.0	10.0	-9.83	-1.99	0.36	1.23	-0.04	-0.20
8	136	0.25	-0.06	6.49e-06	0.0	0.0	-23.59	2.45	3.64	-1.51	-0.42	2.42e-03
		2.42e-03	-0.42	-4.76e-04	0.0	10.0	-23.59	2.45	3.64	-1.51	-0.06	0.25
8	159	0.05	-0.05	1.47e-05	0.0	0.0	-20.41	0.49	3.83	0.17	-0.43	3.46e-03
		3.46e-03	-0.43	-6.51e-04	0.0	10.0	-20.41	0.49	3.83	0.17	-0.05	0.05
8	162	-3.77e-03	-0.05	-2.33e-05	0.0	0.0	-13.01	-0.03	0.17	-0.45	-0.07	-3.77e-03
		-5.24e-03	-0.07	5.81e-04	0.0	10.0	-13.01	-0.03	0.17	-0.45	-0.05	-5.24e-03
8	168	-3.18e-03	-0.06	-2.27e-05	0.0	0.0	-14.37	-0.39	0.44	0.22	-0.10	-3.18e-03
		-0.04	-0.10	5.86e-04	0.0	10.0	-14.37	-0.39	0.44	0.22	-0.06	-0.04
8	169	0.09	-0.04	1.40e-05	0.0	0.0	-19.06	0.85	3.56	-0.50	-0.40	2.87e-03
		2.87e-03	-0.40	-6.56e-04	0.0	10.0	-19.06	0.85	3.56	-0.50	-0.04	0.09
9	1	9.02e-04	0.11	1.12e-05	0.0	0.0	-7.24	-0.15	-0.90	-0.08	0.11	9.02e-04
		-0.01	0.02	-1.04e-04	0.0	10.0	-7.24	-0.15	-0.90	-0.08	0.02	-0.01
9	2	-5.40e-03	0.59	-4.77e-05	0.0	0.0	-38.98	-0.36	-4.82	-0.24	0.59	-5.40e-03
		-0.04	0.11	-4.56e-04	0.0	10.0	-38.98	-0.36	-4.82	-0.24	0.11	-0.04
9	3	6.94e-04	0.08	8.60e-06	0.0	0.0	-5.57	-0.12	-0.69	-0.06	0.08	6.94e-04
		-0.01	0.02	-8.01e-05	0.0	10.0	-5.57	-0.12	-0.69	-0.06	0.02	-0.01
9	5	6.94e-04	0.08	8.60e-06	0.0	0.0	-5.57	-0.12	-0.69	-0.06	0.08	6.94e-04
		-0.01	0.02	-8.01e-05	0.0	10.0	-5.57	-0.12	-0.69	-0.06	0.02	-0.01
9	6	-3.51e-03	0.40	-3.06e-05	0.0	0.0	-26.73	-0.25	-3.31	-0.17	0.40	-3.51e-03
		-0.03	0.07	-3.15e-04	0.0	10.0	-26.73	-0.25	-3.31	-0.17	0.07	-0.03
9	7	6.94e-04	0.08	8.60e-06	0.0	0.0	-5.57	-0.12	-0.69	-0.06	0.08	6.94e-04
		-0.01	0.02	-8.01e-05	0.0	10.0	-5.57	-0.12	-0.69	-0.06	0.02	-0.01
9	8	-2.25e-03	0.31	-1.89e-05	0.0	0.0	-20.38	-0.21	-2.52	-0.14	0.31	-2.25e-03
		-0.02	0.06	-2.45e-04	0.0	10.0	-20.38	-0.21	-2.52	-0.14	0.06	-0.02
9	9	6.94e-04	0.08	8.60e-06	0.0	0.0	-5.57	-0.12	-0.69	-0.06	0.08	6.94e-04
		-0.01	0.02	-8.01e-05	0.0	10.0	-5.57	-0.12	-0.69	-0.06	0.02	-0.01
9	10	-1.83e-03	0.28	-1.49e-05	0.0	0.0	-18.26	-0.20	-2.26	-0.13	0.28	-1.83e-03
		-0.02	0.05	-2.21e-04	0.0	10.0	-18.26	-0.20	-2.26	-0.13	0.05	-0.02
9	54	-3.38e-03	0.81	-1.75e-05	0.0	0.0	-26.35	-1.17	-7.76	0.30	0.81	-3.38e-03
		-0.12	0.04	1.23e-03	0.0	10.0	-26.35	-1.17	-7.76	0.30	0.04	-0.12
9	55	0.07	0.06	-1.23e-05	0.0	0.0	-10.18	0.77	3.23	-0.55	-0.26	-2.74e-04
		-2.74e-04	-0.26	-1.67e-03	0.0	10.0	-10.18	0.77	3.23	-0.55	0.06	0.07
9	96	-2.04e-03	0.56	-1.77e-05	0.0	0.0	-21.73	-0.51	-5.16	0.27	0.56	-2.04e-03
		-0.05	0.04	5.75e-04	0.0	10.0	-21.73	-0.51	-5.16	0.27	0.04	-0.05
9	97	8.80e-03	0.06	-1.22e-05	0.0	0.0	-14.80	0.11	0.64	-0.53	-5.30e-03	-1.62e-03
		-1.62e-03	-5.30e-03	-1.02e-03	0.0	10.0	-14.80	0.11	0.64	-0.53	0.06	8.80e-03
9	100	0.05	0.54	-1.89e-05	0.0	0.0	-21.47	0.54	-5.05	0.37	0.54	-2.49e-03
		-2.49e-03	0.04	5.96e-04	0.0	10.0	-21.47	0.54	-5.05	0.37	0.04	0.05
9	101	-1.16e-03	0.06	-1.10e-05	0.0	0.0	-15.06	-0.94	0.52	-0.63	6.38e-03	-1.16e-03
		-0.09	6.38e-03	-1.04e-03	0.0	10.0	-15.06	-0.94	0.52	-0.63	0.06	-0.09
9	117	0.19	0.34	-1.92e-05	0.0	0.0	-14.34	1.97	-3.10	1.26	0.34	3.34e-03
		3.34e-03	0.03	2.35e-04	0.0	10.0	-14.34	1.97	-3.10	1.26	0.03	0.19



Pilas.	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
9	120	-6.99e-03	0.21	-1.07e-05	0.0	0.0	-22.19	-2.36	-1.43	-1.51	0.21	-6.99e-03
		-0.24	0.07	-6.77e-04	0.0	10.0	-22.19	-2.36	-1.43	-1.51	0.07	-0.24
9	126	-4.21e-03	0.54	-3.23e-06	0.0	0.0	-27.27	-1.70	-4.73	-0.77	0.54	-4.21e-03
		-0.17	0.06	2.02e-04	0.0	10.0	-27.27	-1.70	-4.73	-0.77	0.06	-0.17
9	127	0.13	0.04	-2.66e-05	0.0	0.0	-9.26	1.31	0.21	0.52	0.01	5.53e-04
		5.53e-04	0.01	-6.44e-04	0.0	10.0	-9.26	1.31	0.21	0.52	0.04	0.13
9	160	-1.93e-03	0.49	-1.69e-05	0.0	0.0	-21.03	-0.44	-4.52	0.20	0.49	-1.93e-03
		-0.05	0.04	3.97e-04	0.0	10.0	-21.03	-0.44	-4.52	0.20	0.04	-0.05
9	161	2.54e-03	0.06	-1.30e-05	0.0	0.0	-15.50	0.05	2.86e-04	-0.45	0.06	-1.72e-03
		-1.72e-03	0.06	-8.39e-04	0.0	10.0	-15.50	0.05	2.86e-04	-0.45	0.06	2.54e-03
9	164	0.04	0.49	-1.78e-05	0.0	0.0	-20.82	0.39	-4.43	0.27	0.49	-2.30e-03
		-2.30e-03	0.04	4.12e-04	0.0	10.0	-20.82	0.39	-4.43	0.27	0.04	0.04
9	165	-1.36e-03	0.07	-1.21e-05	0.0	0.0	-15.71	-0.79	-0.09	-0.52	0.07	-1.36e-03
		-0.08	0.06	-8.54e-04	0.0	10.0	-15.71	-0.79	-0.09	-0.52	0.06	-0.08
9	170	0.01	0.47	-2.48e-05	0.0	0.0	-19.89	0.14	-4.30	0.11	0.47	-4.35e-03
		-4.35e-03	0.04	4.14e-04	0.0	10.0	-19.89	0.14	-4.30	0.11	0.04	0.01
10	1	0.14	-0.13	9.92e-05	0.0	0.0	-15.25	-0.05	-0.13	1.12e-04	-0.13	0.14
		-1.10e-04	-0.49	-7.15e-04	0.0	272.5	-14.17	-0.05	-0.13	1.12e-04	-0.49	-1.10e-04
10	2	-4.84e-03	-0.47	-2.42e-04	0.0	0.0	-76.39	0.12	-0.53	-1.49e-03	-0.47	-0.34
		-0.34	-1.91	-2.71e-03	0.0	272.5	-75.32	0.12	-0.53	-1.49e-03	-1.91	-4.84e-03
10	3	0.11	-0.10	7.63e-05	0.0	0.0	-11.73	-0.04	-0.10	8.60e-05	-0.10	0.11
		-8.49e-05	-0.38	-5.50e-04	0.0	272.5	-10.90	-0.04	-0.10	8.60e-05	-0.38	-8.49e-05
10	4	-4.82e-03	-0.44	-2.65e-04	0.0	0.0	-72.88	0.14	-0.50	-1.52e-03	-0.44	-0.37
		-0.37	-1.79	-2.55e-03	0.0	272.5	-72.05	0.14	-0.50	-1.52e-03	-1.79	-4.82e-03
10	5	0.11	-0.10	7.63e-05	0.0	0.0	-11.73	-0.04	-0.10	8.60e-05	-0.10	0.11
		-8.49e-05	-0.38	-5.50e-04	0.0	272.5	-10.90	-0.04	-0.10	8.60e-05	-0.38	-8.49e-05
10	6	-3.24e-03	-0.32	-1.51e-04	0.0	0.0	-52.49	0.08	-0.37	-9.82e-04	-0.32	-0.21
		-0.21	-1.32	-1.88e-03	0.0	272.5	-51.66	0.08	-0.37	-9.82e-04	-1.32	-3.24e-03
10	7	0.11	-0.10	7.63e-05	0.0	0.0	-11.73	-0.04	-0.10	8.60e-05	-0.10	0.11
		-8.49e-05	-0.38	-5.50e-04	0.0	272.5	-10.90	-0.04	-0.10	8.60e-05	-0.38	-8.49e-05
10	8	-2.29e-03	-0.26	-8.30e-05	0.0	0.0	-40.26	0.04	-0.29	-6.62e-04	-0.26	-0.12
		-0.12	-1.04	-1.48e-03	0.0	272.5	-39.43	0.04	-0.29	-6.62e-04	-1.04	-2.29e-03
10	9	0.11	-0.10	7.63e-05	0.0	0.0	-11.73	-0.04	-0.10	8.60e-05	-0.10	0.11
		-8.49e-05	-0.38	-5.50e-04	0.0	272.5	-10.90	-0.04	-0.10	8.60e-05	-0.38	-8.49e-05
10	10	-1.98e-03	-0.23	-6.02e-05	0.0	0.0	-36.19	0.03	-0.26	-5.55e-04	-0.23	-0.08
		-0.08	-0.94	-1.35e-03	0.0	272.5	-35.36	0.03	-0.26	-5.55e-04	-0.94	-1.98e-03
10	36	0.01	-0.71	-4.65e-04	0.0	0.0	-48.65	0.25	3.32	-0.01	-0.71	-0.67
		-0.67	-7.06	-0.01	0.0	272.5	-47.82	0.25	3.32	-0.01	-0.71	0.01
10	41	0.50	6.59	3.45e-04	0.0	0.0	-23.73	-0.19	-3.84	0.01	6.59	0.50
		-0.01	-1.18	9.14e-03	0.0	272.5	-22.90	-0.19	-3.84	0.01	-1.18	-0.01
10	52	0.01	5.22	-3.01e-04	0.0	0.0	-45.36	0.16	9.30	-0.03	-20.02	-0.43
		-0.43	-20.02	-0.03	0.0	272.5	-44.53	0.16	9.30	-0.03	5.22	0.01
10	57	0.26	19.55	1.81e-04	0.0	0.0	-27.02	-0.10	-9.82	0.03	19.55	0.26
		-0.01	-7.10	0.03	0.0	272.5	-26.19	-0.10	-9.82	0.03	-7.10	-0.01
10	87	5.75e-03	-0.78	-2.59e-04	0.0	0.0	-40.79	0.14	1.76	-7.17e-03	-3.97	-0.37
		-0.37	-3.97	-7.09e-03	0.0	272.5	-39.96	0.14	1.76	-7.17e-03	-0.78	5.75e-03
10	90	0.20	3.51	1.39e-04	0.0	0.0	-31.59	-0.08	-2.28	6.06e-03	3.51	0.20
		-9.71e-03	-1.11	4.39e-03	0.0	272.5	-30.76	-0.08	-2.28	6.06e-03	-1.11	-9.71e-03
10	95	5.57e-03	2.56	-1.72e-04	0.0	0.0	-39.09	0.09	5.04	-0.02	-11.08	-0.25
		-0.25	-11.08	-0.02	0.0	272.5	-38.26	0.09	5.04	-0.02	2.56	5.57e-03
10	98	0.08	10.61	5.11e-05	0.0	0.0	-33.28	-0.03	-5.56	0.02	10.61	0.08
		-9.52e-03	-4.44	0.02	0.0	272.5	-32.45	-0.03	-5.56	0.02	-4.44	-9.52e-03
10	132	-3.28e-05	0.17	-3.22e-04	0.0	0.0	-52.09	0.17	2.56	-0.01	-6.44	-0.46
		-0.46	-6.44	-0.01	0.0	272.5	-51.26	0.17	2.56	-0.01	0.17	-3.28e-05
10	137	0.29	5.98	2.02e-04	0.0	0.0	-20.29	-0.11	-3.08	0.01	5.98	0.29
		-3.92e-03	-2.06	8.55e-03	0.0	272.5	-19.46	-0.11	-3.08	0.01	-2.06	-3.92e-03
10	151	4.30e-03	-0.83	-2.23e-04	0.0	0.0	-39.94	0.12	1.32	-5.71e-03	-3.15	-0.32
		-0.32	-3.15	-5.80e-03	0.0	272.5	-39.11	0.12	1.32	-5.71e-03	-0.83	4.30e-03
10	154	0.15	2.69	1.03e-04	0.0	0.0	-32.43	-0.06	-1.85	4.60e-03	2.69	0.15
		-8.25e-03	-1.05	3.11e-03	0.0	272.5	-31.60	-0.06	-1.85	4.60e-03	-1.05	-8.25e-03
10	159	3.97e-03	1.81	-1.50e-04	0.0	0.0	-38.50	0.08	3.87	-0.01	-8.66	-0.21
		-0.21	-8.66	-0.02	0.0	272.5	-37.67	0.08	3.87	-0.01	1.81	3.97e-03
10	162	0.05	8.20	2.92e-05	0.0	0.0	-33.88	-0.02	-4.39	0.01	8.20	0.05
		-7.93e-03	-3.70	0.01	0.0	272.5	-33.05	-0.02	-4.39	0.01	-3.70	-7.93e-03
17	2	12.67	0.26	0.0	0.0	0.0	-16.29	7.47	0.26	-0.44	0.24	11.92
		11.92	0.24	0.0	0.0	10.0	-16.29	7.47	0.26	-0.44	0.26	12.67
17	3	1.43	0.06	0.0	0.0	0.0	-2.17	0.64	0.06	-0.10	0.06	1.37
		1.37	0.06	0.0	0.0	10.0	-2.17	0.64	0.06	-0.10	0.06	1.43
17	5	1.43	0.06	0.0	0.0	0.0	-2.17	0.64	0.06	-0.10	0.06	1.37
		1.37	0.06	0.0	0.0	10.0	-2.17	0.64	0.06	-0.10	0.06	1.43
17	6	8.64	0.18	0.0	0.0	0.0	-11.15	5.06	0.18	-0.31	0.17	8.13

Pilas.	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		8.13	0.17	0.0	0.0	10.0	-11.15	5.06	0.18	-0.31	0.18	8.64
17	7	1.43	0.06	0.0	0.0	0.0	-2.17	0.64	0.06	-0.10	0.06	1.37
		1.37	0.06	0.0	0.0	10.0	-2.17	0.64	0.06	-0.10	0.06	1.43
17	8	6.47	0.15	0.0	0.0	0.0	-8.45	3.74	0.14	-0.24	0.13	6.10
		6.10	0.13	0.0	0.0	10.0	-8.45	3.74	0.14	-0.24	0.15	6.47
17	9	1.43	0.06	0.0	0.0	0.0	-2.17	0.64	0.06	-0.10	0.06	1.37
		1.37	0.06	0.0	0.0	10.0	-2.17	0.64	0.06	-0.10	0.06	1.43
17	10	5.75	0.14	0.0	0.0	0.0	-7.56	3.29	0.13	-0.22	0.12	5.42
		5.42	0.12	0.0	0.0	10.0	-7.56	3.29	0.13	-0.22	0.14	5.75
17	53	21.15	-1.30	0.0	0.0	0.0	-0.39	26.15	-2.82	2.30	-1.30	18.83
		18.83	-1.38	0.0	0.0	10.0	-0.39	26.15	-2.82	2.30	-1.38	21.15
17	56	-7.98	1.65	0.0	0.0	0.0	-14.72	-19.56	3.08	-2.75	1.54	-7.98
		-9.64	1.54	0.0	0.0	10.0	-14.72	-19.56	3.08	-2.75	1.65	-9.64
17	61	21.94	-1.28	0.0	0.0	0.0	0.01	27.08	-3.14	2.26	-1.28	19.13
		19.13	-1.35	0.0	0.0	10.0	0.01	27.08	-3.14	2.26	-1.35	21.94
17	64	-8.29	1.62	0.0	0.0	0.0	-15.12	-20.49	3.40	-2.71	1.52	-8.29
		-10.43	1.52	0.0	0.0	10.0	-15.12	-20.49	3.40	-2.71	1.62	-10.43
17	67	-8.98	1.56	0.0	0.0	0.0	-12.44	-16.13	3.35	-2.61	1.47	-8.98
		-10.88	1.47	0.0	0.0	10.0	-12.44	-16.13	3.35	-2.61	1.56	-10.88
17	74	22.38	-1.23	0.0	0.0	0.0	-2.67	22.71	-3.09	2.16	-1.23	19.83
		19.83	-1.29	0.0	0.0	10.0	-2.67	22.71	-3.09	2.16	-1.29	22.38
17	96	14.29	-0.64	0.0	0.0	0.0	-4.11	15.23	-1.08	1.16	-0.64	12.85
		12.85	-0.69	0.0	0.0	10.0	-4.11	15.23	-1.08	1.16	-0.69	14.29
17	97	-2.00	0.96	0.0	0.0	0.0	-11.00	-8.65	1.35	-1.60	0.89	-2.00
		-2.78	0.89	0.0	0.0	10.0	-11.00	-8.65	1.35	-1.60	0.96	-2.78
17	100	14.72	-0.63	0.0	0.0	0.0	-3.91	15.69	-1.19	1.13	-0.63	13.03
		13.03	-0.67	0.0	0.0	10.0	-3.91	15.69	-1.19	1.13	-0.67	14.72
17	101	-2.18	0.94	0.0	0.0	0.0	-11.20	-9.10	1.45	-1.58	0.88	-2.18
		-3.22	0.88	0.0	0.0	10.0	-11.20	-9.10	1.45	-1.58	0.94	-3.22
17	103	-2.42	0.92	0.0	0.0	0.0	-10.75	-8.01	1.44	-1.54	0.86	-2.42
		-3.30	0.86	0.0	0.0	10.0	-10.75	-8.01	1.44	-1.54	0.92	-3.30
17	106	14.81	-0.61	0.0	0.0	0.0	-4.36	14.59	-1.18	1.10	-0.61	13.27
		13.27	-0.65	0.0	0.0	10.0	-4.36	14.59	-1.18	1.10	-0.65	14.81
17	160	12.38	-0.47	0.0	0.0	0.0	-4.87	12.59	-0.83	0.85	-0.47	11.19
		11.19	-0.51	0.0	0.0	10.0	-4.87	12.59	-0.83	0.85	-0.51	12.38
17	161	-0.34	0.78	0.0	0.0	0.0	-10.24	-6.01	1.09	-1.30	0.72	-0.34
		-0.87	0.72	0.0	0.0	10.0	-10.24	-6.01	1.09	-1.30	0.78	-0.87
17	164	12.72	-0.46	0.0	0.0	0.0	-4.71	12.94	-0.92	0.83	-0.46	11.32
		11.32	-0.49	0.0	0.0	10.0	-4.71	12.94	-0.92	0.83	-0.49	12.72
17	165	-0.47	0.76	0.0	0.0	0.0	-10.40	-6.35	1.18	-1.28	0.71	-0.47
		-1.21	0.71	0.0	0.0	10.0	-10.40	-6.35	1.18	-1.28	0.76	-1.21
17	167	-0.67	0.75	0.0	0.0	0.0	-10.03	-5.47	1.17	-1.25	0.69	-0.67
		-1.28	0.69	0.0	0.0	10.0	-10.03	-5.47	1.17	-1.25	0.75	-1.28
17	170	12.79	-0.45	0.0	0.0	0.0	-5.08	12.05	-0.90	0.80	-0.45	11.52
		11.52	-0.48	0.0	0.0	10.0	-5.08	12.05	-0.90	0.80	-0.48	12.79
18	1	2.93e-03	0.16	3.72e-05	0.0	0.0	-3.38	-0.63	-0.14	-0.39	0.16	2.93e-03
		-0.06	0.15	-7.31e-05	0.0	10.0	-3.38	-0.63	-0.14	-0.39	0.15	-0.06
18	2	0.16	0.50	2.17e-04	0.0	0.0	-17.50	1.46	1.40	0.14	0.36	0.02
		0.02	0.36	-3.80e-04	0.0	10.0	-17.50	1.46	1.40	0.14	0.50	0.16
18	3	2.26e-03	0.12	2.86e-05	0.0	0.0	-2.60	-0.48	-0.11	-0.30	0.12	2.26e-03
		-0.05	0.11	-5.62e-05	0.0	10.0	-2.60	-0.48	-0.11	-0.30	0.11	-0.05
18	4	0.18	0.46	2.08e-04	0.0	0.0	-16.72	1.61	1.43	0.23	0.32	0.02
		0.02	0.32	-3.63e-04	0.0	10.0	-16.72	1.61	1.43	0.23	0.46	0.18
18	5	2.26e-03	0.12	2.86e-05	0.0	0.0	-2.60	-0.48	-0.11	-0.30	0.12	2.26e-03
		-0.05	0.11	-5.62e-05	0.0	10.0	-2.60	-0.48	-0.11	-0.30	0.11	-0.05
18	6	0.10	0.35	1.48e-04	0.0	0.0	-12.02	0.91	0.92	0.05	0.25	0.01
		0.01	0.25	-2.61e-04	0.0	10.0	-12.02	0.91	0.92	0.05	0.35	0.10
18	7	2.26e-03	0.12	2.86e-05	0.0	0.0	-2.60	-0.48	-0.11	-0.30	0.12	2.26e-03
		-0.05	0.11	-5.62e-05	0.0	10.0	-2.60	-0.48	-0.11	-0.30	0.11	-0.05
18	8	0.06	0.28	1.12e-04	0.0	0.0	-9.19	0.49	0.61	-0.05	0.22	8.87e-03
		8.87e-03	0.22	-2.00e-04	0.0	10.0	-9.19	0.49	0.61	-0.05	0.28	0.06
18	9	2.26e-03	0.12	2.86e-05	0.0	0.0	-2.60	-0.48	-0.11	-0.30	0.12	2.26e-03
		-0.05	0.11	-5.62e-05	0.0	10.0	-2.60	-0.48	-0.11	-0.30	0.11	-0.05
18	10	0.04	0.25	1.01e-04	0.0	0.0	-8.25	0.35	0.51	-0.09	0.20	7.92e-03
		7.92e-03	0.20	-1.79e-04	0.0	10.0	-8.25	0.35	0.51	-0.09	0.25	0.04
18	36	0.32	0.52	1.28e-04	0.0	0.0	-7.80	3.11	3.24	0.81	0.32	9.02e-03
		9.02e-03	0.32	-2.72e-04	0.0	10.0	-7.80	3.11	3.24	0.81	0.52	0.32
18	41	6.82e-03	0.08	7.32e-05	0.0	0.0	-8.70	-2.41	-2.22	-0.99	0.08	6.82e-03
		-0.23	-0.02	-8.65e-05	0.0	10.0	-8.70	-2.41	-2.22	-0.99	-0.02	-0.23
18	53	-1.70e-03	-0.97	-1.40e-05	0.0	0.0	-1.86	-0.82	-3.80	0.71	-0.97	-1.70e-03
		-0.08	-1.18	-1.08e-04	0.0	10.0	-1.86	-0.82	-3.80	0.71	-1.18	-0.08

Pilas.	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
18	56	0.17	1.69	2.15e-04	0.0	0.0	-14.64	1.53	4.82	-0.88	1.37	0.02
		0.02	1.37	-2.51e-04	0.0	10.0	-14.64	1.53	4.82	-0.88	1.69	0.17
18	87	0.18	0.39	1.13e-04	0.0	0.0	-7.64	1.72	1.76	0.34	0.25	8.28e-03
		8.28e-03	0.25	-2.20e-04	0.0	10.0	-7.64	1.72	1.76	0.34	0.39	0.18
18	90	7.57e-03	0.15	8.77e-05	0.0	0.0	-8.86	-1.01	-0.74	-0.51	0.15	7.57e-03
		-0.09	0.11	-1.38e-04	0.0	10.0	-8.86	-1.01	-0.74	-0.51	0.11	-0.09
18	96	2.90e-03	-0.42	3.97e-05	0.0	0.0	-5.14	-0.18	-1.48	0.42	-0.42	2.90e-03
		-0.01	-0.52	-1.48e-04	0.0	10.0	-5.14	-0.18	-1.48	0.42	-0.52	-0.01
18	97	0.10	1.03	1.61e-04	0.0	0.0	-11.36	0.88	2.50	-0.59	0.82	0.01
		0.01	0.82	-2.10e-04	0.0	10.0	-11.36	0.88	2.50	-0.59	1.03	0.10
18	151	0.15	0.36	1.10e-04	0.0	0.0	-7.71	1.46	1.51	0.27	0.24	8.15e-03
		8.15e-03	0.24	-2.12e-04	0.0	10.0	-7.71	1.46	1.51	0.27	0.36	0.15
18	154	7.70e-03	0.17	9.09e-05	0.0	0.0	-8.79	-0.76	-0.49	-0.44	0.17	7.70e-03
		-0.07	0.15	-1.46e-04	0.0	10.0	-8.79	-0.76	-0.49	-0.44	0.15	-0.07
18	160	4.01e-03	-0.28	5.32e-05	0.0	0.0	-5.81	-0.05	-1.05	0.32	-0.28	4.01e-03
		-7.85e-04	-0.35	-1.56e-04	0.0	10.0	-5.81	-0.05	-1.05	0.32	-0.35	-7.85e-04
18	161	0.09	0.86	1.48e-04	0.0	0.0	-10.68	0.76	2.07	-0.49	0.69	0.01
		0.01	0.69	-2.03e-04	0.0	10.0	-10.68	0.76	2.07	-0.49	0.86	0.09
19	1	3.15e-03	0.03	4.00e-05	0.0	0.0	-0.11	-0.27	-1.61	-0.09	0.03	3.15e-03
		-0.02	-0.13	-5.08e-06	0.0	10.0	-0.11	-0.27	-1.61	-0.09	-0.13	-0.02
19	2	0.24	0.13	2.03e-04	0.0	0.0	-0.63	2.24	-4.95	0.82	0.13	0.02
		0.02	-0.37	-1.30e-05	0.0	10.0	-0.63	2.24	-4.95	0.82	-0.37	0.24
19	3	2.42e-03	0.02	3.07e-05	0.0	0.0	-0.09	-0.20	-1.24	-0.07	0.02	2.42e-03
		-0.02	-0.10	-3.91e-06	0.0	10.0	-0.09	-0.20	-1.24	-0.07	-0.10	-0.02
19	4	0.25	0.12	1.94e-04	0.0	0.0	-0.60	2.30	-4.58	0.84	0.12	0.02
		0.02	-0.34	-1.19e-05	0.0	10.0	-0.60	2.30	-4.58	0.84	-0.34	0.25
19	5	2.42e-03	0.02	3.07e-05	0.0	0.0	-0.09	-0.20	-1.24	-0.07	0.02	2.42e-03
		-0.02	-0.10	-3.91e-06	0.0	10.0	-0.09	-0.20	-1.24	-0.07	-0.10	-0.02
19	6	0.16	0.09	1.39e-04	0.0	0.0	-0.43	1.47	-3.46	0.54	0.09	0.01
		0.01	-0.26	-9.21e-06	0.0	10.0	-0.43	1.47	-3.46	0.54	-0.26	0.16
19	7	2.42e-03	0.02	3.07e-05	0.0	0.0	-0.09	-0.20	-1.24	-0.07	0.02	2.42e-03
		-0.02	-0.10	-3.91e-06	0.0	10.0	-0.09	-0.20	-1.24	-0.07	-0.10	-0.02
19	8	0.10	0.07	1.07e-04	0.0	0.0	-0.33	0.96	-2.80	0.35	0.07	8.42e-03
		8.42e-03	-0.21	-7.62e-06	0.0	10.0	-0.33	0.96	-2.80	0.35	-0.21	0.10
19	9	2.42e-03	0.02	3.07e-05	0.0	0.0	-0.09	-0.20	-1.24	-0.07	0.02	2.42e-03
		-0.02	-0.10	-3.91e-06	0.0	10.0	-0.09	-0.20	-1.24	-0.07	-0.10	-0.02
19	10	0.09	0.06	9.60e-05	0.0	0.0	-0.29	0.80	-2.57	0.29	0.06	7.57e-03
		7.57e-03	-0.19	-7.09e-06	0.0	10.0	-0.29	0.80	-2.57	0.29	-0.19	0.09
19	68	0.47	0.22	1.34e-04	0.0	0.0	1.01	4.63	3.51	1.77	-0.14	0.01
		0.01	-0.14	1.57e-05	0.0	10.0	1.01	4.63	3.51	1.77	0.22	0.47
19	70	4.87e-03	0.34	6.72e-05	0.0	0.0	-1.97	-1.63	-11.00	-0.66	0.34	4.87e-03
		-0.16	-0.76	-3.39e-05	0.0	10.0	-1.97	-1.63	-11.00	-0.66	-0.76	-0.16
19	71	0.33	0.38	1.25e-04	0.0	0.0	1.38	3.23	5.85	1.25	-0.21	0.01
		0.01	-0.21	1.97e-05	0.0	10.0	1.38	3.23	5.85	1.25	0.38	0.33
19	73	4.95e-03	0.26	5.79e-05	0.0	0.0	-1.60	-3.03	-8.66	-1.18	0.26	4.95e-03
		-0.30	-0.60	-2.99e-05	0.0	10.0	-1.60	-3.03	-8.66	-1.18	-0.60	-0.30
19	103	0.29	0.06	1.13e-04	0.0	0.0	0.48	2.77	1.13	1.05	-0.06	8.61e-03
		8.61e-03	-0.06	6.41e-06	0.0	10.0	0.48	2.77	1.13	1.05	0.06	0.29
19	104	5.69e-03	0.20	7.64e-05	0.0	0.0	-1.16	-0.67	-6.83	-0.28	0.20	5.69e-03
		-0.06	-0.48	-2.08e-05	0.0	10.0	-1.16	-0.67	-6.83	-0.28	-0.48	-0.06
19	105	0.24	0.09	1.16e-04	0.0	0.0	0.57	2.27	1.68	0.87	-0.07	9.44e-03
		9.44e-03	-0.07	6.62e-06	0.0	10.0	0.57	2.27	1.68	0.87	0.09	0.24
19	106	6.52e-03	0.18	7.88e-05	0.0	0.0	-1.07	-1.18	-6.28	-0.47	0.18	6.52e-03
		-0.11	-0.44	-2.06e-05	0.0	10.0	-1.07	-1.18	-6.28	-0.47	-0.44	-0.11
19	167	0.24	-1.11e-03	1.09e-04	0.0	0.0	0.31	2.34	0.29	0.89	-0.03	8.36e-03
		8.36e-03	-0.03	3.39e-06	0.0	10.0	0.31	2.34	0.29	0.89	-1.11e-03	0.24
19	168	6.09e-03	0.17	8.07e-05	0.0	0.0	-0.97	-0.33	-5.89	-0.15	0.17	6.09e-03
		-0.03	-0.42	-1.77e-05	0.0	10.0	-0.97	-0.33	-5.89	-0.15	-0.42	-0.03
19	169	0.20	0.03	1.11e-04	0.0	0.0	0.38	1.93	0.74	0.74	-0.04	9.04e-03
		9.04e-03	-0.04	3.56e-06	0.0	10.0	0.38	1.93	0.74	0.74	0.03	0.20
19	170	6.78e-03	0.16	8.27e-05	0.0	0.0	-0.89	-0.75	-5.44	-0.30	0.16	6.78e-03
		-0.07	-0.39	-1.76e-05	0.0	10.0	-0.89	-0.75	-5.44	-0.30	-0.39	-0.07
20	2	1.07	-2.01	0.0	0.0	0.0	-6.33	0.25	3.83	-0.38	-2.39	1.04
		1.04	-2.39	0.0	0.0	10.0	-6.33	0.25	3.83	-0.38	-2.01	1.07
20	3	0.15	-0.65	0.0	0.0	0.0	-1.33	-0.18	1.42	0.13	-0.79	0.15
		0.14	-0.79	0.0	0.0	10.0	-1.33	-0.18	1.42	0.13	-0.65	0.14
20	5	0.15	-0.65	0.0	0.0	0.0	-1.33	-0.18	1.42	0.13	-0.79	0.15
		0.14	-0.79	0.0	0.0	10.0	-1.33	-0.18	1.42	0.13	-0.65	0.14
20	6	0.73	-1.43	0.0	0.0	0.0	-4.40	0.14	2.74	-0.23	-1.70	0.72
		0.72	-1.70	0.0	0.0	10.0	-4.40	0.14	2.74	-0.23	-1.43	0.73
20	7	0.15	-0.65	0.0	0.0	0.0	-1.33	-0.18	1.42	0.13	-0.79	0.15

Pilas.	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		0.14	-0.79	0.0	0.0	10.0	-1.33	-0.18	1.42	0.13	-0.65	0.14
20	8	0.55	-1.19	0.0	0.0	0.0	-3.48	0.04	2.35	-0.12	-1.43	0.55
		0.55	-1.43	0.0	0.0	10.0	-3.48	0.04	2.35	-0.12	-1.19	0.55
20	9	0.15	-0.65	0.0	0.0	0.0	-1.33	-0.18	1.42	0.13	-0.79	0.15
		0.14	-0.79	0.0	0.0	10.0	-1.33	-0.18	1.42	0.13	-0.65	0.14
20	10	0.49	-1.12	0.0	0.0	0.0	-3.17	0.01	2.22	-0.09	-1.34	0.49
		0.49	-1.34	0.0	0.0	10.0	-3.17	0.01	2.22	-0.09	-1.12	0.49
20	59	0.50	3.20	0.0	0.0	0.0	0.11	1.40	-7.71	-1.12	3.20	0.35
		0.35	2.43	0.0	0.0	10.0	0.11	1.40	-7.71	-1.12	2.43	0.50
20	66	0.63	-4.67	0.0	0.0	0.0	-6.45	-1.38	12.14	0.94	-5.88	0.63
		0.48	-5.88	0.0	0.0	10.0	-6.45	-1.38	12.14	0.94	-4.67	0.48
20	70	0.58	-5.06	0.0	0.0	0.0	-6.81	-0.82	12.12	0.62	-6.35	0.58
		0.48	-6.35	0.0	0.0	10.0	-6.81	-0.82	12.12	0.62	-5.06	0.48
20	71	0.50	3.67	0.0	0.0	0.0	0.47	0.84	-7.69	-0.80	3.67	0.41
		0.41	2.82	0.0	0.0	10.0	0.47	0.84	-7.69	-0.80	2.82	0.50
20	103	0.50	0.99	0.0	0.0	0.0	-1.53	0.79	-3.37	-0.71	0.99	0.42
		0.42	0.69	0.0	0.0	10.0	-1.53	0.79	-3.37	-0.71	0.69	0.50
20	104	0.54	-3.14	0.0	0.0	0.0	-5.01	-0.51	7.35	0.35	-3.91	0.54
		0.49	-3.91	0.0	0.0	10.0	-5.01	-0.51	7.35	0.35	-3.14	0.49
20	105	0.50	1.24	0.0	0.0	0.0	-1.33	0.53	-2.92	-0.52	1.24	0.45
		0.45	0.90	0.0	0.0	10.0	-1.33	0.53	-2.92	-0.52	0.90	0.50
20	106	0.56	-2.93	0.0	0.0	0.0	-4.82	-0.77	7.80	0.53	-3.66	0.56
		0.48	-3.66	0.0	0.0	10.0	-4.82	-0.77	7.80	0.53	-2.93	0.48
20	167	0.50	0.46	0.0	0.0	0.0	-1.90	0.62	-2.13	-0.58	0.46	0.44
		0.44	0.28	0.0	0.0	10.0	-1.90	0.62	-2.13	-0.58	0.28	0.50
20	168	0.53	-2.69	0.0	0.0	0.0	-4.60	-0.39	6.19	0.25	-3.34	0.53
		0.49	-3.34	0.0	0.0	10.0	-4.60	-0.39	6.19	0.25	-2.69	0.49
20	169	0.50	0.67	0.0	0.0	0.0	-1.74	0.41	-1.76	-0.42	0.67	0.46
		0.46	0.45	0.0	0.0	10.0	-1.74	0.41	-1.76	-0.42	0.45	0.50
20	170	0.55	-2.52	0.0	0.0	0.0	-4.44	-0.60	6.56	0.40	-3.14	0.55
		0.49	-3.14	0.0	0.0	10.0	-4.44	-0.60	6.56	0.40	-2.52	0.49
Pilas.		M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3		N	V 2	V 3	T		
		-10.88	-20.02	-0.03	0.0		-76.39	-24.16	-11.00	-2.75		
		22.38	19.55	0.03	0.0		6.73	27.08	12.14	2.30		

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		kN m	kN m	m	kN	cm	kN	kN	kN	kN m	kN m	kN m
3	1	1.56	-6.66e-04	-3.69e-04	-3.86	0.0	-2.64	1.62	-0.01	-1.03e-03	-6.66e-04	-0.13
		-1.70	-0.06	-7.47e-04	0.0	500.7	-0.13	-2.24	-0.01	-1.03e-03	-0.06	-1.70
3	2	9.59	5.01e-03	-2.68e-03	-23.55	0.0	-17.03	9.94	9.90e-04	8.30e-05	5.39e-05	-0.89
		-10.09	5.39e-05	-3.02e-03	0.0	500.7	-1.76	-13.61	9.90e-04	8.30e-05	5.01e-03	-10.09
3	3	1.20	-5.12e-04	-2.84e-04	-2.97	0.0	-2.03	1.24	-9.41e-03	-7.90e-04	-5.12e-04	-0.10
		-1.31	-0.05	-5.75e-04	0.0	500.7	-0.10	-1.73	-9.41e-03	-7.90e-04	-0.05	-1.31
3	4	9.23	0.02	-2.59e-03	-22.66	0.0	-16.43	9.56	3.81e-03	3.20e-04	2.08e-04	-0.86
		-9.70	2.08e-04	-2.84e-03	0.0	500.7	-1.73	-13.09	3.81e-03	3.20e-04	0.02	-9.70
3	5	1.20	-5.12e-04	-2.84e-04	-2.97	0.0	-2.03	1.24	-9.41e-03	-7.90e-04	-5.12e-04	-0.10
		-1.31	-0.05	-5.75e-04	0.0	500.7	-0.10	-1.73	-9.41e-03	-7.90e-04	-0.05	-1.31
3	6	6.56	-3.24e-05	-1.82e-03	-16.09	0.0	-11.63	6.79	-5.95e-04	-4.99e-05	-3.24e-05	-0.61
		-6.90	-3.01e-03	-2.09e-03	0.0	500.7	-1.18	-9.30	-5.95e-04	-4.99e-05	-3.01e-03	-6.90
3	7	1.20	-5.12e-04	-2.84e-04	-2.97	0.0	-2.03	1.24	-9.41e-03	-7.90e-04	-5.12e-04	-0.10
		-1.31	-0.05	-5.75e-04	0.0	500.7	-0.10	-1.73	-9.41e-03	-7.90e-04	-0.05	-1.31
3	8	4.95	-1.76e-04	-1.36e-03	-12.16	0.0	-8.75	5.13	-3.24e-03	-2.72e-04	-1.76e-04	-0.45
		-5.22	-0.02	-1.63e-03	0.0	500.7	-0.86	-7.03	-3.24e-03	-2.72e-04	-0.02	-5.22
3	9	1.20	-5.12e-04	-2.84e-04	-2.97	0.0	-2.03	1.24	-9.41e-03	-7.90e-04	-5.12e-04	-0.10
		-1.31	-0.05	-5.75e-04	0.0	500.7	-0.10	-1.73	-9.41e-03	-7.90e-04	-0.05	-1.31
3	10	4.41	-2.24e-04	-1.21e-03	-10.84	0.0	-7.79	4.57	-4.12e-03	-3.46e-04	-2.24e-04	-0.40
		-4.66	-0.02	-1.48e-03	0.0	500.7	-0.75	-6.27	-4.12e-03	-3.46e-04	-0.02	-4.66
3	43	3.85	2.13	0.01	-10.84	0.0	16.74	3.12	0.43	0.28	0.18	1.61
		-9.87	0.18	-0.03	0.0	500.7	23.77	-7.73	0.43	0.28	2.13	-9.87
3	50	5.93	-0.18	-0.01	-10.84	0.0	-32.31	6.03	-0.44	-0.28	-0.18	-2.42
		-2.42	-2.17	0.03	0.0	500.7	-25.27	-4.82	-0.44	-0.28	-2.17	0.54
3	62	6.16	-0.18	-0.01	-10.84	0.0	-30.59	5.98	-0.43	-0.28	-0.18	-2.22
		-2.22	-2.13	0.03	0.0	500.7	-23.56	-4.86	-0.43	-0.28	-2.13	0.80
3	67	3.75	2.16	0.01	-10.84	0.0	16.60	3.09	0.43	0.28	0.18	1.59
		-10.17	0.18	-0.03	0.0	500.7	23.63	-7.75	0.43	0.28	2.16	-10.17
3	68	3.71	2.20	0.01	-10.84	0.0	15.23	3.13	0.44	0.28	0.18	1.46
		-10.01	0.18	-0.03	0.0	500.7	22.27	-7.72	0.44	0.28	2.20	-10.01
3	73	6.07	-0.18	-0.01	-10.84	0.0	-30.80	6.02	-0.45	-0.28	-0.18	-2.27
		-2.27	-2.24	0.03	0.0	500.7	-23.77	-4.83	-0.45	-0.28	-2.24	0.69

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
3	91	3.96	1.17	5.76e-03	-10.84	0.0	5.20	3.78	0.24	0.16	0.10	0.65
		-7.48	0.10	-0.02	0.0	500.7	12.24	-7.06	0.24	0.16	1.17	-7.48
3	94	5.13	-0.10	-5.39e-03	-10.84	0.0	-20.77	5.36	-0.24	-0.16	-0.10	-1.46
		-1.85	-1.21	0.02	0.0	500.7	-13.74	-5.49	-0.24	-0.16	-1.21	-1.85
3	100	5.24	-0.11	-5.58e-03	-10.84	0.0	-20.02	5.34	-0.24	-0.16	-0.11	-1.38
		-1.71	-1.19	0.02	0.0	500.7	-12.99	-5.50	-0.24	-0.16	-1.19	-1.71
3	103	3.90	1.19	6.02e-03	-10.84	0.0	5.14	3.77	0.24	0.16	0.11	0.64
		-7.64	0.11	-0.02	0.0	500.7	12.18	-7.07	0.24	0.16	1.19	-7.64
3	106	5.22	-0.11	-5.65e-03	-10.84	0.0	-20.72	5.37	-0.25	-0.16	-0.11	-1.45
		-1.68	-1.23	0.02	0.0	500.7	-13.68	-5.47	-0.25	-0.16	-1.23	-1.68
3	155	4.05	0.91	4.51e-03	-10.84	0.0	2.31	3.96	0.18	0.13	0.08	0.42
		-6.85	0.08	-0.01	0.0	500.7	9.35	-6.89	0.18	0.13	0.91	-6.85
3	158	4.94	-0.08	-4.17e-03	-10.84	0.0	-17.88	5.18	-0.19	-0.13	-0.08	-1.23
		-2.48	-0.95	0.01	0.0	500.7	-10.85	-5.66	-0.19	-0.13	-0.95	-2.48
3	164	5.02	-0.08	-4.32e-03	-10.84	0.0	-17.27	5.17	-0.19	-0.13	-0.08	-1.16
		-2.37	-0.93	0.01	0.0	500.7	-10.23	-5.68	-0.19	-0.13	-0.93	-2.37
3	167	4.00	0.92	4.71e-03	-10.84	0.0	2.26	3.95	0.19	0.13	0.09	0.41
		-6.98	0.09	-0.01	0.0	500.7	9.29	-6.90	0.19	0.13	0.92	-6.98
3	170	5.00	-0.09	-4.36e-03	-10.84	0.0	-17.83	5.19	-0.19	-0.13	-0.09	-1.22
		-2.35	-0.96	0.01	0.0	500.7	-10.79	-5.65	-0.19	-0.13	-0.96	-2.35
4	1	1.24	0.10	4.06e-04	3.86	0.0	0.89	-1.71	0.02	-1.23e-03	-0.01	0.14
		-1.76	-0.01	7.60e-04	0.0	500.7	3.40	2.15	0.02	-1.23e-03	0.10	1.24
4	2	9.99	0.15	2.94e-03	23.55	0.0	-9.77	-10.17	0.02	-6.70e-03	0.05	1.98
		-9.02	0.05	3.25e-03	0.0	500.7	5.51	13.37	0.02	-6.70e-03	0.15	9.99
4	4	9.70	0.13	2.85e-03	22.66	0.0	-9.97	-9.78	0.02	-6.42e-03	0.05	1.95
		-8.62	0.05	3.08e-03	0.0	500.7	4.73	12.88	0.02	-6.42e-03	0.13	9.70
4	5	0.95	0.08	3.12e-04	2.97	0.0	0.69	-1.32	0.02	-9.43e-04	-9.98e-03	0.11
		-1.35	-9.98e-03	5.85e-04	0.0	500.7	2.61	1.65	0.02	-9.43e-04	0.08	0.95
4	6	6.79	0.11	2.00e-03	16.09	0.0	-6.42	-6.96	0.02	-4.59e-03	0.03	1.34
		-6.19	0.03	2.25e-03	0.0	500.7	4.02	9.14	0.02	-4.59e-03	0.11	6.79
4	7	0.95	0.08	3.12e-04	2.97	0.0	0.69	-1.32	0.02	-9.43e-04	-9.98e-03	0.11
		-1.35	-9.98e-03	5.85e-04	0.0	500.7	2.61	1.65	0.02	-9.43e-04	0.08	0.95
4	8	5.04	0.10	1.49e-03	12.16	0.0	-4.29	-5.27	0.02	-3.50e-03	0.02	0.97
		-4.74	0.02	1.75e-03	0.0	500.7	3.60	6.89	0.02	-3.50e-03	0.10	5.04
4	9	0.95	0.08	3.12e-04	2.97	0.0	0.69	-1.32	0.02	-9.43e-04	-9.98e-03	0.11
		-1.35	-9.98e-03	5.85e-04	0.0	500.7	2.61	1.65	0.02	-9.43e-04	0.08	0.95
4	10	4.45	0.10	1.32e-03	10.84	0.0	-3.58	-4.70	0.02	-3.13e-03	0.01	0.84
		-4.26	0.01	1.58e-03	0.0	500.7	3.46	6.14	0.02	-3.13e-03	0.10	4.45
4	29	4.67	0.84	-1.87e-03	10.84	0.0	5.66	-4.49	0.25	0.01	-0.42	-0.23
		-4.76	-0.42	-8.95e-03	0.0	500.7	12.70	6.35	0.25	0.01	0.84	4.67
4	32	4.23	0.45	2.32e-03	10.84	0.0	-12.82	-4.91	-0.22	-0.02	0.45	1.92
		-3.75	-0.64	0.01	0.0	500.7	-5.78	5.93	-0.22	-0.02	-0.64	4.23
4	67	3.56	1.64	0.01	10.84	0.0	-5.90	-7.11	-0.94	-0.07	1.64	3.56
		-8.06	-3.04	0.04	0.0	500.7	1.14	3.73	-0.94	-0.07	-3.04	-4.85
4	74	13.75	3.24	-0.01	10.84	0.0	-1.26	-2.29	0.97	0.06	-1.61	-1.87
		-3.08	-1.61	-0.04	0.0	500.7	5.78	8.55	0.97	0.06	3.24	13.75
4	84	4.75	0.52	-9.28e-04	10.84	0.0	1.10	-4.55	0.15	5.81e-03	-0.22	0.26
		-4.46	-0.22	-4.28e-03	0.0	500.7	8.14	6.30	0.15	5.81e-03	0.52	4.75
4	85	4.16	0.25	1.84e-03	10.84	0.0	-8.26	-4.85	-0.11	-0.01	0.25	1.43
		-4.06	-0.32	7.33e-03	0.0	500.7	-1.22	5.99	-0.11	-0.01	-0.32	4.16
4	103	2.33	0.91	6.17e-03	10.84	0.0	-5.19	-5.99	-0.50	-0.04	0.91	2.33
		-5.94	-1.61	0.02	0.0	500.7	1.85	4.85	-0.50	-0.04	-1.61	-0.49
4	106	9.40	1.81	-5.79e-03	10.84	0.0	-1.97	-3.41	0.54	0.03	-0.88	-0.64
		-3.33	-0.88	-0.02	0.0	500.7	5.07	7.43	0.54	0.03	1.81	9.40
4	148	4.63	0.42	1.01e-03	10.84	0.0	0.23	-4.59	0.12	3.78e-03	-0.17	0.39
		-4.43	-0.17	-3.05e-03	0.0	500.7	7.26	6.25	0.12	3.78e-03	0.42	4.63
4	149	4.27	0.20	1.69e-03	10.84	0.0	-7.38	-4.81	-0.09	-0.01	0.20	1.30
		-4.08	-0.23	6.04e-03	0.0	500.7	-0.35	6.03	-0.09	-0.01	-0.23	4.27
4	167	1.99	0.71	4.92e-03	10.84	0.0	-4.78	-5.71	-0.39	-0.03	0.71	1.99
		-5.49	-1.23	0.02	0.0	500.7	2.25	5.14	-0.39	-0.03	-1.23	0.60
4	170	8.31	1.42	-4.46e-03	10.84	0.0	-2.37	-3.70	0.42	0.03	-0.68	-0.30
		-3.45	-0.68	-0.02	0.0	500.7	4.66	7.15	0.42	0.03	1.42	8.31
5	2	0.54	0.02	-7.58e-04	-0.25	0.0	-4.30	-35.84	0.48	5.54e-04	-0.28	0.54
		-21.95	-0.28	2.70e-04	0.0	62.5	-4.30	-36.09	0.48	5.54e-04	0.02	-21.95
5	3	0.07	-9.89e-03	-2.02e-04	-0.19	0.0	-0.59	-4.95	0.08	-7.79e-04	-0.06	0.07
		-3.08	-0.06	-1.10e-05	0.0	62.5	-0.59	-5.14	0.08	-7.79e-04	-9.89e-03	-3.08
5	4	0.51	0.02	-6.98e-04	-0.19	0.0	-4.12	-34.36	0.46	7.87e-04	-0.26	0.51
		-21.02	-0.26	2.73e-04	0.0	62.5	-4.12	-34.55	0.46	7.87e-04	0.02	-21.02
5	5	0.07	-9.89e-03	-2.02e-04	-0.19	0.0	-0.59	-4.95	0.08	-7.79e-04	-0.06	0.07
		-3.08	-0.06	-1.10e-05	0.0	62.5	-0.59	-5.14	0.08	-7.79e-04	-9.89e-03	-3.08
5	6	0.37	0.01	-5.32e-04	-0.19	0.0	-2.94	-24.56	0.33	2.65e-04	-0.20	0.37

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		-15.04	-0.20	1.78e-04	0.0	62.5	-2.94	-24.75	0.33	2.65e-04	0.01	-15.04
5	7	0.07	-9.89e-03	-2.02e-04	-0.19	0.0	-0.59	-4.95	0.08	-7.79e-04	-0.06	0.07
		-3.08	-0.06	-1.10e-05	0.0	62.5	-0.59	-5.14	0.08	-7.79e-04	-9.89e-03	-3.08
5	8	0.28	5.00e-03	-4.33e-04	-0.19	0.0	-2.24	-18.67	0.25	-4.81e-05	-0.15	0.28
		-11.45	-0.15	1.22e-04	0.0	62.5	-2.24	-18.86	0.25	-4.81e-05	5.00e-03	-11.45
5	9	0.07	-9.89e-03	-2.02e-04	-0.19	0.0	-0.59	-4.95	0.08	-7.79e-04	-0.06	0.07
		-3.08	-0.06	-1.10e-05	0.0	62.5	-0.59	-5.14	0.08	-7.79e-04	-9.89e-03	-3.08
5	10	0.25	2.87e-03	-4.00e-04	-0.19	0.0	-2.00	-16.71	0.23	-1.52e-04	-0.14	0.25
		-10.25	-0.14	1.03e-04	0.0	62.5	-2.00	-16.90	0.23	-1.52e-04	2.87e-03	-10.25
5	52	0.69	0.24	-9.70e-03	-0.19	0.0	-6.49	-27.07	1.24	8.56e-03	0.24	0.69
		-16.30	0.05	6.04e-03	0.0	62.5	-6.49	-27.26	1.24	8.56e-03	0.05	-16.30
5	57	-0.19	-0.05	8.90e-03	-0.19	0.0	2.49	-6.35	-0.78	-8.86e-03	-0.52	-0.19
		-4.21	-0.52	-5.84e-03	0.0	62.5	2.49	-6.54	-0.78	-8.86e-03	-0.05	-4.21
5	95	0.48	0.24	-5.53e-03	-0.19	0.0	-4.36	-21.40	0.55	4.47e-03	0.24	0.48
		-12.96	0.03	3.37e-03	0.0	62.5	-4.36	-21.59	0.55	4.47e-03	0.03	-12.96
5	98	0.02	-0.02	4.73e-03	-0.19	0.0	0.36	-12.02	-0.09	-4.78e-03	-0.52	0.02
		-7.55	-0.52	-3.16e-03	0.0	62.5	0.36	-12.21	-0.09	-4.78e-03	-0.02	-7.55
5	104	0.06	0.32	4.61e-03	-0.19	0.0	0.03	-13.69	-0.54	-4.07e-03	0.32	0.06
		-8.55	-0.03	-2.99e-03	0.0	62.5	0.03	-13.88	-0.54	-4.07e-03	-0.03	-8.55
5	105	0.44	0.04	-5.41e-03	-0.19	0.0	-4.03	-19.74	1.00	3.76e-03	-0.60	0.44
		-11.96	-0.60	3.20e-03	0.0	62.5	-4.03	-19.93	1.00	3.76e-03	0.04	-11.96
5	117	0.07	1.23	2.34e-03	-0.19	0.0	-0.30	-9.73	-1.99	-2.87e-03	1.23	0.07
		-6.07	-0.03	-1.62e-03	0.0	62.5	-0.30	-9.92	-1.99	-2.87e-03	-0.03	-6.07
5	120	0.43	0.04	-3.14e-03	-0.19	0.0	-3.70	-23.70	2.45	2.56e-03	-1.51	0.43
		-14.44	-1.51	1.83e-03	0.0	62.5	-3.70	-23.89	2.45	2.56e-03	0.04	-14.44
5	159	0.43	0.17	-4.39e-03	-0.19	0.0	-3.84	-20.41	0.48	3.46e-03	0.17	0.43
		-12.39	0.02	2.64e-03	0.0	62.5	-3.84	-20.60	0.48	3.46e-03	0.02	-12.39
5	162	0.07	-0.02	3.59e-03	-0.19	0.0	-0.16	-13.01	-0.03	-3.77e-03	-0.45	0.07
		-8.12	-0.45	-2.44e-03	0.0	62.5	-0.16	-13.20	-0.03	-3.77e-03	-0.02	-8.12
5	164	0.10	0.22	3.60e-03	-0.19	0.0	-0.40	-14.32	-0.38	-3.24e-03	0.22	0.10
		-8.91	-0.02	-2.38e-03	0.0	62.5	-0.40	-14.51	-0.38	-3.24e-03	-0.02	-8.91
5	165	0.40	0.03	-4.40e-03	-0.19	0.0	-3.60	-19.11	0.84	2.94e-03	-0.50	0.40
		-11.60	-0.50	2.58e-03	0.0	62.5	-3.60	-19.30	0.84	2.94e-03	0.03	-11.60
6	2	-10.09	0.37	2.98e-04	-3.36	0.0	-8.79	-10.79	-2.34	0.05	0.37	-10.09
		-17.57	-1.03	4.83e-04	0.0	60.0	-8.79	-14.16	-2.34	0.05	-1.03	-17.57
6	3	-1.31	0.06	4.41e-05	-0.42	0.0	-0.94	-1.66	-0.34	8.67e-03	0.06	-1.31
		-2.43	-0.15	2.37e-05	0.0	60.0	-0.94	-2.08	-0.34	8.67e-03	-0.15	-2.43
6	5	-1.31	0.06	4.41e-05	-0.42	0.0	-0.94	-1.66	-0.34	8.67e-03	0.06	-1.31
		-2.43	-0.15	2.37e-05	0.0	60.0	-0.94	-2.08	-0.34	8.67e-03	-0.15	-2.43
6	6	-6.90	0.26	2.04e-04	-2.30	0.0	-5.98	-7.42	-1.60	0.03	0.26	-6.90
		-12.04	-0.71	3.25e-04	0.0	60.0	-5.98	-9.72	-1.60	0.03	-0.71	-12.04
6	7	-1.31	0.06	4.41e-05	-0.42	0.0	-0.94	-1.66	-0.34	8.67e-03	0.06	-1.31
		-2.43	-0.15	2.37e-05	0.0	60.0	-0.94	-2.08	-0.34	8.67e-03	-0.15	-2.43
6	8	-5.22	0.20	1.56e-04	-1.74	0.0	-4.47	-5.69	-1.23	0.03	0.20	-5.22
		-9.16	-0.54	2.35e-04	0.0	60.0	-4.47	-7.43	-1.23	0.03	-0.54	-9.16
6	9	-1.31	0.06	4.41e-05	-0.42	0.0	-0.94	-1.66	-0.34	8.67e-03	0.06	-1.31
		-2.43	-0.15	2.37e-05	0.0	60.0	-0.94	-2.08	-0.34	8.67e-03	-0.15	-2.43
6	10	-4.66	0.18	1.40e-04	-1.55	0.0	-3.96	-5.11	-1.10	0.02	0.18	-4.66
		-8.20	-0.48	2.04e-04	0.0	60.0	-3.96	-6.66	-1.10	0.02	-0.48	-8.20
6	67	-10.14	1.07	6.35e-04	-1.55	0.0	13.96	-15.56	-3.12	0.01	1.07	-10.14
		-19.72	-0.81	5.82e-03	0.0	60.0	13.96	-17.11	-3.12	0.01	-0.81	-19.72
6	68	-9.99	1.37	6.40e-04	-1.55	0.0	13.66	-17.12	-4.10	0.02	1.37	-9.99
		-20.52	-1.11	5.87e-03	0.0	60.0	13.66	-18.67	-4.10	0.02	-1.11	-20.52
6	73	4.12	0.15	-3.61e-04	-1.55	0.0	-21.59	6.89	1.90	0.03	-1.01	0.67
		0.67	-1.01	-5.46e-03	0.0	60.0	-21.59	5.34	1.90	0.03	0.15	4.12
6	74	3.33	-0.15	-3.56e-04	-1.55	0.0	-21.89	5.33	0.93	0.03	-0.72	0.82
		0.82	-0.72	-5.41e-03	0.0	60.0	-21.89	3.78	0.93	0.03	-0.15	3.33
6	99	-7.52	0.75	4.08e-04	-1.55	0.0	5.49	-11.25	-2.48	0.02	0.75	-7.52
		-14.72	-0.74	3.26e-03	0.0	60.0	5.49	-12.80	-2.48	0.02	-0.74	-14.72
6	103	-7.63	0.75	4.13e-04	-1.55	0.0	5.79	-11.26	-2.48	0.02	0.75	-7.63
		-14.73	-0.74	3.30e-03	0.0	60.0	5.79	-12.81	-2.48	0.02	-0.74	-14.73
6	106	-1.56	-0.22	-1.34e-04	-1.55	0.0	-13.72	1.04	0.28	0.03	-0.40	-1.69
		-1.69	-0.40	-2.89e-03	0.0	60.0	-13.72	-0.51	0.28	0.03	-0.22	-1.66
6	116	-5.91	1.05	2.93e-04	-1.55	0.0	0.52	-11.43	-3.74	0.03	1.05	-5.91
		-13.25	-1.20	1.94e-03	0.0	60.0	0.52	-12.98	-3.74	0.03	-1.20	-13.25
6	143	-5.22	0.46	2.00e-04	-1.55	0.0	-2.06	-7.18	-1.91	0.03	0.46	-5.22
		-10.01	-0.69	8.77e-04	0.0	60.0	-2.06	-8.73	-1.91	0.03	-0.69	-10.01
6	167	-6.97	0.63	3.52e-04	-1.55	0.0	3.61	-9.90	-2.18	0.02	0.63	-6.97
		-13.27	-0.69	2.60e-03	0.0	60.0	3.61	-11.45	-2.18	0.02	-0.69	-13.27
6	170	-2.36	-0.27	-7.30e-05	-1.55	0.0	-11.54	-0.33	-0.02	0.03	-0.27	-2.36
		-3.12	-0.28	-2.20e-03	0.0	60.0	-11.54	-1.88	-0.02	0.03	-0.28	-3.12

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
7	1	3.71	0.07	-1.35e-04	0.55	0.0	1.57	3.85	-0.41	-8.41e-03	0.07	1.24
		1.24	-0.18	4.07e-05	0.0	60.0	1.57	4.40	-0.41	-8.41e-03	-0.18	3.71
7	2	19.66	0.37	-1.48e-04	3.36	0.0	-2.75	14.43	-2.32	-0.06	0.37	9.99
		9.99	-1.02	-9.62e-05	0.0	60.0	-2.75	17.79	-2.32	-0.06	-1.02	19.66
7	3	2.86	0.05	-1.04e-04	0.42	0.0	1.21	2.96	-0.32	-6.47e-03	0.05	0.95
		0.95	-0.14	3.13e-05	0.0	60.0	1.21	3.38	-0.32	-6.47e-03	-0.14	2.86
7	4	18.80	0.36	-1.24e-04	3.24	0.0	-3.11	13.54	-2.22	-0.06	0.36	9.71
		9.71	-0.98	-1.06e-04	0.0	60.0	-3.11	16.78	-2.22	-0.06	-0.98	18.80
7	5	2.86	0.05	-1.04e-04	0.42	0.0	1.21	2.96	-0.32	-6.47e-03	0.05	0.95
		0.95	-0.14	3.13e-05	0.0	60.0	1.21	3.38	-0.32	-6.47e-03	-0.14	2.86
7	6	13.49	0.26	-1.09e-04	2.30	0.0	-1.67	10.01	-1.59	-0.04	0.26	6.79
		6.79	-0.70	-6.00e-05	0.0	60.0	-1.67	12.31	-1.59	-0.04	-0.70	13.49
7	7	2.86	0.05	-1.04e-04	0.42	0.0	1.21	2.96	-0.32	-6.47e-03	0.05	0.95
		0.95	-0.14	3.13e-05	0.0	60.0	1.21	3.38	-0.32	-6.47e-03	-0.14	2.86
7	8	10.30	0.20	-1.02e-04	1.74	0.0	-0.81	7.90	-1.21	-0.03	0.20	5.04
		5.04	-0.53	-3.26e-05	0.0	60.0	-0.81	9.63	-1.21	-0.03	-0.53	10.30
7	9	2.86	0.05	-1.04e-04	0.42	0.0	1.21	2.96	-0.32	-6.47e-03	0.05	0.95
		0.95	-0.14	3.13e-05	0.0	60.0	1.21	3.38	-0.32	-6.47e-03	-0.14	2.86
7	10	9.23	0.18	-9.98e-05	1.55	0.0	-0.52	7.19	-1.08	-0.03	0.18	4.45
		4.45	-0.47	-2.35e-05	0.0	60.0	-0.52	8.74	-1.08	-0.03	-0.47	9.23
7	29	12.38	0.78	-1.21e-04	1.55	0.0	4.05	10.91	-2.49	-0.02	0.78	4.66
		4.66	-0.72	1.46e-03	0.0	60.0	4.05	12.46	-2.49	-0.02	-0.72	12.38
7	32	6.08	-0.22	-7.94e-05	1.55	0.0	-5.09	3.47	0.33	-0.03	-0.43	4.24
		4.24	-0.43	-1.51e-03	0.0	60.0	-5.09	5.02	0.33	-0.03	-0.22	6.08
7	62	19.15	1.98	-3.30e-04	1.55	0.0	1.79	11.43	-5.32	-0.02	1.98	12.67
		12.67	-1.22	5.55e-03	0.0	60.0	1.79	12.98	-5.32	-0.02	-1.22	19.15
7	67	-0.16	0.08	5.10e-05	1.55	0.0	-0.87	5.16	2.50	-0.04	-1.42	-4.83
		-4.83	-1.42	-5.62e-03	0.0	60.0	-0.87	6.71	2.50	-0.04	0.08	-0.16
7	70	19.15	1.98	-2.44e-04	1.55	0.0	2.00	11.61	-5.31	-0.02	1.98	12.56
		12.56	-1.22	5.47e-03	0.0	60.0	2.00	13.16	-5.31	-0.02	-1.22	19.15
7	71	-0.68	0.28	4.64e-05	1.55	0.0	-3.04	2.77	3.16	-0.04	-1.63	-3.66
		-3.66	-1.63	-5.52e-03	0.0	60.0	-3.04	4.32	3.16	-0.04	0.28	-0.68
7	84	11.19	0.59	-1.18e-04	1.55	0.0	1.72	9.76	-2.12	-0.03	0.59	4.74
		4.74	-0.69	7.79e-04	0.0	60.0	1.72	11.31	-2.12	-0.03	-0.69	11.19
7	85	7.28	-0.24	-8.14e-05	1.55	0.0	-2.77	4.62	-0.04	-0.03	-0.24	4.17
		4.17	-0.25	-8.26e-04	0.0	60.0	-2.77	6.17	-0.04	-0.03	-0.25	7.28
7	100	14.42	1.08	-2.15e-04	1.55	0.0	0.89	8.99	-3.10	-0.02	1.08	8.82
		8.82	-0.79	3.05e-03	0.0	60.0	0.89	10.53	-3.10	-0.02	-0.79	14.42
7	103	4.32	-0.25	-2.59e-05	1.55	0.0	-0.92	6.58	0.60	-0.03	-0.62	-0.48
		-0.48	-0.62	-3.11e-03	0.0	60.0	-0.92	8.13	0.60	-0.03	-0.25	4.32
7	104	14.42	1.08	-1.71e-04	1.55	0.0	1.01	9.09	-3.10	-0.02	1.08	8.75
		8.75	-0.79	3.01e-03	0.0	60.0	1.01	10.64	-3.10	-0.02	-0.79	14.42
7	148	10.77	0.50	-1.14e-04	1.55	0.0	1.31	9.29	-1.91	-0.03	0.50	4.63
		4.63	-0.65	5.99e-04	0.0	60.0	1.31	10.84	-1.91	-0.03	-0.65	10.77
7	149	7.70	-0.15	-8.58e-05	1.55	0.0	-2.35	5.10	-0.25	-0.03	-0.15	4.28
		4.28	-0.30	-6.46e-04	0.0	60.0	-2.35	6.64	-0.25	-0.03	-0.30	7.70
7	164	13.26	0.88	-1.90e-04	1.55	0.0	0.60	8.63	-2.65	-0.02	0.88	7.83
		7.83	-0.72	2.36e-03	0.0	60.0	0.60	10.18	-2.65	-0.02	-0.72	13.26
7	167	5.43	-0.30	-4.24e-05	1.55	0.0	-0.81	6.72	0.22	-0.03	-0.44	0.61
		0.61	-0.44	-2.41e-03	0.0	60.0	-0.81	8.27	0.22	-0.03	-0.30	5.43
7	168	13.26	0.88	-1.55e-04	1.55	0.0	0.70	8.72	-2.65	-0.02	0.88	7.78
		7.78	-0.72	2.33e-03	0.0	60.0	0.70	10.27	-2.65	-0.02	-0.72	13.26
11	1	0.16	0.39	-6.25e-04	-0.49	0.0	-0.14	3.88	0.63	-2.93e-03	-0.40	-4.37
		-4.37	-0.40	-8.48e-05	0.0	125.0	-0.14	3.38	0.63	-2.93e-03	0.39	0.16
11	2	0.36	1.69	-3.20e-03	-0.49	0.0	1.40	18.00	-1.46	-0.02	1.69	-21.83
		-21.83	-0.14	6.52e-04	0.0	125.0	1.40	17.50	-1.46	-0.02	-0.14	0.36
11	4	0.32	1.78	-3.05e-03	-0.38	0.0	1.43	17.10	-1.61	-0.02	1.78	-20.82
		-20.82	-0.23	6.72e-04	0.0	125.0	1.43	16.72	-1.61	-0.02	-0.23	0.32
11	5	0.12	0.30	-4.81e-04	-0.38	0.0	-0.11	2.98	0.48	-2.26e-03	-0.31	-3.36
		-3.36	-0.31	-6.52e-05	0.0	125.0	-0.11	2.60	0.48	-2.26e-03	0.30	0.12
11	6	0.25	1.09	-2.20e-03	-0.38	0.0	0.92	12.40	-0.91	-0.01	1.09	-15.00
		-15.00	-0.05	4.26e-04	0.0	125.0	0.92	12.02	-0.91	-0.01	-0.05	0.25
11	7	0.12	0.30	-4.81e-04	-0.38	0.0	-0.11	2.98	0.48	-2.26e-03	-0.31	-3.36
		-3.36	-0.31	-6.52e-05	0.0	125.0	-0.11	2.60	0.48	-2.26e-03	0.30	0.12
11	8	0.22	0.67	-1.68e-03	-0.38	0.0	0.61	9.57	-0.49	-8.87e-03	0.67	-11.51
		-11.51	0.05	2.79e-04	0.0	125.0	0.61	9.19	-0.49	-8.87e-03	0.05	0.22
11	9	0.12	0.30	-4.81e-04	-0.38	0.0	-0.11	2.98	0.48	-2.26e-03	-0.31	-3.36
		-3.36	-0.31	-6.52e-05	0.0	125.0	-0.11	2.60	0.48	-2.26e-03	0.30	0.12
11	10	0.20	0.53	-1.51e-03	-0.38	0.0	0.51	8.63	-0.35	-7.92e-03	0.53	-10.35
		-10.35	0.09	2.30e-04	0.0	125.0	0.51	8.25	-0.35	-7.92e-03	0.09	0.20
11	56	1.37	2.33	-2.47e-03	-0.38	0.0	4.84	15.06	-1.52	-0.02	2.33	-17.34



Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		-17.34	0.88	1.05e-03	0.0	125.0	4.84	14.68	-1.52	-0.02	0.88	1.37
11	68	1.22	3.44	-2.18e-03	-0.38	0.0	5.77	13.39	-2.90	-0.02	3.44	-15.34
		-15.34	0.23	1.37e-03	0.0	125.0	5.77	13.01	-2.90	-0.02	0.23	1.22
11	73	-0.81	-0.05	-8.41e-04	-0.38	0.0	-4.75	3.87	2.20	5.90e-04	-2.39	-5.36
		-5.36	-2.39	-9.09e-04	0.0	125.0	-4.75	3.49	2.20	5.90e-04	-0.05	-0.81
11	97	0.82	1.40	-1.96e-03	-0.38	0.0	2.51	11.75	-0.88	-0.01	1.40	-13.67
		-13.67	0.59	6.42e-04	0.0	125.0	2.51	11.37	-0.88	-0.01	0.59	0.82
11	103	0.74	2.01	-1.80e-03	-0.38	0.0	2.96	10.85	-1.62	-0.01	2.01	-12.60
		-12.60	0.23	8.16e-04	0.0	125.0	2.96	10.47	-1.62	-0.01	0.23	0.74
11	106	-0.33	-0.06	-1.22e-03	-0.38	0.0	-1.94	6.41	0.91	-3.51e-03	-0.95	-8.10
		-8.10	-0.95	-3.57e-04	0.0	125.0	-1.94	6.03	0.91	-3.51e-03	-0.06	-0.33
11	161	0.69	1.20	-1.86e-03	-0.38	0.0	2.07	11.08	-0.75	-0.01	1.20	-12.96
		-12.96	0.49	5.47e-04	0.0	125.0	2.07	10.69	-0.75	-0.01	0.49	0.69
11	167	0.62	1.69	-1.74e-03	-0.38	0.0	2.44	10.33	-1.36	-0.01	1.69	-12.07
		-12.07	0.20	6.89e-04	0.0	125.0	2.44	9.95	-1.36	-0.01	0.20	0.62
11	170	-0.21	-0.03	-1.28e-03	-0.38	0.0	-1.42	6.93	0.65	-4.51e-03	-0.64	-8.63
		-8.63	-0.64	-2.30e-04	0.0	125.0	-1.42	6.54	0.65	-4.51e-03	-0.03	-0.21
12	2	0.13	1.98	-1.22e-04	-0.49	0.0	-4.95	1.12	-2.24	-0.02	1.98	-0.96
		-0.96	-0.82	6.34e-04	0.0	125.0	-4.95	0.63	-2.24	-0.02	-0.82	0.13
12	3	0.02	0.07	-3.73e-05	-0.38	0.0	-1.24	0.47	0.20	-2.42e-03	-0.19	-0.32
		-0.32	-0.19	-6.24e-05	0.0	125.0	-1.24	0.09	0.20	-2.42e-03	0.07	0.02
12	4	0.12	2.04	-1.11e-04	-0.38	0.0	-4.58	0.98	-2.30	-0.02	2.04	-0.87
		-0.87	-0.84	6.53e-04	0.0	125.0	-4.58	0.60	-2.30	-0.02	-0.84	0.12
12	5	0.02	0.07	-3.73e-05	-0.38	0.0	-1.24	0.47	0.20	-2.42e-03	-0.19	-0.32
		-0.32	-0.19	-6.24e-05	0.0	125.0	-1.24	0.09	0.20	-2.42e-03	0.07	0.02
12	6	0.09	1.30	-8.63e-05	-0.38	0.0	-3.46	0.81	-1.47	-0.01	1.30	-0.69
		-0.69	-0.54	4.14e-04	0.0	125.0	-3.46	0.43	-1.47	-0.01	-0.54	0.09
12	7	0.02	0.07	-3.73e-05	-0.38	0.0	-1.24	0.47	0.20	-2.42e-03	-0.19	-0.32
		-0.32	-0.19	-6.24e-05	0.0	125.0	-1.24	0.09	0.20	-2.42e-03	0.07	0.02
12	8	0.07	0.85	-7.16e-05	-0.38	0.0	-2.80	0.71	-0.96	-8.42e-03	0.85	-0.58
		-0.58	-0.35	2.71e-04	0.0	125.0	-2.80	0.33	-0.96	-8.42e-03	-0.35	0.07
12	9	0.02	0.07	-3.73e-05	-0.38	0.0	-1.24	0.47	0.20	-2.42e-03	-0.19	-0.32
		-0.32	-0.19	-6.24e-05	0.0	125.0	-1.24	0.09	0.20	-2.42e-03	0.07	0.02
12	10	0.06	0.70	-6.67e-05	-0.38	0.0	-2.57	0.67	-0.80	-7.57e-03	0.70	-0.54
		-0.54	-0.29	2.24e-04	0.0	125.0	-2.57	0.29	-0.80	-7.57e-03	-0.29	0.06
12	68	0.88	4.07	1.29e-04	-0.38	0.0	3.51	-0.62	-4.67	-0.01	4.07	0.88
		-0.14	-1.77	1.28e-03	0.0	125.0	3.51	-1.00	-4.67	-0.01	-1.77	-0.14
12	70	0.34	0.66	-3.19e-04	-0.38	0.0	-11.00	2.36	1.60	-4.87e-03	-1.34	-2.38
		-2.38	-1.34	-4.07e-04	0.0	125.0	-11.00	1.98	1.60	-4.87e-03	0.66	0.34
12	71	1.30	2.75	1.86e-04	-0.38	0.0	5.85	-1.01	-3.20	-0.01	2.75	1.30
		-0.21	-1.25	8.54e-04	0.0	125.0	5.85	-1.40	-3.20	-0.01	-1.25	-0.21
12	73	0.26	1.18	-2.62e-04	-0.38	0.0	-8.66	1.97	3.07	-4.95e-03	-2.66	-1.96
		-1.96	-2.66	-8.34e-04	0.0	125.0	-8.66	1.59	3.07	-4.95e-03	1.18	0.26
12	103	0.30	2.43	4.97e-05	-0.38	0.0	1.13	-0.10	-2.78	-8.61e-03	2.43	0.30
		-0.06	-1.05	7.65e-04	0.0	125.0	1.13	-0.48	-2.78	-8.61e-03	-1.05	-0.06
12	104	0.20	0.28	-1.96e-04	-0.38	0.0	-6.83	1.54	0.66	-5.69e-03	-0.55	-1.48
		-1.48	-0.55	-1.64e-04	0.0	125.0	-6.83	1.16	0.66	-5.69e-03	0.28	0.20
12	105	0.40	1.95	6.28e-05	-0.38	0.0	1.69	-0.19	-2.26	-9.44e-03	1.95	0.40
		-0.07	-0.87	6.11e-04	0.0	125.0	1.69	-0.57	-2.26	-9.44e-03	-0.87	-0.07
12	167	0.12	2.05	2.34e-05	-0.38	0.0	0.29	0.08	-2.35	-8.36e-03	2.05	0.12
		-0.03	-0.89	6.48e-04	0.0	125.0	0.29	-0.31	-2.35	-8.36e-03	-0.89	-0.03
12	168	0.17	0.15	-1.67e-04	-0.38	0.0	-5.89	1.35	0.33	-6.09e-03	-0.26	-1.27
		-1.27	-0.26	-7.44e-05	0.0	125.0	-5.89	0.97	0.33	-6.09e-03	0.15	0.17
12	169	0.19	1.66	3.41e-05	-0.38	0.0	0.74	1.04e-03	-1.92	-9.04e-03	1.66	0.19
		-0.04	-0.74	5.22e-04	0.0	125.0	0.74	-0.38	-1.92	-9.04e-03	-0.74	-0.04
13	1	1.18	0.23	-4.03e-04	-4.14	0.0	-2.11	1.89	-0.07	1.56e-03	0.23	-1.09
		-2.04	-0.16	7.70e-04	0.0	526.1	0.39	-2.25	-0.07	1.56e-03	-0.16	-2.04
13	2	7.22	0.76	-1.97e-03	-25.23	0.0	-15.40	11.05	-0.24	7.61e-03	0.76	-5.51
		-13.73	-0.52	2.61e-03	0.0	526.1	-0.12	-14.18	-0.24	7.61e-03	-0.52	-13.73
13	5	0.90	0.17	-3.10e-04	-3.18	0.0	-1.63	1.45	-0.06	1.20e-03	0.17	-0.84
		-1.57	-0.12	5.92e-04	0.0	526.1	0.30	-1.73	-0.06	1.20e-03	-0.12	-1.57
13	6	4.94	0.53	-1.35e-03	-17.24	0.0	-10.48	7.56	-0.17	5.23e-03	0.53	-3.79
		-9.36	-0.37	1.82e-03	0.0	526.1	-0.04	-9.68	-0.17	5.23e-03	-0.37	-9.36
13	7	0.90	0.17	-3.10e-04	-3.18	0.0	-1.63	1.45	-0.06	1.20e-03	0.17	-0.84
		-1.57	-0.12	5.92e-04	0.0	526.1	0.30	-1.73	-0.06	1.20e-03	-0.12	-1.57
13	8	3.73	0.42	-1.04e-03	-13.03	0.0	-7.83	5.73	-0.14	4.02e-03	0.42	-2.90
		-7.02	-0.29	1.45e-03	0.0	526.1	0.06	-7.30	-0.14	4.02e-03	-0.29	-7.02
13	9	0.90	0.17	-3.10e-04	-3.18	0.0	-1.63	1.45	-0.06	1.20e-03	0.17	-0.84
		-1.57	-0.12	5.92e-04	0.0	526.1	0.30	-1.73	-0.06	1.20e-03	-0.12	-1.57
13	10	3.32	0.39	-9.31e-04	-11.62	0.0	-6.94	5.12	-0.12	3.62e-03	0.39	-2.61
		-6.24	-0.27	1.33e-03	0.0	526.1	0.10	-6.50	-0.12	3.62e-03	-0.27	-6.24



Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
13	56	9.37	3.27	-0.01	-11.62	0.0	15.90	10.65	-1.24	0.06	3.27	-16.31
		-16.31	-3.27	0.03	0.0	526.1	22.93	-0.97	-1.24	0.06	-3.27	9.17
13	61	11.89	2.68	0.01	-11.62	0.0	-30.68	-0.72	0.97	-0.05	-2.42	11.89
		-22.45	-2.42	-0.03	0.0	526.1	-23.64	-12.34	0.97	-0.05	2.68	-22.45
13	64	10.06	3.19	-0.01	-11.62	0.0	16.80	10.95	-1.22	0.06	3.19	-17.10
		-17.10	-3.21	0.03	0.0	526.1	23.83	-0.67	-1.22	0.06	-3.21	9.96
13	74	12.38	2.57	0.01	-11.62	0.0	-26.48	-0.90	0.92	-0.05	-2.24	12.38
		-22.89	-2.24	-0.03	0.0	526.1	-19.44	-12.51	0.92	-0.05	2.57	-22.89
13	97	4.95	1.95	-5.89e-03	-11.62	0.0	4.97	8.19	-0.73	0.03	1.95	-10.23
		-10.23	-1.90	0.02	0.0	526.1	12.01	-3.43	-0.73	0.03	-1.90	2.30
13	104	6.05	1.35	5.76e-03	-11.62	0.0	-19.34	1.99	0.47	-0.03	-1.14	5.17
		-14.94	-1.14	-0.01	0.0	526.1	-12.30	-9.63	0.47	-0.03	1.35	-14.94
13	105	5.01	1.92	-5.99e-03	-11.62	0.0	5.46	8.25	-0.72	0.03	1.92	-10.38
		-10.38	-1.88	0.02	0.0	526.1	12.49	-3.37	-0.72	0.03	-1.88	2.45
13	106	6.28	1.30	6.00e-03	-11.62	0.0	-18.33	1.85	0.45	-0.03	-1.07	5.53
		-15.31	-1.07	-0.01	0.0	526.1	-11.29	-9.77	0.45	-0.03	1.30	-15.31
13	161	4.21	1.60	-4.60e-03	-11.62	0.0	2.34	7.50	-0.60	0.03	1.60	-8.53
		-8.53	-1.54	0.01	0.0	526.1	9.37	-4.11	-0.60	0.03	-1.54	0.39
13	168	5.05	0.99	4.45e-03	-11.62	0.0	-16.59	2.69	0.34	-0.02	-0.80	3.42
		-12.99	-0.80	-0.01	0.0	526.1	-9.55	-8.93	0.34	-0.02	0.99	-12.99
13	169	4.24	1.58	-4.67e-03	-11.62	0.0	2.71	7.55	-0.59	0.03	1.58	-8.63
		-8.63	-1.52	0.01	0.0	526.1	9.74	-4.07	-0.59	0.03	-1.52	0.50
13	170	5.20	0.95	4.63e-03	-11.62	0.0	-15.77	2.58	0.32	-0.02	-0.75	3.72
		-13.29	-0.75	-0.01	0.0	526.1	-8.73	-9.04	0.32	-0.02	0.95	-13.29
14	2	0.52	0.01	-9.35e-06	-8.41	0.0	0.02	4.22	0.02	-4.23e-06	-0.01	-1.07
		-1.07	-0.01	1.08e-06	0.0	150.0	0.02	-4.19	0.02	-4.23e-06	0.01	-1.04
14	3	0.07	-8.25e-04	-1.18e-06	-1.06	0.0	2.20e-03	0.53	-6.73e-04	-1.34e-06	-8.25e-04	-0.13
		-0.13	-1.83e-03	0.0	0.0	150.0	2.20e-03	-0.53	-6.73e-04	-1.34e-06	-1.83e-03	-0.13
14	4	0.50	0.01	-8.99e-06	-8.09	0.0	0.02	4.06	0.02	-3.82e-06	-0.01	-1.03
		-1.03	-0.01	0.0	0.0	150.0	0.02	-4.03	0.02	-3.82e-06	0.01	-1.00
14	5	0.07	-8.25e-04	-1.18e-06	-1.06	0.0	2.20e-03	0.53	-6.73e-04	-1.34e-06	-8.25e-04	-0.13
		-0.13	-1.83e-03	0.0	0.0	150.0	2.20e-03	-0.53	-6.73e-04	-1.34e-06	-1.83e-03	-0.13
14	6	0.36	8.80e-03	-6.39e-06	-5.75	0.0	0.01	2.88	0.01	-3.00e-06	-9.60e-03	-0.73
		-0.73	-9.60e-03	0.0	0.0	150.0	0.01	-2.86	0.01	-3.00e-06	8.80e-03	-0.71
14	7	0.07	-8.25e-04	-1.18e-06	-1.06	0.0	2.20e-03	0.53	-6.73e-04	-1.34e-06	-8.25e-04	-0.13
		-0.13	-1.83e-03	0.0	0.0	150.0	2.20e-03	-0.53	-6.73e-04	-1.34e-06	-1.83e-03	-0.13
14	8	0.27	5.61e-03	-4.83e-06	-4.34	0.0	0.01	2.18	8.38e-03	-2.50e-06	-6.97e-03	-0.55
		-0.55	-6.97e-03	0.0	0.0	150.0	0.01	-2.16	8.38e-03	-2.50e-06	5.61e-03	-0.54
14	9	0.07	-8.25e-04	-1.18e-06	-1.06	0.0	2.20e-03	0.53	-6.73e-04	-1.34e-06	-8.25e-04	-0.13
		-0.13	-1.83e-03	0.0	0.0	150.0	2.20e-03	-0.53	-6.73e-04	-1.34e-06	-1.83e-03	-0.13
14	10	0.24	4.54e-03	-4.31e-06	-3.87	0.0	8.92e-03	1.94	7.09e-03	-2.34e-06	-6.09e-03	-0.49
		-0.49	-6.09e-03	0.0	0.0	150.0	8.92e-03	-1.93	7.09e-03	-2.34e-06	4.54e-03	-0.48
14	52	0.25	0.06	-4.47e-06	-3.87	0.0	-0.02	1.93	0.09	1.15e-06	-0.07	-0.47
		-0.47	-0.07	7.85e-06	0.0	150.0	-0.02	-1.95	0.09	1.15e-06	0.06	-0.49
14	57	0.24	0.06	-4.14e-06	-3.87	0.0	0.03	1.96	-0.07	-5.82e-06	0.06	-0.51
		-0.51	-0.05	-6.50e-06	0.0	150.0	0.03	-1.91	-0.07	-5.82e-06	-0.05	-0.47
14	67	0.25	0.06	-4.48e-06	-3.87	0.0	-0.02	1.93	0.09	2.29e-06	-0.07	-0.47
		-0.47	-0.07	7.83e-06	0.0	150.0	-0.02	-1.95	0.09	2.29e-06	0.06	-0.49
14	74	0.24	0.06	-4.13e-06	-3.87	0.0	0.04	1.96	-0.07	-6.96e-06	0.06	-0.51
		-0.51	-0.05	-6.49e-06	0.0	150.0	0.04	-1.91	-0.07	-6.96e-06	-0.05	-0.47
14	95	0.24	0.03	-4.40e-06	-3.87	0.0	-5.41e-03	1.93	0.05	0.0	-0.04	-0.48
		-0.48	-0.04	4.65e-06	0.0	150.0	-5.41e-03	-1.94	0.05	0.0	0.03	-0.49
14	103	0.24	0.03	-4.40e-06	-3.87	0.0	-5.62e-03	1.93	0.05	0.0	-0.04	-0.48
		-0.48	-0.04	4.56e-06	0.0	150.0	-5.62e-03	-1.94	0.05	0.0	0.03	-0.49
14	106	0.24	0.03	-4.21e-06	-3.87	0.0	0.02	1.95	-0.04	-4.62e-06	0.03	-0.50
		-0.50	-0.02	-3.22e-06	0.0	150.0	0.02	-1.92	-0.04	-4.62e-06	-0.02	-0.48
14	159	0.24	0.03	-4.38e-06	-3.87	0.0	-2.22e-03	1.94	0.04	0.0	-0.03	-0.48
		-0.48	-0.03	3.76e-06	0.0	150.0	-2.22e-03	-1.94	0.04	0.0	0.03	-0.48
14	167	0.24	0.03	-4.38e-06	-3.87	0.0	-2.38e-03	1.94	0.04	0.0	-0.03	-0.48
		-0.48	-0.03	3.68e-06	0.0	150.0	-2.38e-03	-1.94	0.04	0.0	0.03	-0.48
14	170	0.24	0.02	-4.23e-06	-3.87	0.0	0.02	1.95	-0.03	-4.10e-06	0.02	-0.50
		-0.50	-0.02	-2.34e-06	0.0	150.0	0.02	-1.92	-0.03	-4.10e-06	-0.02	-0.48
15	2	8.00	0.88	3.59e-03	25.23	0.0	-12.81	-13.49	0.30	-2.17e-03	-0.72	8.00
		-10.92	-0.72	-2.82e-03	0.0	526.1	2.47	11.74	0.30	-2.17e-03	0.88	3.40
15	6	5.56	0.61	2.44e-03	17.24	0.0	-8.56	-9.25	0.21	-1.46e-03	-0.50	5.56
		-7.46	-0.50	-1.96e-03	0.0	526.1	1.88	8.00	0.21	-1.46e-03	0.61	2.27
15	8	4.40	0.49	1.83e-03	13.03	0.0	-6.03	-7.05	0.17	-1.05e-03	-0.41	4.40
		-5.61	-0.41	-1.57e-03	0.0	526.1	1.86	5.98	0.17	-1.05e-03	0.49	1.59
15	10	4.01	0.45	1.63e-03	11.62	0.0	-5.19	-6.31	0.16	-9.09e-04	-0.38	4.01
		-5.00	-0.38	-1.44e-03	0.0	526.1	1.85	5.31	0.16	-9.09e-04	0.45	1.37
15	56	8.01	3.27	-9.44e-03	11.62	0.0	-9.54	-3.36	1.22	0.05	-3.16	-4.68

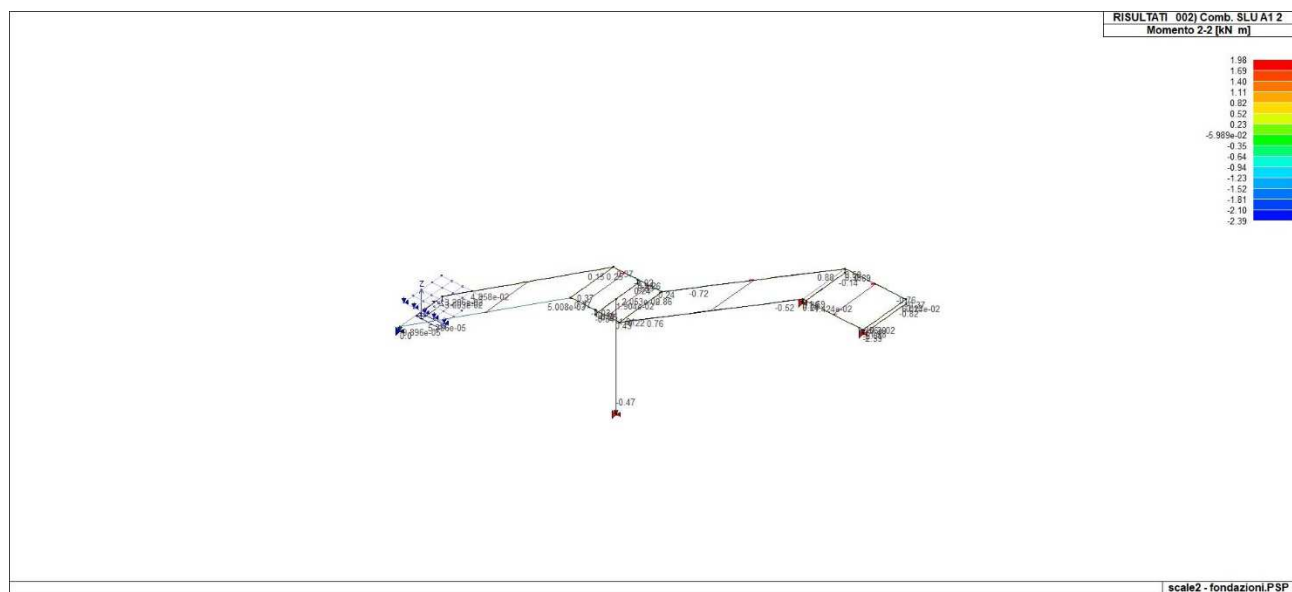
Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		-7.28	-3.16	-0.03	0.0	526.1	-2.50	8.26	1.22	0.05	3.27	8.01
15	68	8.84	3.06	-0.01	11.62	0.0	-10.78	-3.51	1.14	0.05	-2.92	-4.04
		-6.58	-2.92	-0.03	0.0	526.1	-3.75	8.11	1.14	0.05	3.06	8.84
15	69	12.81	2.35	9.45e-03	11.62	0.0	-0.48	-9.32	-0.89	-0.05	2.35	12.81
		-6.67	-2.32	0.03	0.0	526.1	6.56	2.30	-0.89	-0.05	-2.32	-5.44
15	73	12.06	2.17	0.01	11.62	0.0	0.40	-9.12	-0.82	-0.05	2.17	12.06
		-7.35	-2.15	0.03	0.0	526.1	7.44	2.50	-0.82	-0.05	-2.15	-6.10
15	74	11.68	2.11	0.01	11.62	0.0	-0.11	-9.28	-0.80	-0.05	2.11	11.68
		-8.00	-2.09	0.03	0.0	526.1	6.93	2.34	-0.80	-0.05	-2.09	-6.80
15	97	5.21	1.98	-5.24e-03	11.62	0.0	-7.49	-4.65	0.74	0.03	-1.89	-0.65
		-5.62	-1.89	-0.02	0.0	526.1	-0.45	6.97	0.74	0.03	1.98	5.21
15	103	5.66	1.87	-5.65e-03	11.62	0.0	-8.09	-4.72	0.69	0.03	-1.76	-0.31
		-5.24	-1.76	-0.02	0.0	526.1	-1.06	6.90	0.69	0.03	1.87	5.66
15	104	8.74	1.10	5.33e-03	11.62	0.0	-2.70	-8.01	-0.41	-0.03	1.10	8.74
		-5.60	-1.05	0.01	0.0	526.1	4.34	3.61	-0.41	-0.03	-1.05	-2.57
15	106	8.33	1.00	5.67e-03	11.62	0.0	-2.29	-7.90	-0.37	-0.03	1.00	8.33
		-5.97	-0.96	0.01	0.0	526.1	4.75	3.72	-0.37	-0.03	-0.96	-2.92
15	161	4.35	1.64	-4.09e-03	11.62	0.0	-6.98	-5.01	0.61	0.02	-1.55	0.38
		-5.41	-1.55	-0.01	0.0	526.1	0.06	6.60	0.61	0.02	1.64	4.35
15	167	4.71	1.55	-4.41e-03	11.62	0.0	-7.46	-5.08	0.57	0.02	-1.45	0.66
		-5.09	-1.45	-0.01	0.0	526.1	-0.42	6.54	0.57	0.02	1.55	4.71
15	168	7.69	0.77	4.31e-03	11.62	0.0	-3.25	-7.63	-0.28	-0.02	0.77	7.69
		-5.33	-0.72	0.01	0.0	526.1	3.78	3.99	-0.28	-0.02	-0.72	-1.68
15	170	7.35	0.69	4.60e-03	11.62	0.0	-2.92	-7.54	-0.25	-0.02	0.69	7.35
		-5.64	-0.64	0.01	0.0	526.1	4.11	4.08	-0.25	-0.02	-0.64	-1.97
16	1	0.09	0.20	-5.76e-04	1.38	0.0	0.50	-0.76	0.24	7.21e-03	-0.15	0.09
		-0.23	-0.15	-7.79e-05	0.0	150.0	0.50	0.62	0.24	7.21e-03	0.20	-0.02
16	2	3.23	0.89	-3.08e-03	8.41	0.0	-2.50	-6.18	-1.10	0.04	0.89	3.23
		-0.18	-0.76	-3.77e-04	0.0	150.0	-2.50	2.23	-1.10	0.04	-0.76	0.27
16	4	3.21	0.93	-2.94e-03	8.09	0.0	-2.62	-6.01	-1.15	0.04	0.93	3.21
		-0.13	-0.80	-3.61e-04	0.0	150.0	-2.62	2.08	-1.15	0.04	-0.80	0.27
16	5	0.07	0.16	-4.43e-04	1.06	0.0	0.38	-0.58	0.18	5.55e-03	-0.12	0.07
		-0.17	-0.12	-5.99e-05	0.0	150.0	0.38	0.48	0.18	5.55e-03	0.16	-0.01
16	6	2.16	0.58	-2.11e-03	5.75	0.0	-1.62	-4.20	-0.71	0.03	0.58	2.16
		-0.14	-0.48	-2.58e-04	0.0	150.0	-1.62	1.55	-0.71	0.03	-0.48	0.18
16	7	0.07	0.16	-4.43e-04	1.06	0.0	0.38	-0.58	0.18	5.55e-03	-0.12	0.07
		-0.17	-0.12	-5.99e-05	0.0	150.0	0.38	0.48	0.18	5.55e-03	0.16	-0.01
16	8	1.53	0.37	-1.61e-03	4.34	0.0	-1.02	-3.11	-0.44	0.02	0.37	1.53
		-0.14	-0.29	-1.97e-04	0.0	150.0	-1.02	1.23	-0.44	0.02	-0.29	0.12
16	9	0.07	0.16	-4.43e-04	1.06	0.0	0.38	-0.58	0.18	5.55e-03	-0.12	0.07
		-0.17	-0.12	-5.99e-05	0.0	150.0	0.38	0.48	0.18	5.55e-03	0.16	-0.01
16	10	1.32	0.30	-1.44e-03	3.87	0.0	-0.82	-2.75	-0.35	0.02	0.30	1.32
		-0.14	-0.23	-1.77e-04	0.0	150.0	-0.82	1.12	-0.35	0.02	-0.23	0.10
16	68	7.94	2.62	-2.31e-03	3.87	0.0	-5.70	-6.92	-3.24	0.03	2.62	7.94
		0.49	-2.24	-3.24e-04	0.0	150.0	-5.70	-3.05	-3.24	0.03	-2.24	0.49
16	70	-0.15	1.07	-5.09e-04	3.87	0.0	2.82	2.42	1.62	0.01	-1.35	-6.72
		-6.72	-1.35	-1.42e-04	0.0	150.0	2.82	6.30	1.62	0.01	1.07	-0.15
16	71	9.37	1.95	-2.38e-03	3.87	0.0	-4.46	-7.93	-2.32	0.03	1.95	9.37
		0.35	-1.53	-2.75e-04	0.0	150.0	-4.46	-4.06	-2.32	0.03	-1.53	0.35
16	73	-0.29	1.78	-5.79e-04	3.87	0.0	4.07	1.42	2.53	4.65e-03	-2.02	-5.29
		-5.29	-2.02	1.63e-04	0.0	150.0	4.07	5.29	2.53	4.65e-03	1.78	-0.29
16	103	5.17	1.51	-1.85e-03	3.87	0.0	-3.39	-5.19	-1.85	0.02	1.51	5.17
		0.30	-1.27	-2.36e-04	0.0	150.0	-3.39	-1.32	-1.85	0.02	-1.27	0.30
16	104	-0.05	0.55	-8.66e-04	3.87	0.0	1.29	-0.06	0.81	0.01	-0.67	-2.88
		-2.88	-0.67	-1.42e-04	0.0	150.0	1.29	3.82	0.81	0.01	0.55	-0.05
16	105	5.53	1.27	-2.02e-03	3.87	0.0	-2.93	-5.45	-1.52	0.02	1.27	5.53
		0.25	-1.00	-2.18e-04	0.0	150.0	-2.93	-1.58	-1.52	0.02	-1.00	0.25
16	106	-0.10	0.81	-1.03e-03	3.87	0.0	1.76	-0.32	1.15	0.01	-0.91	-2.52
		-2.54	-0.91	-1.42e-04	0.0	150.0	1.76	3.56	1.15	0.01	0.81	-0.10
16	167	4.30	1.25	-1.76e-03	3.87	0.0	-2.83	-4.64	-1.53	0.02	1.25	4.30
		0.26	-1.04	-2.24e-04	0.0	150.0	-2.83	-0.77	-1.53	0.02	-1.04	0.26
16	168	-0.02	0.37	-9.92e-04	3.87	0.0	0.81	-0.65	0.54	0.01	-0.45	-1.95
		-2.03	-0.45	-1.47e-04	0.0	150.0	0.81	3.22	0.54	0.01	0.37	-0.02
16	169	4.60	1.05	-1.90e-03	3.87	0.0	-2.45	-4.85	-1.25	0.02	1.05	4.60
		0.22	-0.82	-2.08e-04	0.0	150.0	-2.45	-0.98	-1.25	0.02	-0.82	0.22
16	170	-0.06	0.59	-1.13e-03	3.87	0.0	1.19	-0.87	0.82	0.01	-0.65	-1.65
		-1.80	-0.65	-1.43e-04	0.0	150.0	1.19	3.01	0.82	0.01	0.59	-0.06
21	1	0.11	0.08	-5.72e-04	-0.25	0.0	-0.90	7.49	0.15	-9.02e-04	-0.01	-4.49
		-4.49	-0.01	-1.66e-05	0.0	62.5	-0.90	7.24	0.15	-9.02e-04	0.08	0.11
21	2	0.59	0.24	-2.43e-03	-0.25	0.0	-4.82	39.22	0.36	5.40e-03	0.02	-23.85
		-23.85	0.02	2.72e-04	0.0	62.5	-4.82	38.98	0.36	5.40e-03	0.24	0.59

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
21	3	0.08	0.06	-4.40e-04	-0.19	0.0	-0.69	5.76	0.12	-6.94e-04	-9.97e-03	-3.46
		-3.46	-9.97e-03	-1.27e-05	0.0	62.5	-0.69	5.57	0.12	-6.94e-04	0.06	0.08
21	5	0.08	0.06	-4.40e-04	-0.19	0.0	-0.69	5.76	0.12	-6.94e-04	-9.97e-03	-3.46
		-3.46	-9.97e-03	-1.27e-05	0.0	62.5	-0.69	5.57	0.12	-6.94e-04	0.06	0.08
21	6	0.40	0.17	-1.68e-03	-0.19	0.0	-3.31	26.92	0.25	3.51e-03	0.01	-16.36
		-16.36	0.01	1.80e-04	0.0	62.5	-3.31	26.73	0.25	3.51e-03	0.17	0.40
21	7	0.08	0.06	-4.40e-04	-0.19	0.0	-0.69	5.76	0.12	-6.94e-04	-9.97e-03	-3.46
		-3.46	-9.97e-03	-1.27e-05	0.0	62.5	-0.69	5.57	0.12	-6.94e-04	0.06	0.08
21	8	0.31	0.14	-1.31e-03	-0.19	0.0	-2.52	20.57	0.21	2.25e-03	5.66e-03	-12.49
		-12.49	5.66e-03	1.22e-04	0.0	62.5	-2.52	20.38	0.21	2.25e-03	0.14	0.31
21	9	0.08	0.06	-4.40e-04	-0.19	0.0	-0.69	5.76	0.12	-6.94e-04	-9.97e-03	-3.46
		-3.46	-9.97e-03	-1.27e-05	0.0	62.5	-0.69	5.57	0.12	-6.94e-04	0.06	0.08
21	10	0.28	0.13	-1.18e-03	-0.19	0.0	-2.26	18.46	0.20	1.83e-03	3.42e-03	-11.20
		-11.20	3.42e-03	1.03e-04	0.0	62.5	-2.26	18.26	0.20	1.83e-03	0.13	0.28
21	54	0.81	-0.09	7.85e-03	-0.19	0.0	-7.79	26.56	1.17	3.38e-03	-0.09	-15.82
		-15.82	-0.30	-5.55e-03	0.0	62.5	-7.79	26.37	1.17	3.38e-03	-0.30	0.81
21	55	-0.26	0.55	-0.01	-0.19	0.0	3.27	10.35	-0.77	2.74e-04	0.09	-6.58
		-6.58	0.09	5.76e-03	0.0	62.5	3.27	10.16	-0.77	2.74e-04	0.55	-0.26
21	96	0.56	-0.05	3.81e-03	-0.19	0.0	-5.18	21.92	0.50	2.04e-03	-0.05	-13.14
		-13.14	-0.27	-3.01e-03	0.0	62.5	-5.18	21.73	0.50	2.04e-03	-0.27	0.56
21	97	-5.30e-03	0.53	-6.17e-03	-0.19	0.0	0.66	14.99	-0.11	1.62e-03	0.05	-9.26
		-9.26	0.05	3.21e-03	0.0	62.5	0.66	14.80	-0.11	1.62e-03	0.53	-5.30e-03
21	100	0.54	-0.05	4.00e-03	-0.19	0.0	-5.06	21.66	-0.53	2.49e-03	-0.05	-13.00
		-13.00	-0.37	-3.09e-03	0.0	62.5	-5.06	21.47	-0.53	2.49e-03	-0.37	0.54
21	101	6.38e-03	0.63	-6.37e-03	-0.19	0.0	0.54	15.25	0.93	1.16e-03	0.05	-9.40
		-9.40	0.05	3.30e-03	0.0	62.5	0.54	15.06	0.93	1.16e-03	0.63	6.38e-03
21	117	0.34	-0.04	1.88e-03	-0.19	0.0	-3.10	14.50	-1.97	-3.34e-03	-0.04	-8.70
		-8.70	-1.26	-1.65e-03	0.0	62.5	-3.10	14.31	-1.97	-3.34e-03	-1.26	0.34
21	120	0.21	1.51	-4.25e-03	-0.19	0.0	-1.42	22.41	2.37	6.99e-03	0.05	-13.70
		-13.70	0.05	1.85e-03	0.0	62.5	-1.42	22.22	2.37	6.99e-03	1.51	0.21
21	126	0.54	0.77	1.25e-03	-0.19	0.0	-4.74	27.50	1.72	4.21e-03	-0.02	-16.62
		-16.62	-0.02	-1.52e-03	0.0	62.5	-4.74	27.31	1.72	4.21e-03	0.77	0.54
21	160	0.49	-0.04	2.69e-03	-0.19	0.0	-4.54	21.22	0.44	1.93e-03	-0.04	-12.75
		-12.75	-0.20	-2.31e-03	0.0	62.5	-4.54	21.03	0.44	1.93e-03	-0.20	0.49
21	161	0.06	0.45	-5.06e-03	-0.19	0.0	0.02	15.69	-0.04	1.72e-03	0.04	-9.65
		-9.65	0.04	2.52e-03	0.0	62.5	0.02	15.50	-0.04	1.72e-03	0.45	0.06
21	164	0.49	-0.04	2.84e-03	-0.19	0.0	-4.45	21.02	-0.38	2.30e-03	-0.04	-12.64
		-12.64	-0.27	-2.38e-03	0.0	62.5	-4.45	20.83	-0.38	2.30e-03	-0.27	0.49
21	165	0.07	0.52	-5.21e-03	-0.19	0.0	-0.08	15.89	0.78	1.36e-03	0.04	-9.76
		-9.76	0.04	2.58e-03	0.0	62.5	-0.08	15.70	0.78	1.36e-03	0.52	0.07
22	2	-5.52	0.43	-3.78e-04	-3.36	0.0	-8.31	21.69	1.96	-0.06	-0.75	-17.52
		-17.52	-0.75	1.65e-04	0.0	60.0	-8.31	18.32	1.96	-0.06	0.43	-5.52
22	3	-0.83	0.06	-4.91e-05	-0.42	0.0	-0.86	2.86	0.25	-6.45e-03	-0.09	-2.43
		-2.43	-0.09	-1.86e-05	0.0	60.0	-0.86	2.44	0.25	-6.45e-03	0.06	-0.83
22	5	-0.83	0.06	-4.91e-05	-0.42	0.0	-0.86	2.86	0.25	-6.45e-03	-0.09	-2.43
		-2.43	-0.09	-1.86e-05	0.0	60.0	-0.86	2.44	0.25	-6.45e-03	0.06	-0.83
22	6	-3.79	0.29	-2.58e-04	-2.30	0.0	-5.65	14.84	1.34	-0.04	-0.51	-12.00
		-12.00	-0.51	1.07e-04	0.0	60.0	-5.65	12.54	1.34	-0.04	0.29	-3.79
22	7	-0.83	0.06	-4.91e-05	-0.42	0.0	-0.86	2.86	0.25	-6.45e-03	-0.09	-2.43
		-2.43	-0.09	-1.86e-05	0.0	60.0	-0.86	2.44	0.25	-6.45e-03	0.06	-0.83
22	8	-2.90	0.22	-1.95e-04	-1.74	0.0	-4.21	11.25	1.01	-0.03	-0.38	-9.13
		-9.13	-0.38	6.96e-05	0.0	60.0	-4.21	9.51	1.01	-0.03	0.22	-2.90
22	9	-0.83	0.06	-4.91e-05	-0.42	0.0	-0.86	2.86	0.25	-6.45e-03	-0.09	-2.43
		-2.43	-0.09	-1.86e-05	0.0	60.0	-0.86	2.44	0.25	-6.45e-03	0.06	-0.83
22	10	-2.61	0.20	-1.75e-04	-1.55	0.0	-3.74	10.05	0.90	-0.03	-0.34	-8.17
		-8.17	-0.34	5.70e-05	0.0	60.0	-3.74	8.50	0.90	-0.03	0.20	-2.61
22	52	-16.95	1.51	-2.12e-04	-1.55	0.0	13.34	6.79	3.90	-0.03	-1.01	-20.37
		-20.37	-1.01	5.58e-03	0.0	60.0	13.34	5.24	3.90	-0.03	1.51	-16.95
22	57	11.74	0.32	-1.43e-04	-1.55	0.0	-20.82	13.31	-2.10	-0.03	0.32	4.02
		4.02	-1.12	-5.47e-03	0.0	60.0	-20.82	11.76	-2.10	-0.03	-1.12	11.74
22	68	-17.22	1.32	-2.11e-04	-1.55	0.0	13.98	6.50	3.33	-0.03	-0.99	-20.40
		-20.40	-0.99	5.76e-03	0.0	60.0	13.98	4.95	3.33	-0.03	1.32	-17.22
22	70	11.71	-0.21	-1.48e-04	-1.55	0.0	-23.08	17.03	0.17	-0.03	-0.21	2.75
		2.75	-0.41	-5.66e-03	0.0	60.0	-23.08	15.49	0.17	-0.03	-0.41	11.71
22	71	-16.92	0.80	-2.05e-04	-1.55	0.0	15.61	3.06	1.63	-0.02	-0.47	-19.10
		-19.10	-0.47	5.77e-03	0.0	60.0	15.61	1.52	1.63	-0.02	0.80	-16.92
22	74	12.36	-0.03	-1.56e-04	-1.55	0.0	-22.27	15.54	-0.47	-0.03	-0.03	3.23
		3.23	-0.61	-5.68e-03	0.0	60.0	-22.27	13.99	-0.47	-0.03	-0.61	12.36
22	95	-10.59	0.84	-1.91e-04	-1.55	0.0	5.88	7.67	2.28	-0.02	-0.63	-14.64
		-14.64	-0.63	3.10e-03	0.0	60.0	5.88	6.12	2.28	-0.02	0.84	-10.59
22	103	-10.74	0.73	-1.91e-04	-1.55	0.0	6.23	7.52	1.96	-0.02	-0.61	-14.65

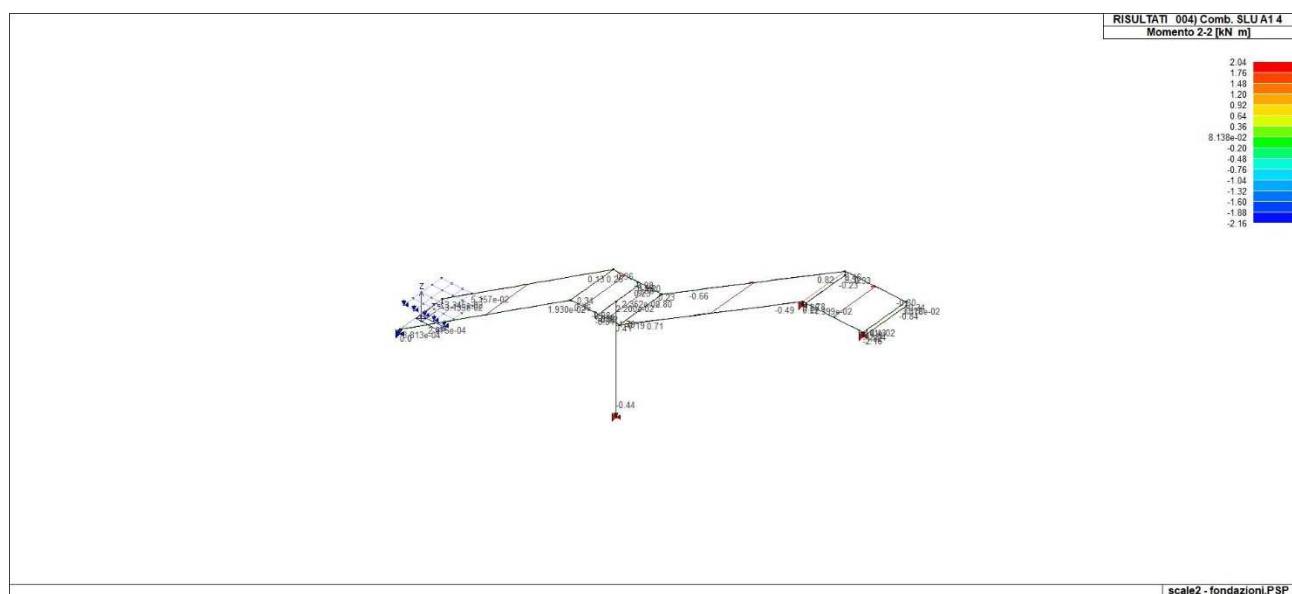
Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		-14.65	-0.61	3.19e-03	0.0	60.0	6.23	5.97	1.96	-0.02	0.73	-10.74
22	104	5.15	-0.17	-1.54e-04	-1.55	0.0	-14.14	13.38	0.17	-0.03	-0.17	-1.95
		-1.95	-0.23	-3.07e-03	0.0	60.0	-14.14	11.83	0.17	-0.03	-0.23	5.15
22	105	-10.37	0.62	-1.95e-04	-1.55	0.0	6.66	6.72	1.63	-0.02	-0.52	-14.40
		-14.40	-0.52	3.18e-03	0.0	60.0	6.66	5.17	1.63	-0.02	0.62	-10.37
22	106	5.52	-0.07	-1.58e-04	-1.55	0.0	-13.70	12.58	-0.16	-0.03	-0.07	-1.69
		-1.69	-0.33	-3.08e-03	0.0	60.0	-13.70	11.03	-0.16	-0.03	-0.33	5.52
22	159	-8.82	0.70	-1.87e-04	-1.55	0.0	3.73	8.19	1.99	-0.02	-0.57	-13.20
		-13.20	-0.57	2.41e-03	0.0	60.0	3.73	6.64	1.99	-0.02	0.70	-8.82
22	167	-8.92	0.62	-1.87e-04	-1.55	0.0	3.99	8.08	1.75	-0.02	-0.56	-13.21
		-13.21	-0.56	2.49e-03	0.0	60.0	3.99	6.53	1.75	-0.02	0.62	-8.92
22	168	3.41	-0.13	-1.59e-04	-1.55	0.0	-11.82	12.68	0.33	-0.03	-0.20	-3.35
		-3.35	-0.20	-2.37e-03	0.0	60.0	-11.82	11.13	0.33	-0.03	-0.13	3.41
22	169	-8.63	0.53	-1.90e-04	-1.55	0.0	4.34	7.42	1.48	-0.02	-0.48	-13.00
		-13.00	-0.48	2.48e-03	0.0	60.0	4.34	5.87	1.48	-0.02	0.53	-8.63
22	170	3.71	-0.12	-1.62e-04	-1.55	0.0	-11.46	12.02	0.05	-0.03	-0.12	-3.14
		-3.14	-0.22	-2.37e-03	0.0	60.0	-11.46	10.47	0.05	-0.03	-0.22	3.71
23	1	3.73	0.04	-1.35e-05	0.55	0.0	1.42	-2.84	0.49	0.01	-0.26	3.73
		2.19	-0.26	-4.73e-05	0.0	60.0	1.42	-2.29	0.49	0.01	0.04	2.19
23	2	19.70	0.24	6.58e-04	3.36	0.0	-3.11	-21.19	2.51	0.05	-1.26	19.70
		8.00	-1.26	-5.52e-04	0.0	60.0	-3.11	-17.82	2.51	0.05	0.24	8.00
23	3	2.87	0.03	-1.04e-05	0.42	0.0	1.09	-2.19	0.38	8.66e-03	-0.20	2.87
		1.68	-0.20	-3.64e-05	0.0	60.0	1.09	-1.76	0.38	8.66e-03	0.03	1.68
23	4	18.84	0.23	6.56e-04	3.24	0.0	-3.44	-20.53	2.39	0.05	-1.20	18.84
		7.49	-1.20	-5.41e-04	0.0	60.0	-3.44	-17.29	2.39	0.05	0.23	7.49
23	5	2.87	0.03	-1.04e-05	0.42	0.0	1.09	-2.19	0.38	8.66e-03	-0.20	2.87
		1.68	-0.20	-3.64e-05	0.0	60.0	1.09	-1.76	0.38	8.66e-03	0.03	1.68
23	6	13.51	0.17	4.40e-04	2.30	0.0	-1.93	-14.42	1.72	0.03	-0.87	13.51
		5.55	-0.87	-3.73e-04	0.0	60.0	-1.93	-12.12	1.72	0.03	0.17	5.55
23	7	2.87	0.03	-1.04e-05	0.42	0.0	1.09	-2.19	0.38	8.66e-03	-0.20	2.87
		1.68	-0.20	-3.64e-05	0.0	60.0	1.09	-1.76	0.38	8.66e-03	0.03	1.68
23	8	10.32	0.12	3.10e-04	1.74	0.0	-1.02	-10.75	1.32	0.03	-0.67	10.32
		4.39	-0.67	-2.72e-04	0.0	60.0	-1.02	-9.01	1.32	0.03	0.12	4.39
23	9	2.87	0.03	-1.04e-05	0.42	0.0	1.09	-2.19	0.38	8.66e-03	-0.20	2.87
		1.68	-0.20	-3.64e-05	0.0	60.0	1.09	-1.76	0.38	8.66e-03	0.03	1.68
23	10	9.26	0.11	2.67e-04	1.55	0.0	-0.72	-9.52	1.18	0.02	-0.60	9.26
		4.01	-0.60	-2.38e-04	0.0	60.0	-0.72	-7.97	1.18	0.02	0.11	4.01
23	37	12.40	0.59	4.18e-04	1.55	0.0	3.05	-11.08	2.35	0.03	-0.90	12.40
		7.92	-0.90	1.43e-03	0.0	60.0	3.05	-9.53	2.35	0.03	0.59	7.92
23	40	6.11	-0.30	1.16e-04	1.55	0.0	-4.49	-7.97	0.02	0.02	-0.30	6.11
		0.09	-0.37	-1.90e-03	0.0	60.0	-4.49	-6.42	0.02	0.02	-0.37	0.09
23	54	19.06	1.35	5.89e-04	1.55	0.0	2.29	-13.43	4.09	0.02	-1.26	19.06
		12.29	-1.26	5.32e-03	0.0	60.0	2.29	-11.88	4.09	0.02	1.35	12.29
23	62	19.09	1.15	5.37e-04	1.55	0.0	2.27	-13.22	3.52	0.02	-1.24	19.09
		12.29	-1.24	5.51e-03	0.0	60.0	2.27	-11.67	3.52	0.02	1.15	12.29
23	72	0.33	-0.25	-3.96e-05	1.55	0.0	-4.49	-7.50	-0.21	0.03	-0.25	0.33
		-4.78	-0.64	-5.94e-03	0.0	60.0	-4.49	-5.96	-0.21	0.03	-0.64	-4.78
23	96	14.38	0.72	4.35e-04	1.55	0.0	1.07	-11.23	2.54	0.02	-0.90	14.38
		8.66	-0.90	2.80e-03	0.0	60.0	1.07	-9.68	2.54	0.02	0.72	8.66
23	100	14.40	0.60	4.07e-04	1.55	0.0	1.05	-11.11	2.23	0.02	-0.88	14.40
		8.66	-0.88	2.90e-03	0.0	60.0	1.05	-9.56	2.23	0.02	0.60	8.66
23	104	14.39	0.61	4.42e-04	1.55	0.0	1.16	-11.14	2.24	0.02	-0.88	14.39
		8.73	-0.88	2.90e-03	0.0	60.0	1.16	-9.59	2.24	0.02	0.61	8.73
23	105	4.12	-0.32	9.14e-05	1.55	0.0	-2.60	-7.91	0.13	0.03	-0.32	4.12
		-0.71	-0.39	-3.38e-03	0.0	60.0	-2.60	-6.36	0.13	0.03	-0.39	-0.71
23	126	13.74	1.01	4.22e-04	1.55	0.0	-0.15	-13.66	3.76	0.03	-1.30	13.74
		6.17	-1.30	1.48e-03	0.0	60.0	-0.15	-12.11	3.76	0.03	1.01	6.17
23	160	13.24	0.59	3.98e-04	1.55	0.0	0.69	-10.88	2.26	0.02	-0.84	13.24
		7.63	-0.84	2.12e-03	0.0	60.0	0.69	-9.33	2.26	0.02	0.59	7.63
23	164	13.25	0.50	3.75e-04	1.55	0.0	0.67	-10.79	2.02	0.02	-0.82	13.25
		7.63	-0.82	2.20e-03	0.0	60.0	0.67	-9.24	2.02	0.02	0.50	7.63
23	168	13.25	0.50	4.03e-04	1.55	0.0	0.76	-10.81	2.03	0.02	-0.83	13.25
		7.68	-0.83	2.20e-03	0.0	60.0	0.76	-9.26	2.03	0.02	0.50	7.68
23	169	5.26	-0.28	1.30e-04	1.55	0.0	-2.20	-8.24	0.34	0.03	-0.37	5.26
		0.33	-0.37	-2.67e-03	0.0	60.0	-2.20	-6.69	0.34	0.03	-0.28	0.33
24	1	0.05	0.13	9.13e-04	0.54	0.0	0.43	-0.34	-0.11	-1.59e-03	0.13	0.05
		-0.09	-0.01	4.49e-05	0.0	125.0	0.43	0.19	-0.11	-1.59e-03	-0.01	-0.05
24	2	0.05	0.37	3.00e-03	0.54	0.0	2.34	-0.33	-0.09	3.80e-03	0.37	0.05
		-0.08	0.25	-5.75e-04	0.0	125.0	2.34	0.21	-0.09	3.80e-03	0.25	-0.03
24	3	0.04	0.10	7.02e-04	0.42	0.0	0.33	-0.27	-0.09	-1.22e-03	0.10	0.04
		-0.07	-0.01	3.45e-05	0.0	125.0	0.33	0.15	-0.09	-1.22e-03	-0.01	-0.04

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
24	5	0.04	0.10	7.02e-04	0.42	0.0	0.33	-0.27	-0.09	-1.22e-03	0.10	0.04
		-0.07	-0.01	3.45e-05	0.0	125.0	0.33	0.15	-0.09	-1.22e-03	-0.01	-0.04
24	6	0.03	0.26	2.09e-03	0.42	0.0	1.60	-0.26	-0.07	2.37e-03	0.26	0.03
		-0.06	0.17	-3.79e-04	0.0	125.0	1.60	0.16	-0.07	2.37e-03	0.17	-0.02
24	7	0.04	0.10	7.02e-04	0.42	0.0	0.33	-0.27	-0.09	-1.22e-03	0.10	0.04
		-0.07	-0.01	3.45e-05	0.0	125.0	0.33	0.15	-0.09	-1.22e-03	-0.01	-0.04
24	8	0.03	0.21	1.68e-03	0.42	0.0	1.22	-0.26	-0.08	1.29e-03	0.21	0.03
		-0.07	0.11	-2.55e-04	0.0	125.0	1.22	0.16	-0.08	1.29e-03	0.11	-0.03
24	9	0.04	0.10	7.02e-04	0.42	0.0	0.33	-0.27	-0.09	-1.22e-03	0.10	0.04
		-0.07	-0.01	3.45e-05	0.0	125.0	0.33	0.15	-0.09	-1.22e-03	-0.01	-0.04
24	10	0.03	0.19	1.54e-03	0.42	0.0	1.10	-0.26	-0.08	9.33e-04	0.19	0.03
		-0.07	0.10	-2.14e-04	0.0	125.0	1.10	0.16	-0.08	9.33e-04	0.10	-0.03
24	44	1.59	1.54	0.02	0.42	0.0	0.26	1.99	1.63	0.02	-0.62	-1.16
		-1.16	-0.62	-0.01	0.0	125.0	0.26	2.40	1.63	0.02	1.54	1.59
24	49	1.23	1.01	-0.02	0.42	0.0	1.93	-2.51	-1.79	-0.02	1.01	1.23
		-1.65	-1.35	0.01	0.0	125.0	1.93	-2.09	-1.79	-0.02	-1.35	-1.65
24	67	1.63	1.12	0.02	0.42	0.0	0.01	2.06	1.85	0.02	-0.92	-1.20
		-1.20	-0.92	-0.01	0.0	125.0	0.01	2.47	1.85	0.02	1.12	1.63
24	70	1.23	1.15	-0.02	0.42	0.0	2.33	-2.51	-1.75	-0.02	1.15	1.23
		-1.65	-0.77	0.01	0.0	125.0	2.33	-2.09	-1.75	-0.02	-0.77	-1.65
24	71	1.59	0.96	0.02	0.42	0.0	-0.14	1.99	1.59	0.02	-0.76	-1.16
		-1.16	-0.76	-0.01	0.0	125.0	-0.14	2.40	1.59	0.02	0.96	1.59
24	74	1.27	1.31	-0.02	0.42	0.0	2.18	-2.58	-2.01	-0.02	1.31	1.27
		-1.69	-0.93	0.01	0.0	125.0	2.18	-2.16	-2.01	-0.02	-0.93	-1.69
24	91	0.86	0.81	0.01	0.42	0.0	0.56	0.98	0.98	0.01	-0.33	-0.62
		-0.62	-0.33	-6.57e-03	0.0	125.0	0.56	1.40	0.98	0.01	0.81	0.86
24	94	0.69	0.72	-8.21e-03	0.42	0.0	1.63	-1.50	-1.14	-0.01	0.72	0.69
		-0.92	-0.62	6.14e-03	0.0	125.0	1.63	-1.09	-1.14	-0.01	-0.62	-0.92
24	103	0.88	0.74	0.01	0.42	0.0	0.56	1.00	0.86	0.01	-0.35	-0.64
		-0.64	-0.35	-6.81e-03	0.0	125.0	0.56	1.42	0.86	0.01	0.74	0.88
24	104	0.68	0.65	-8.22e-03	0.42	0.0	1.71	-1.48	-0.88	-0.01	0.65	0.68
		-0.91	-0.46	6.08e-03	0.0	125.0	1.71	-1.07	-0.88	-0.01	-0.46	-0.91
24	105	0.85	0.65	0.01	0.42	0.0	0.48	0.96	0.73	0.01	-0.26	-0.61
		-0.61	-0.26	-6.51e-03	0.0	125.0	0.48	1.38	0.73	0.01	0.65	0.85
24	106	0.71	0.73	-8.57e-03	0.42	0.0	1.63	-1.52	-1.02	-0.01	0.73	0.71
		-0.94	-0.54	6.38e-03	0.0	125.0	1.63	-1.11	-1.02	-0.01	-0.54	-0.94
24	156	0.53	0.67	-6.06e-03	0.42	0.0	1.58	-1.20	-0.79	-8.49e-03	0.67	0.53
		-0.71	-0.39	4.68e-03	0.0	125.0	1.58	-0.79	-0.79	-8.49e-03	-0.39	-0.71
24	158	0.55	0.60	-6.04e-03	0.42	0.0	1.52	-1.22	-0.90	-7.61e-03	0.60	0.55
		-0.72	-0.46	4.72e-03	0.0	125.0	1.52	-0.81	-0.90	-7.61e-03	-0.46	-0.72
24	167	0.67	0.59	9.39e-03	0.42	0.0	0.67	0.72	0.65	9.41e-03	-0.23	-0.49
		-0.49	-0.23	-5.34e-03	0.0	125.0	0.67	1.13	0.65	9.41e-03	0.59	0.67
24	168	0.54	0.55	-6.03e-03	0.42	0.0	1.58	-1.21	-0.70	-8.63e-03	0.55	0.54
		-0.71	-0.34	4.67e-03	0.0	125.0	1.58	-0.79	-0.70	-8.63e-03	-0.34	-0.71
24	169	0.65	0.53	9.10e-03	0.42	0.0	0.61	0.69	0.54	0.01	-0.16	-0.47
		-0.47	-0.16	-5.10e-03	0.0	125.0	0.61	1.10	0.54	0.01	0.53	0.65
24	170	0.56	0.62	-6.31e-03	0.42	0.0	1.52	-1.24	-0.81	-7.54e-03	0.62	0.56
		-0.73	-0.40	4.91e-03	0.0	125.0	1.52	-0.82	-0.81	-7.54e-03	-0.40	-0.73
25	2	0.32	0.86	-3.47e-03	-0.54	0.0	2.20	0.89	0.86	7.16e-03	-0.22	-0.46
		-0.46	-0.22	5.83e-04	0.0	125.0	2.20	0.35	0.86	7.16e-03	0.86	0.32
25	3	0.09	0.19	-6.00e-04	-0.42	0.0	0.30	0.36	0.22	-5.39e-04	-0.09	-0.10
		-0.10	-0.09	-4.38e-05	0.0	125.0	0.30	-0.06	0.22	-5.39e-04	0.19	0.09
25	5	0.09	0.19	-6.00e-04	-0.42	0.0	0.30	0.36	0.22	-5.39e-04	-0.09	-0.10
		-0.10	-0.09	-4.38e-05	0.0	125.0	0.30	-0.06	0.22	-5.39e-04	0.19	0.09
25	6	0.23	0.60	-2.39e-03	-0.42	0.0	1.51	0.64	0.60	4.70e-03	-0.16	-0.32
		-0.32	-0.16	3.84e-04	0.0	125.0	1.51	0.23	0.60	4.70e-03	0.60	0.23
25	7	0.09	0.19	-6.00e-04	-0.42	0.0	0.30	0.36	0.22	-5.39e-04	-0.09	-0.10
		-0.10	-0.09	-4.38e-05	0.0	125.0	0.30	-0.06	0.22	-5.39e-04	0.19	0.09
25	8	0.18	0.47	-1.86e-03	-0.42	0.0	1.15	0.56	0.49	3.13e-03	-0.14	-0.25
		-0.25	-0.14	2.60e-04	0.0	125.0	1.15	0.14	0.49	3.13e-03	0.47	0.18
25	9	0.09	0.19	-6.00e-04	-0.42	0.0	0.30	0.36	0.22	-5.39e-04	-0.09	-0.10
		-0.10	-0.09	-4.38e-05	0.0	125.0	0.30	-0.06	0.22	-5.39e-04	0.19	0.09
25	10	0.17	0.43	-1.68e-03	-0.42	0.0	1.03	0.53	0.45	2.60e-03	-0.13	-0.23
		-0.23	-0.13	2.18e-04	0.0	125.0	1.03	0.11	0.45	2.60e-03	0.43	0.17
25	56	1.65	2.00	-0.02	-0.42	0.0	1.18	2.93	2.97	-0.01	-1.72	-1.76
		-1.76	-1.72	0.01	0.0	125.0	1.18	2.52	2.97	-0.01	2.00	1.65
25	64	1.61	2.14	-0.02	-0.42	0.0	1.19	2.87	3.19	-0.01	-1.85	-1.73
		-1.73	-1.85	0.01	0.0	125.0	1.19	2.46	3.19	-0.01	2.14	1.61
25	72	1.62	2.14	-0.02	-0.42	0.0	1.18	2.89	3.19	-0.01	-1.85	-1.73
		-1.73	-1.85	0.01	0.0	125.0	1.18	2.47	3.19	-0.01	2.14	1.62
25	87	0.31	0.57	-5.35e-03	-0.42	0.0	1.21	0.78	0.67	-2.67e-03	-0.26	-0.41

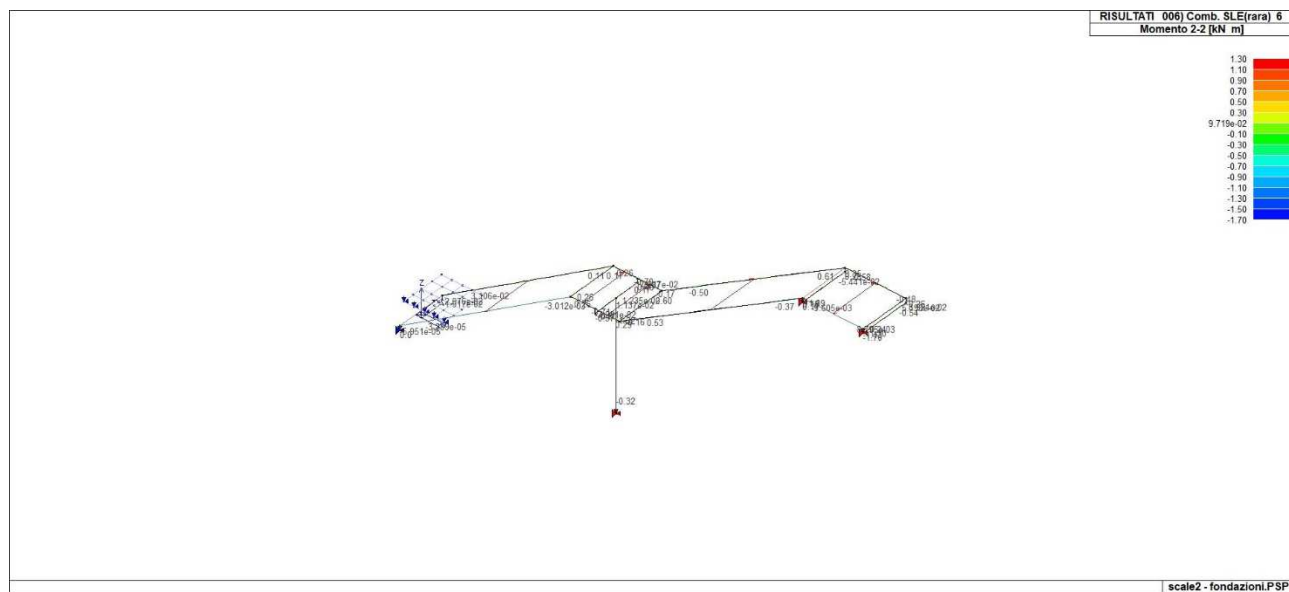
Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		-0.41	-0.26	2.65e-03	0.0	125.0	1.21	0.37	0.67	-2.67e-03	0.57	0.31
25	90	0.06	0.30	2.00e-03	-0.42	0.0	0.84	0.27	0.23	7.87e-03	1.47e-03	-0.05
		-0.05	1.47e-03	-2.21e-03	0.0	125.0	0.84	-0.14	0.23	7.87e-03	0.30	0.03
25	97	0.97	1.22	-0.01	-0.42	0.0	1.05	1.83	1.72	-6.47e-03	-0.93	-1.06
		-1.06	-0.93	6.38e-03	0.0	125.0	1.05	1.42	1.72	-6.47e-03	1.22	0.97
25	105	0.96	1.30	-0.01	-0.42	0.0	1.05	1.81	1.84	-6.68e-03	-1.00	-1.04
		-1.04	-1.00	6.50e-03	0.0	125.0	1.05	1.39	1.84	-6.68e-03	1.30	0.96
25	132	0.59	1.25	-7.63e-03	-0.42	0.0	1.57	1.23	1.76	-1.30e-03	-0.96	-0.69
		-0.69	-0.96	4.02e-03	0.0	125.0	1.57	0.82	1.76	-1.30e-03	1.25	0.59
25	137	0.23	0.70	4.28e-03	-0.42	0.0	0.48	-0.18	-0.86	6.51e-03	0.70	0.23
		-0.25	-0.38	-3.59e-03	0.0	125.0	0.48	-0.59	-0.86	6.51e-03	-0.38	-0.25
25	151	0.28	0.54	-4.55e-03	-0.42	0.0	1.18	0.72	0.61	-1.59e-03	-0.23	-0.37
		-0.37	-0.23	2.12e-03	0.0	125.0	1.18	0.31	0.61	-1.59e-03	0.54	0.28
25	154	0.08	0.33	1.19e-03	-0.42	0.0	0.87	0.33	0.29	6.80e-03	-0.03	-0.09
		-0.09	-0.03	-1.69e-03	0.0	125.0	0.87	-0.08	0.29	6.80e-03	0.33	0.07
25	161	0.79	1.05	-9.23e-03	-0.42	0.0	1.04	1.54	1.44	-4.41e-03	-0.75	-0.88
		-0.88	-0.75	5.00e-03	0.0	125.0	1.04	1.13	1.44	-4.41e-03	1.05	0.79
25	169	0.78	1.11	-9.35e-03	-0.42	0.0	1.04	1.52	1.53	-4.57e-03	-0.81	-0.86
		-0.86	-0.81	5.09e-03	0.0	125.0	1.04	1.11	1.53	-4.57e-03	1.11	0.78
26	1	0.12	0.11	-4.85e-05	-0.54	0.0	1.85	1.04	0.23	-5.09e-03	-0.17	-0.85
		-0.85	-0.17	-1.21e-04	0.0	125.0	1.85	0.50	0.23	-5.09e-03	0.11	0.12
26	2	0.33	0.39	-1.22e-04	-0.54	0.0	3.85	2.14	-0.26	-0.03	0.39	-2.01
		-2.01	0.06	4.31e-04	0.0	125.0	3.85	1.60	-0.26	-0.03	0.06	0.33
26	3	0.09	0.09	-3.73e-05	-0.42	0.0	1.42	0.80	0.18	-3.91e-03	-0.13	-0.65
		-0.65	-0.13	-9.32e-05	0.0	125.0	1.42	0.39	0.18	-3.91e-03	0.09	0.09
26	4	0.30	0.43	-1.11e-04	-0.42	0.0	3.42	1.90	-0.32	-0.02	0.43	-1.82
		-1.82	0.03	4.59e-04	0.0	125.0	3.42	1.48	-0.32	-0.02	0.03	0.30
26	5	0.09	0.09	-3.73e-05	-0.42	0.0	1.42	0.80	0.18	-3.91e-03	-0.13	-0.65
		-0.65	-0.13	-9.32e-05	0.0	125.0	1.42	0.39	0.18	-3.91e-03	0.09	0.09
26	6	0.23	0.24	-8.63e-05	-0.42	0.0	2.76	1.53	-0.15	-0.02	0.24	-1.43
		-1.43	0.05	2.75e-04	0.0	125.0	2.76	1.12	-0.15	-0.02	0.05	0.23
26	7	0.09	0.09	-3.73e-05	-0.42	0.0	1.42	0.80	0.18	-3.91e-03	-0.13	-0.65
		-0.65	-0.13	-9.32e-05	0.0	125.0	1.42	0.39	0.18	-3.91e-03	0.09	0.09
26	8	0.19	0.13	-7.16e-05	-0.42	0.0	2.36	1.31	-0.05	-0.01	0.13	-1.19
		-1.19	0.06	1.64e-04	0.0	125.0	2.36	0.90	-0.05	-0.01	0.06	0.19
26	9	0.09	0.09	-3.73e-05	-0.42	0.0	1.42	0.80	0.18	-3.91e-03	-0.13	-0.65
		-0.65	-0.13	-9.32e-05	0.0	125.0	1.42	0.39	0.18	-3.91e-03	0.09	0.09
26	10	0.18	0.09	-6.67e-05	-0.42	0.0	2.22	1.24	-0.02	-0.01	0.09	-1.12
		-1.12	0.07	1.28e-04	0.0	125.0	2.22	0.83	-0.02	-0.01	0.07	0.18
26	67	2.43	1.20	1.61e-04	-0.42	0.0	-8.44	-2.00	-1.30	-0.01	1.20	2.43
		-0.33	-0.48	1.02e-03	0.0	125.0	-8.44	-2.42	-1.30	-0.01	-0.48	-0.33
26	68	1.92	1.35	1.29e-04	-0.42	0.0	-7.32	-1.52	-1.46	-0.02	1.35	1.92
		-0.25	-0.42	1.15e-03	0.0	125.0	-7.32	-1.94	-1.46	-0.02	-0.42	-0.25
26	70	0.75	0.46	-3.19e-04	-0.42	0.0	12.04	4.85	0.85	-7.87e-03	-0.66	-5.06
		-5.06	-0.66	-4.74e-04	0.0	125.0	12.04	4.44	0.85	-7.87e-03	0.46	0.75
26	71	2.82	0.85	1.86e-04	-0.42	0.0	-7.59	-2.37	-0.90	-0.02	0.85	2.82
		-0.40	-0.32	7.29e-04	0.0	125.0	-7.59	-2.78	-0.90	-0.02	-0.32	-0.40
26	73	0.60	0.56	-2.62e-04	-0.42	0.0	11.76	4.01	1.42	-7.99e-03	-1.17	-4.15
		-4.15	-1.17	-8.92e-04	0.0	125.0	11.76	3.59	1.42	-7.99e-03	0.56	0.60
26	74	0.68	0.61	-2.95e-04	-0.42	0.0	12.89	4.49	1.26	-0.01	-1.02	-4.67
		-4.67	-1.02	-7.63e-04	0.0	125.0	12.89	4.07	1.26	-0.01	0.61	0.68
26	103	0.69	0.74	4.97e-05	-0.42	0.0	-3.32	-0.41	-0.77	-0.01	0.74	0.69
		-0.08	-0.22	6.52e-04	0.0	125.0	-3.32	-0.83	-0.77	-0.01	-0.22	-0.08
26	104	0.47	0.27	-1.96e-04	-0.42	0.0	7.31	3.09	0.51	-9.19e-03	-0.37	-3.14
		-3.14	-0.37	-2.41e-04	0.0	125.0	7.31	2.67	0.51	-9.19e-03	0.27	0.47
26	105	0.90	0.55	6.28e-05	-0.42	0.0	-2.86	-0.61	-0.55	-0.02	0.55	0.90
		-0.12	-0.13	4.96e-04	0.0	125.0	-2.86	-1.02	-0.55	-0.02	-0.13	-0.12
26	106	0.43	0.35	-1.83e-04	-0.42	0.0	7.76	2.90	0.73	-0.01	-0.56	-2.93
		-2.93	-0.56	-3.96e-04	0.0	125.0	7.76	2.48	0.73	-0.01	0.35	0.43
26	167	0.28	0.60	2.34e-05	-0.42	0.0	-2.09	-0.04	-0.61	-0.01	0.60	0.28
		-0.02	-0.16	5.38e-04	0.0	125.0	-2.09	-0.45	-0.61	-0.01	-0.16	-0.02
26	168	0.40	0.22	-1.67e-04	-0.42	0.0	6.16	2.68	0.38	-9.84e-03	-0.26	-2.69
		-2.69	-0.26	-1.55e-04	0.0	125.0	6.16	2.27	0.38	-9.84e-03	0.22	0.40
26	169	0.45	0.44	3.41e-05	-0.42	0.0	-1.72	-0.20	-0.43	-0.01	0.44	0.45
		-0.05	-0.09	4.10e-04	0.0	125.0	-1.72	-0.61	-0.43	-0.01	-0.09	-0.05
26	170	0.37	0.29	-1.57e-04	-0.42	0.0	6.53	2.52	0.56	-0.01	-0.42	-2.52
		-2.52	-0.42	-2.83e-04	0.0	125.0	6.53	2.11	0.56	-0.01	0.29	0.37
Trave		M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3		N	V 2	V 3	T		
		-23.85	-3.27	-0.04	-25.23		-32.31	-36.09	-5.32	-0.28		
		19.70	4.07	0.04	25.23		23.83	39.22	4.09	0.28		



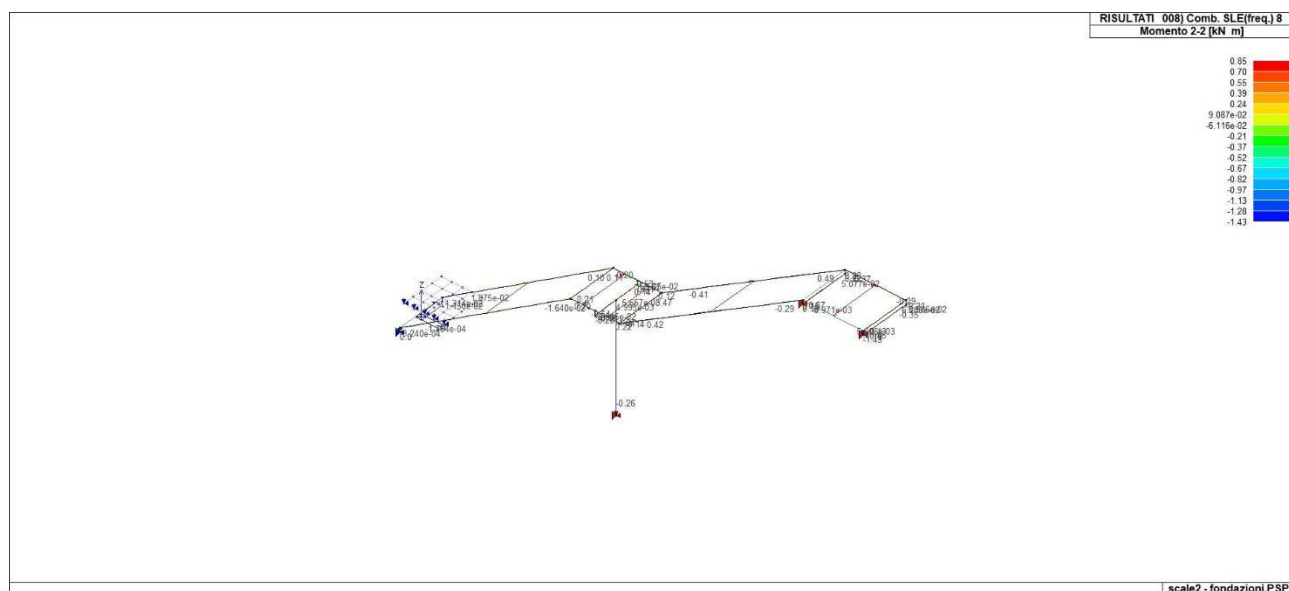
43\_RIS\_M2\_002\_Comb. SLU A1 2



43\_RIS\_M2\_004\_Comb. SLU A1 4

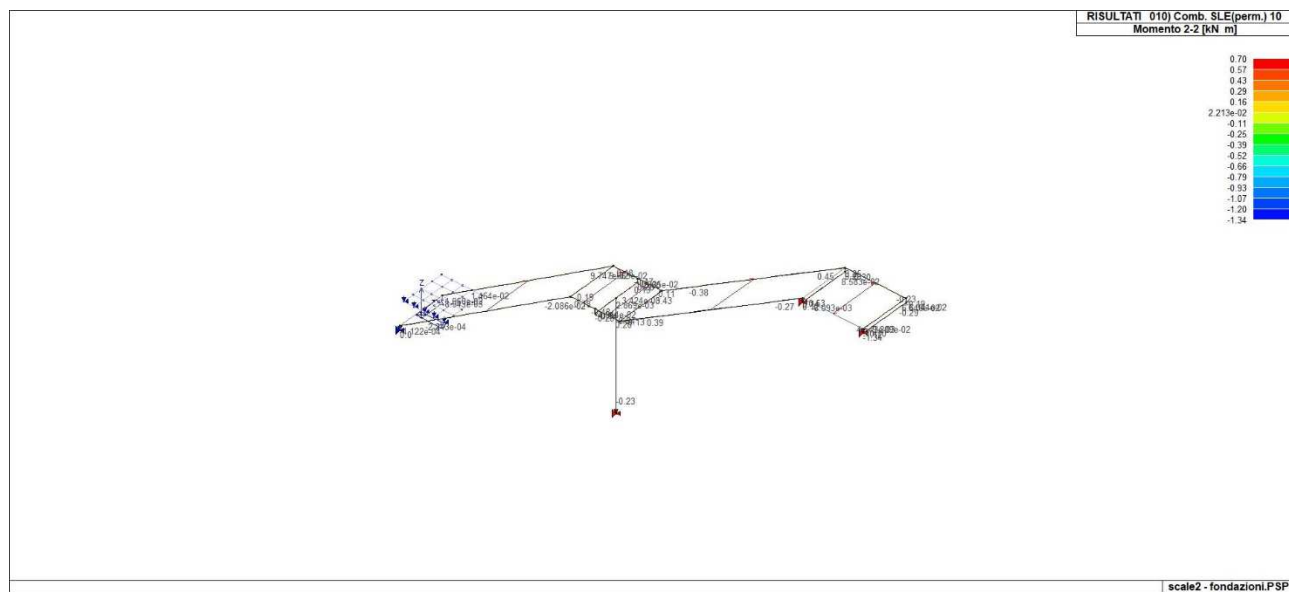


43\_RIS\_M2\_006\_Comb. SLE(rara) 6

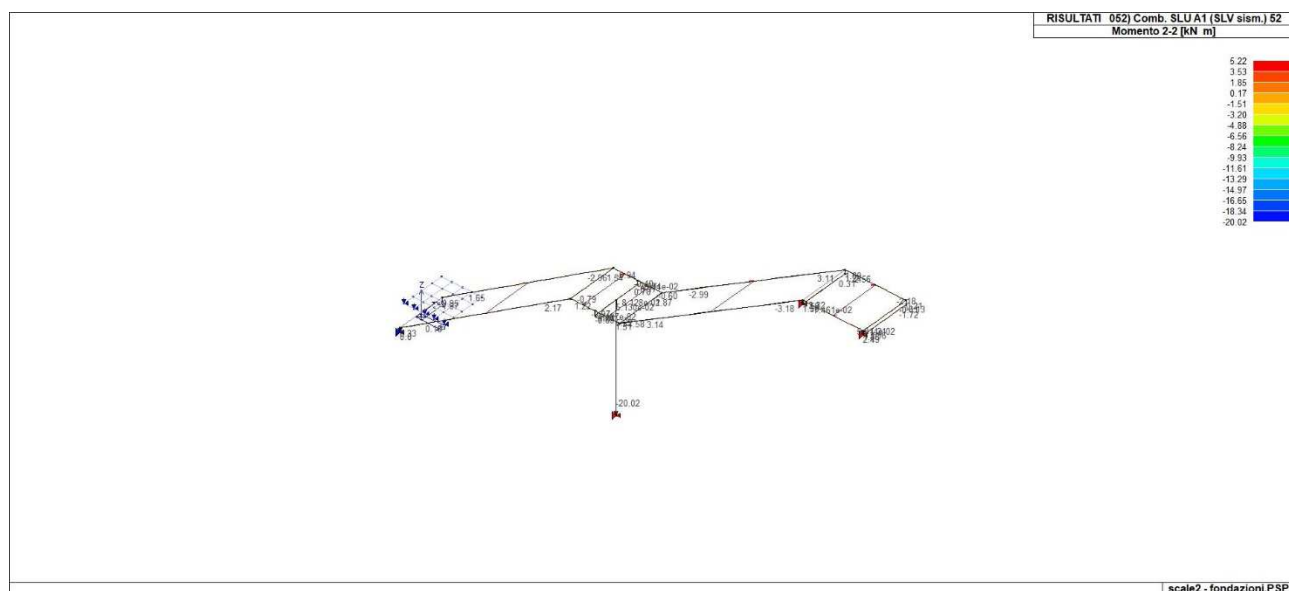


43\_RIS\_M2\_008\_Comb. SLE(freq.) 8

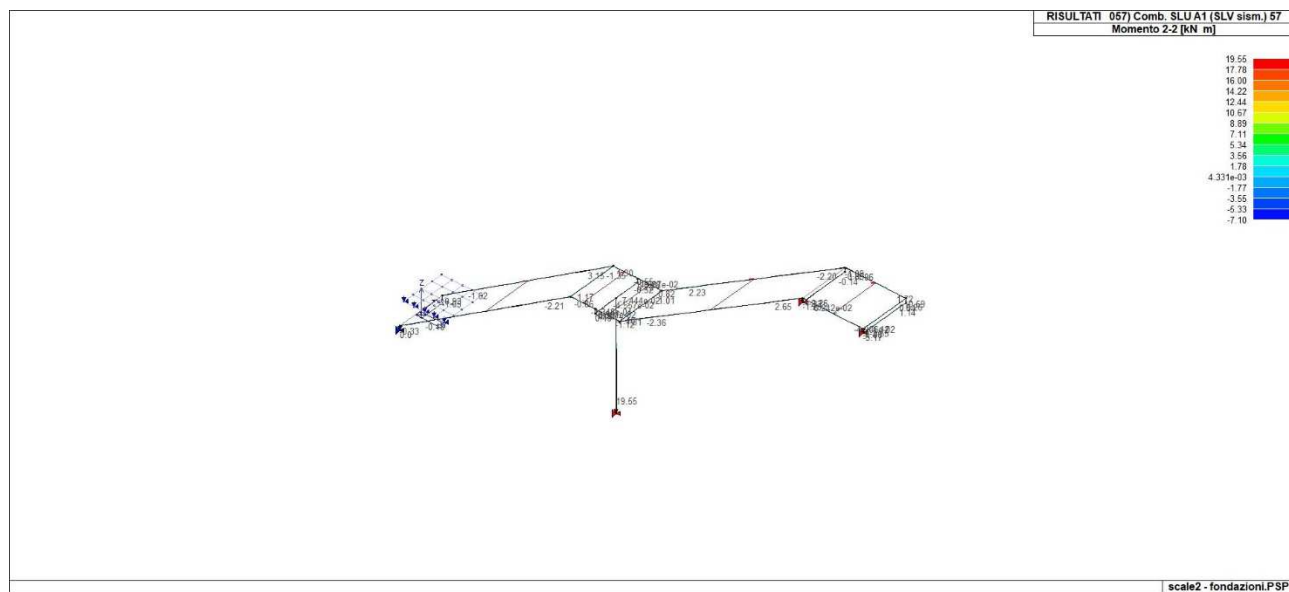




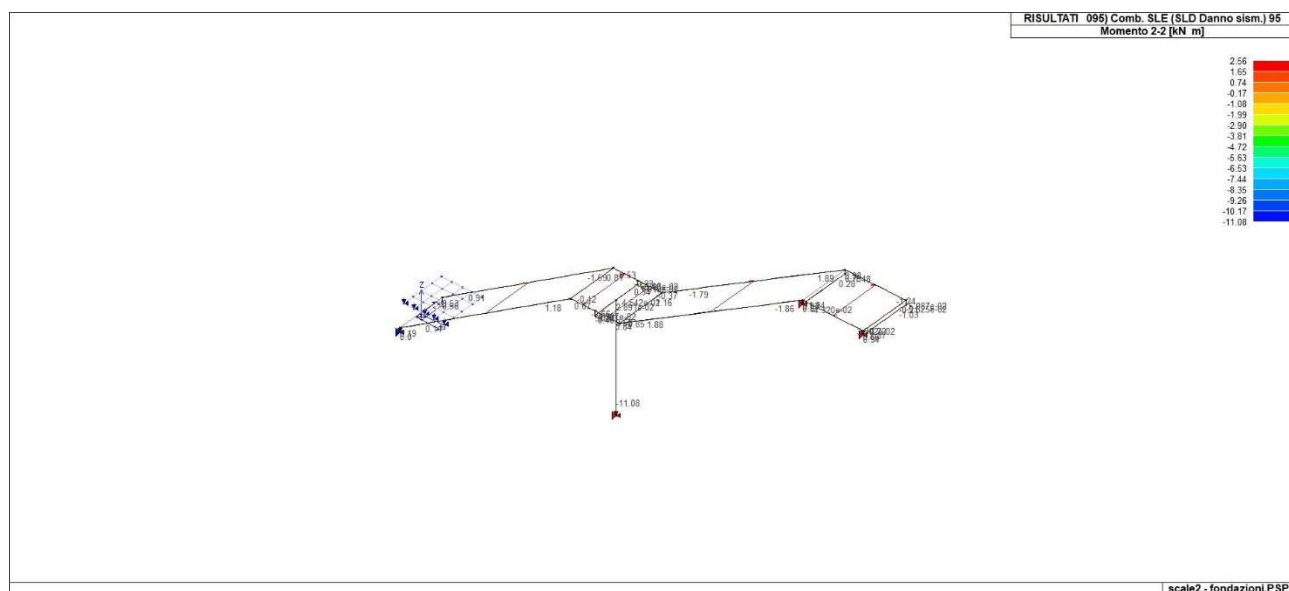
43\_RIS\_M2\_010\_Comb. SLE(perm.) 10



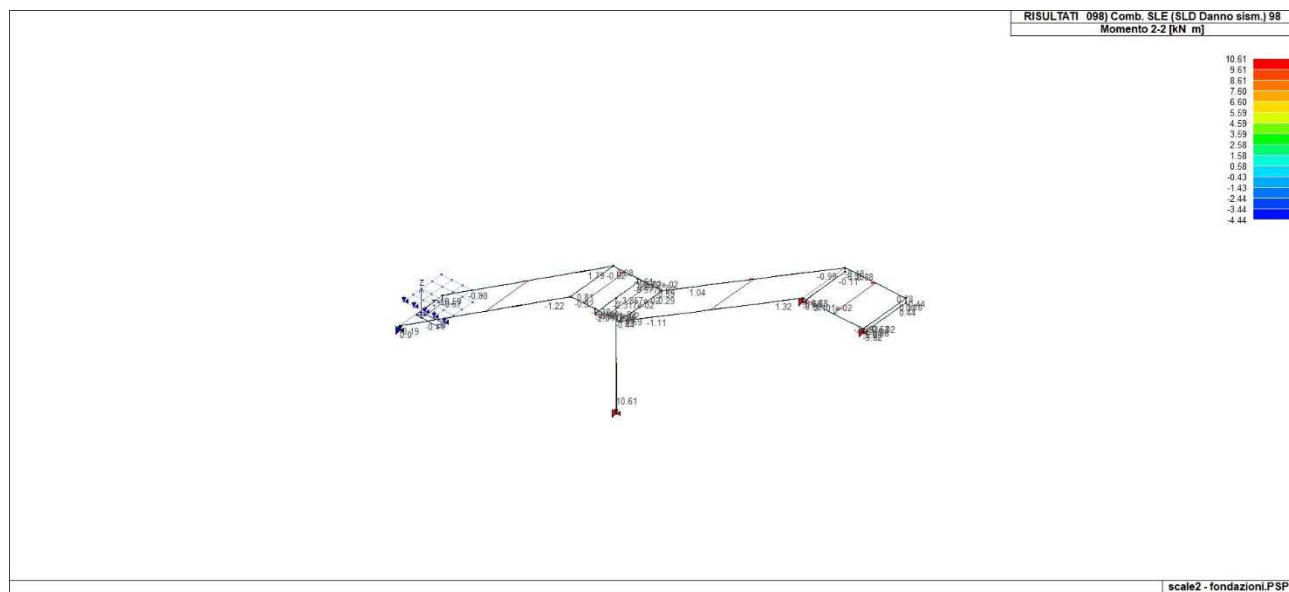
43\_RIS\_M2\_052\_Comb. SLU A1 (SLV sism.) 52



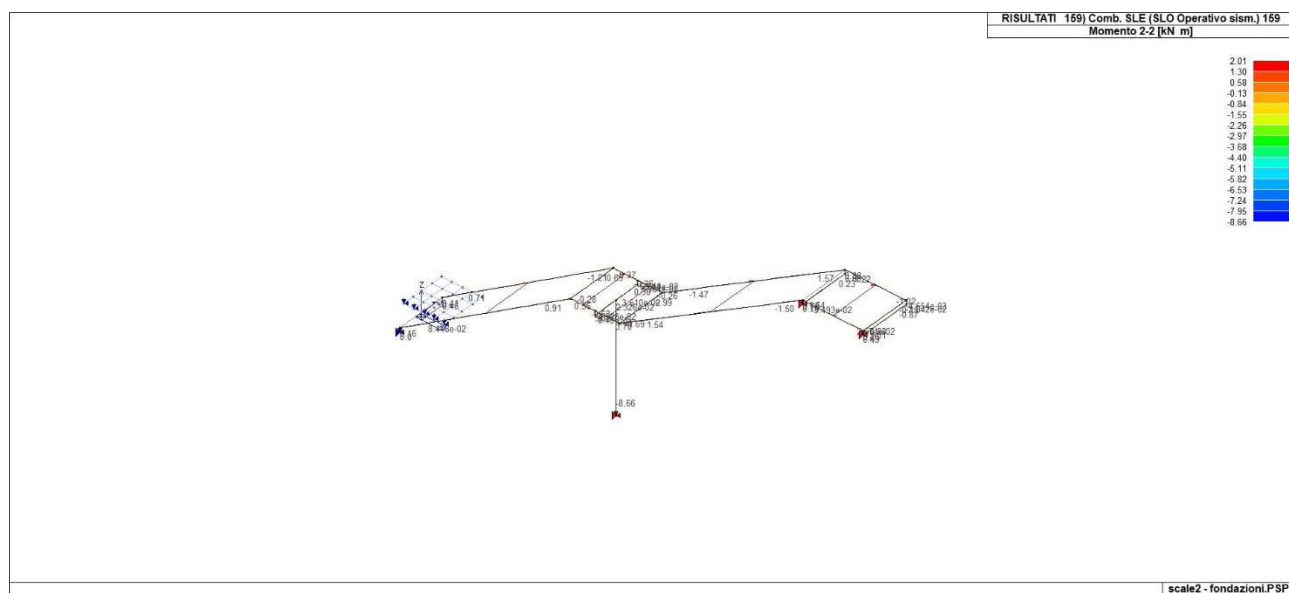
43\_RIS\_M2\_057\_Comb. SLU A1 (SLV sism.) 57



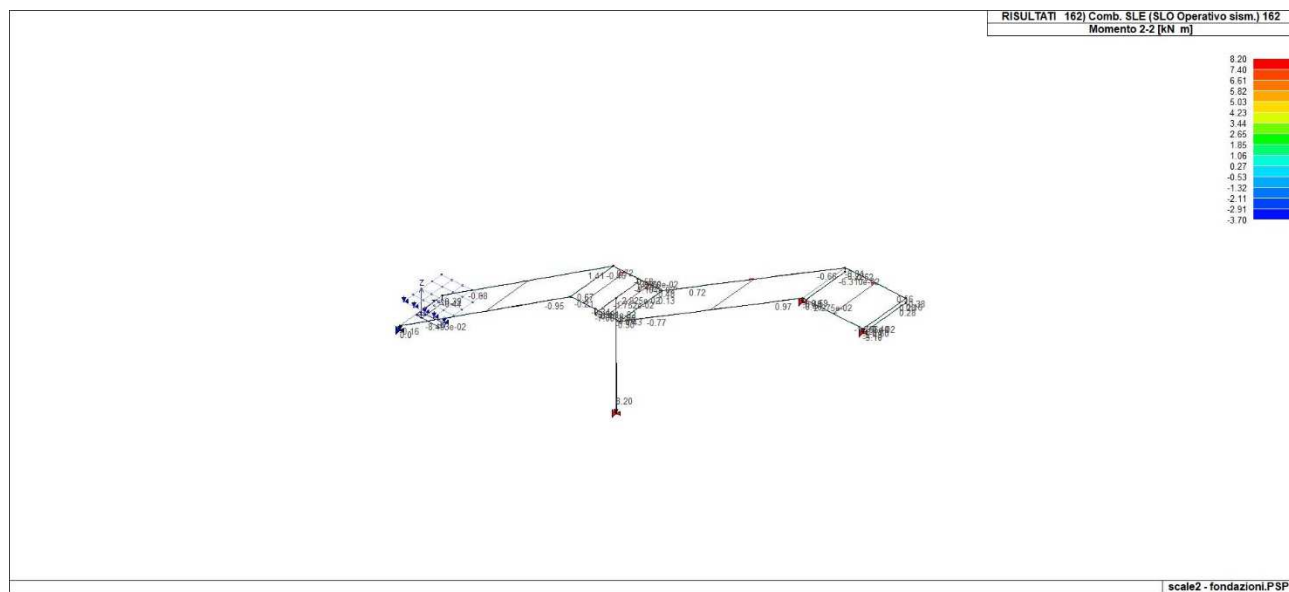
43\_RIS\_M2\_095\_Comb. SLE (SLD Danno sism.) 95



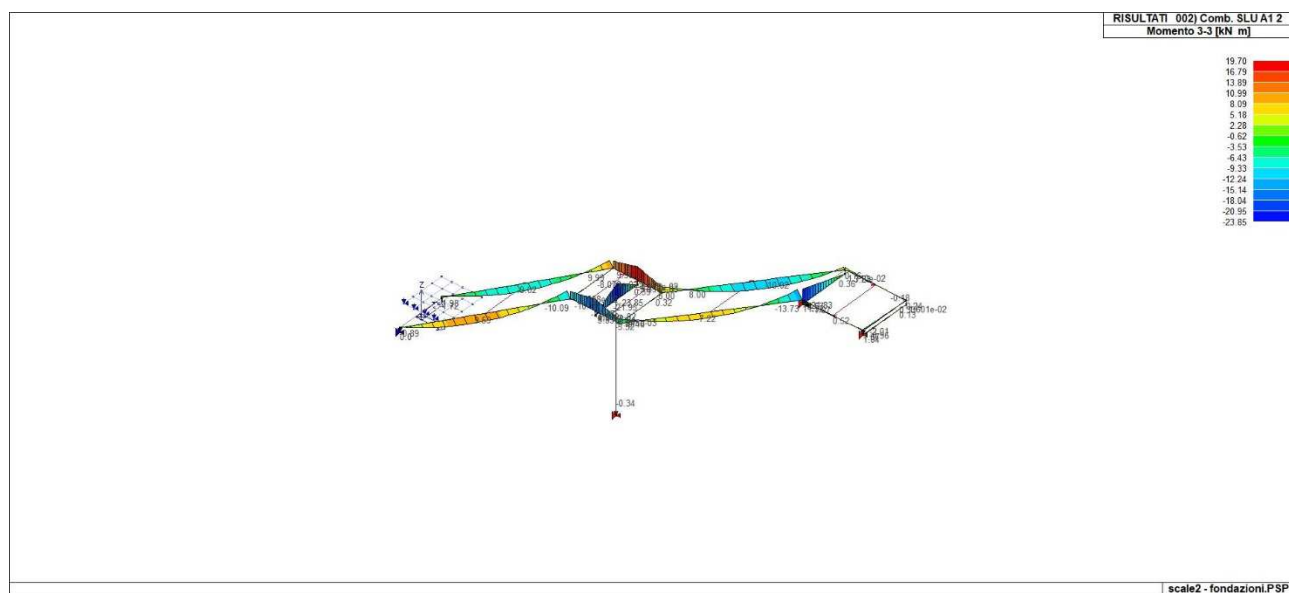
43\_RIS\_M2\_098\_Comb. SLE (SLD Danno sism.) 98



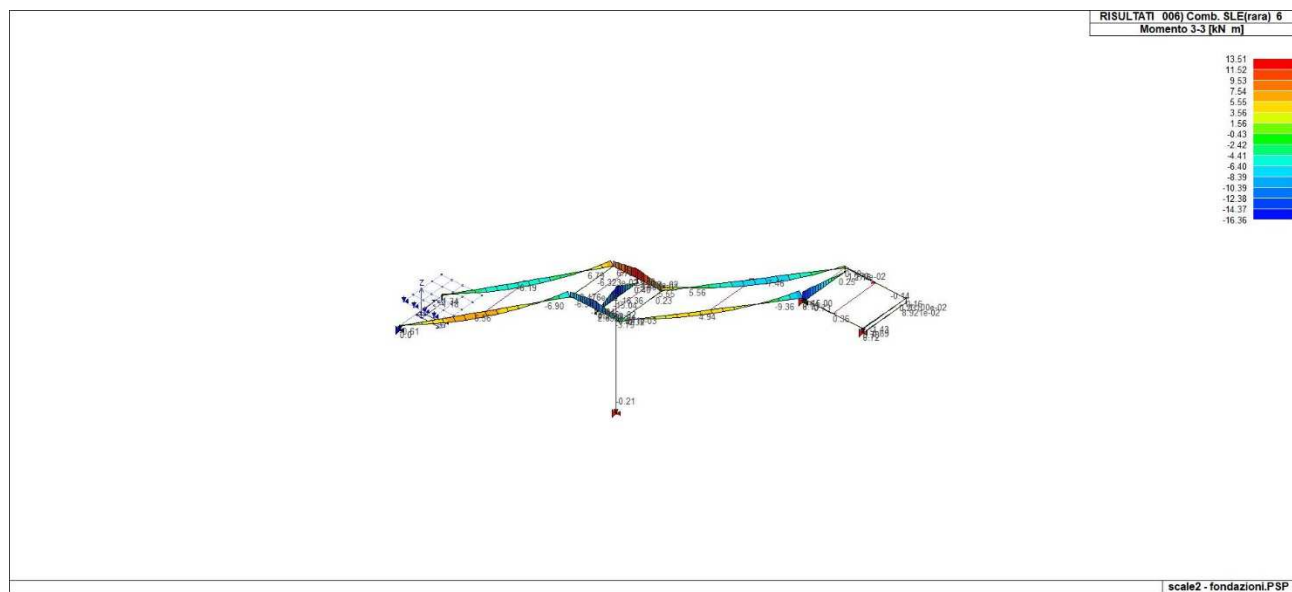
43\_RIS\_M2\_159\_Comb. SLE (SLO Operativo sism.) 159



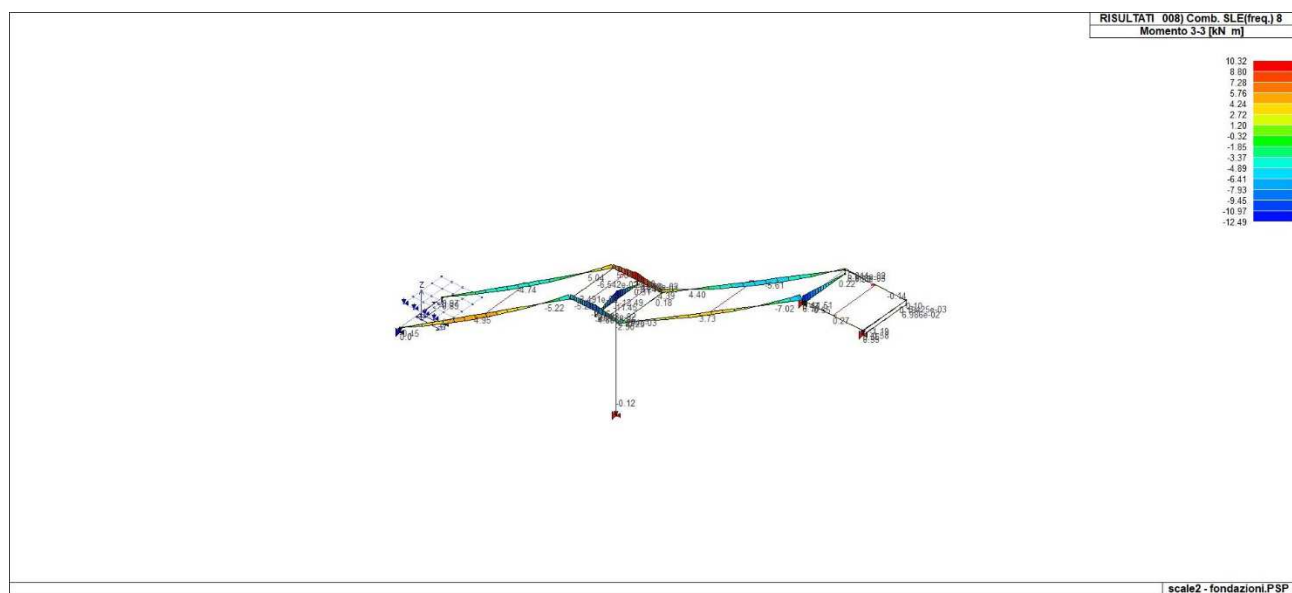
43\_RIS\_M2\_162\_Comb. SLE (SLO Operativo sism.) 162



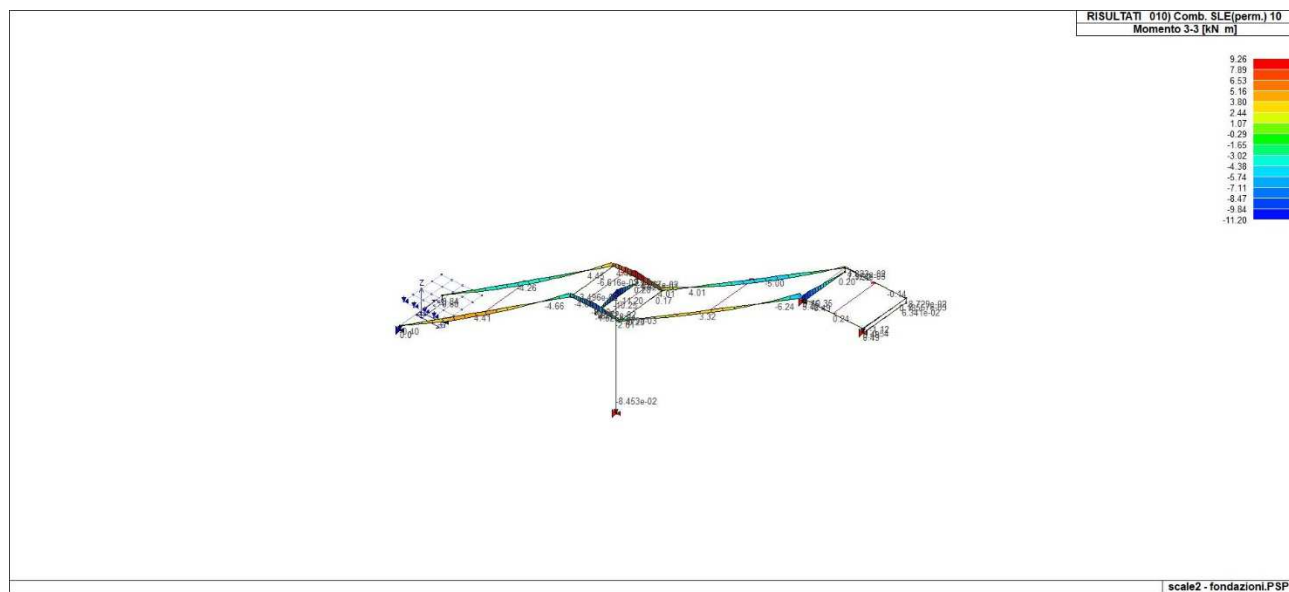
43\_RIS\_M3\_002\_Comb. SLU A1 2



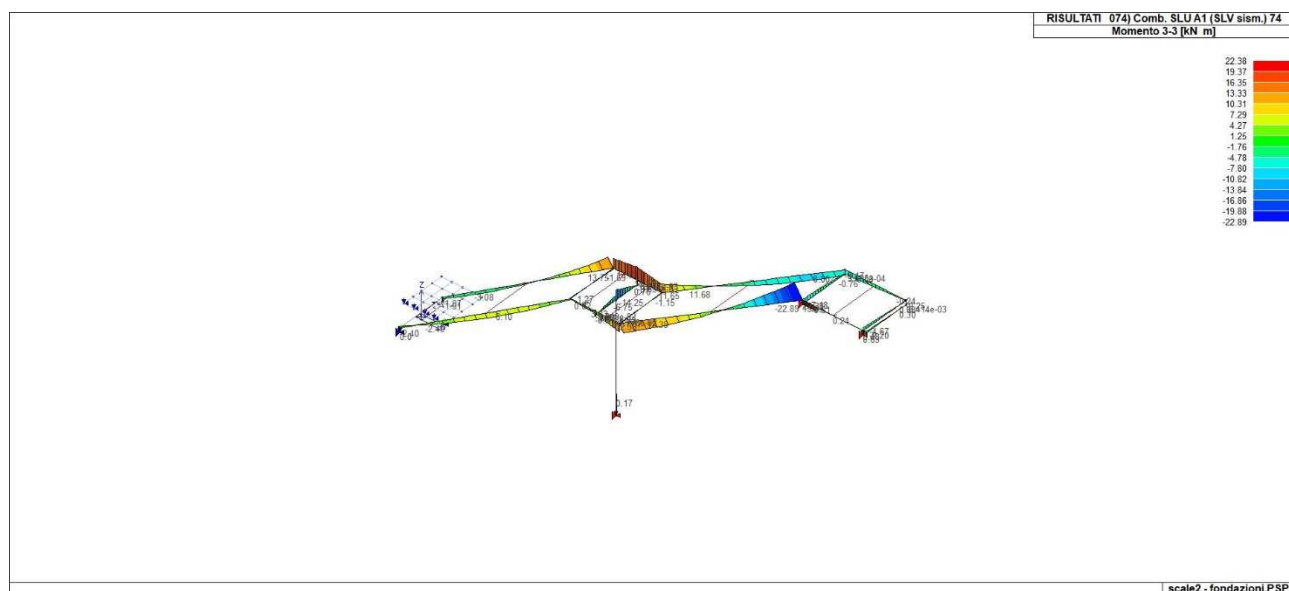
43\_RIS\_M3\_006\_Comb. SLE(rara) 6



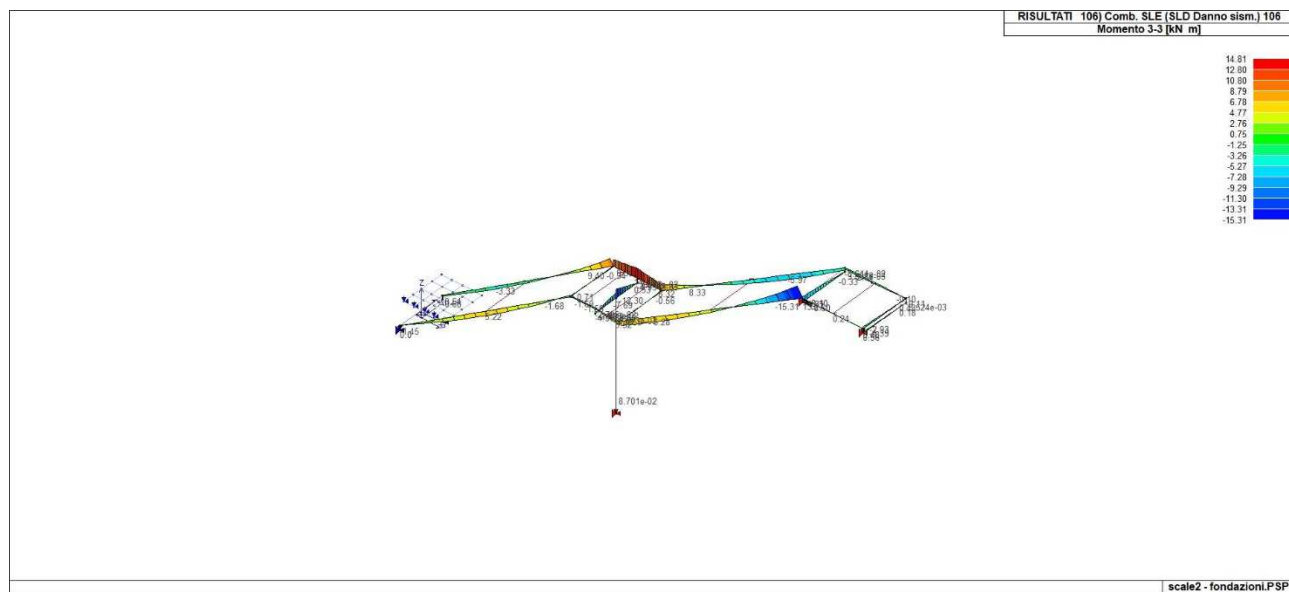
43\_RIS\_M3\_008\_Comb. SLE(freq.) 8



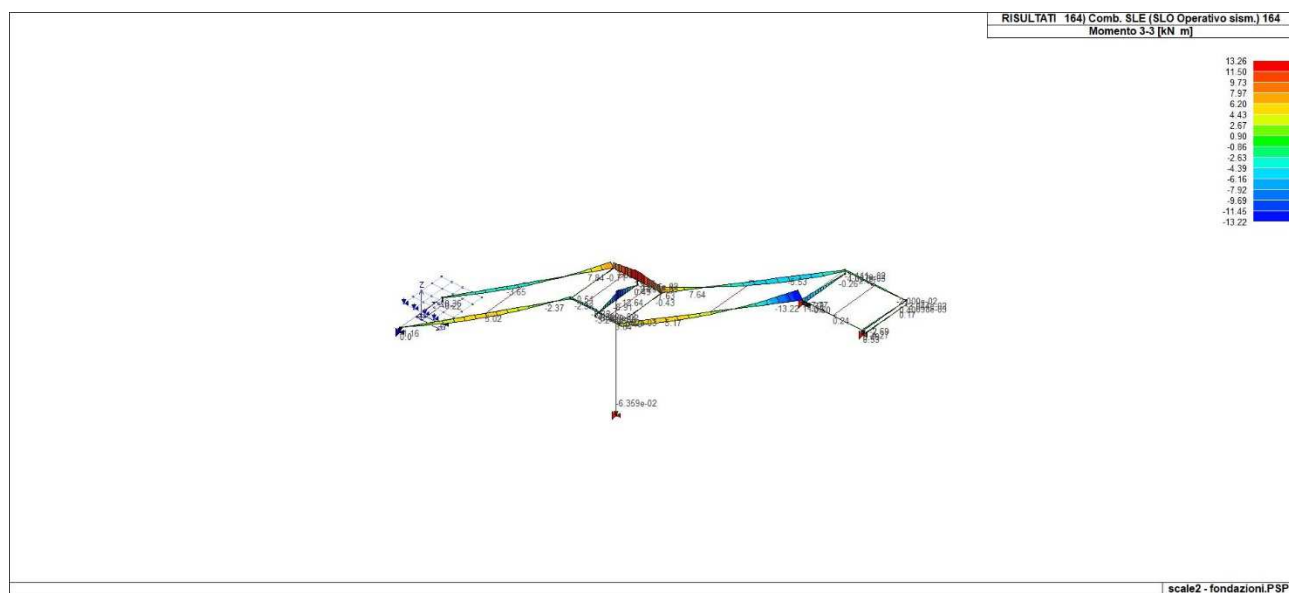
43\_RIS\_M3\_010\_Comb. SLE(perm.) 10



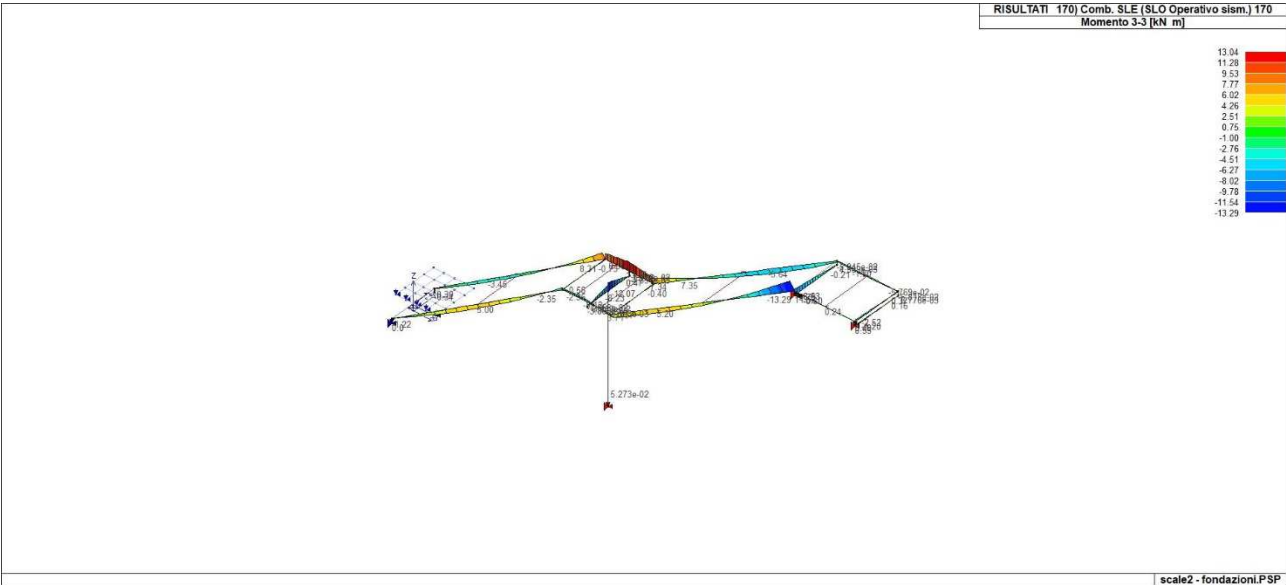
43\_RIS\_M3\_074\_Comb. SLU A1 (SLV sism.) 74



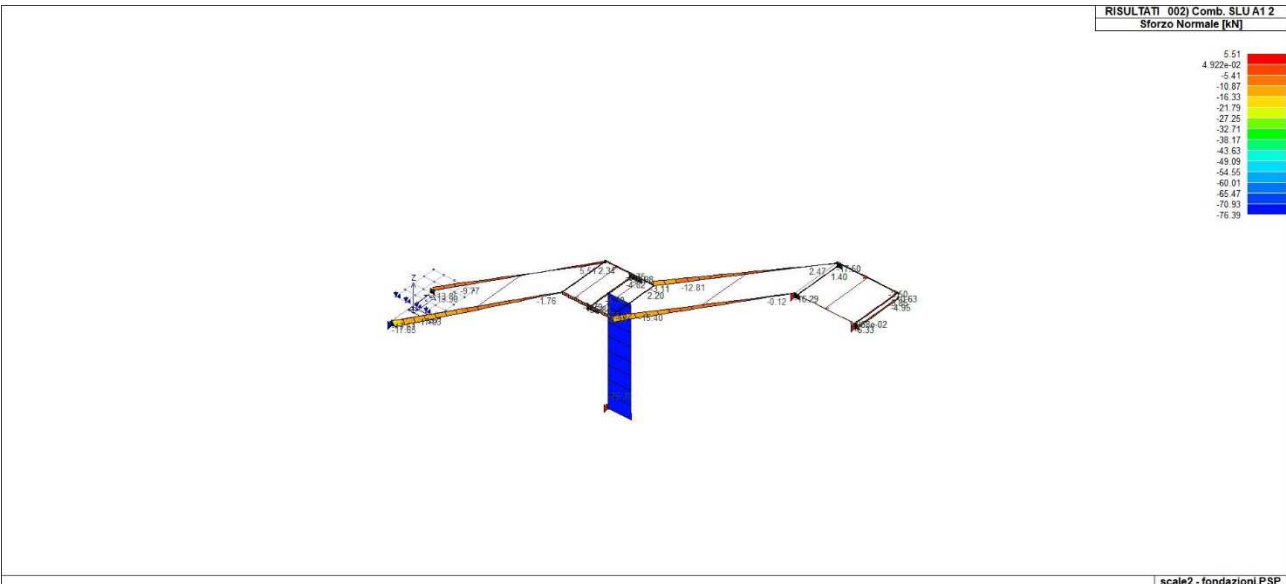
43\_RIS\_M3\_106\_Comb. SLE (SLD Danno sism.) 106



43\_RIS\_M3\_164\_Comb. SLE (SLO Operativo sism.) 164



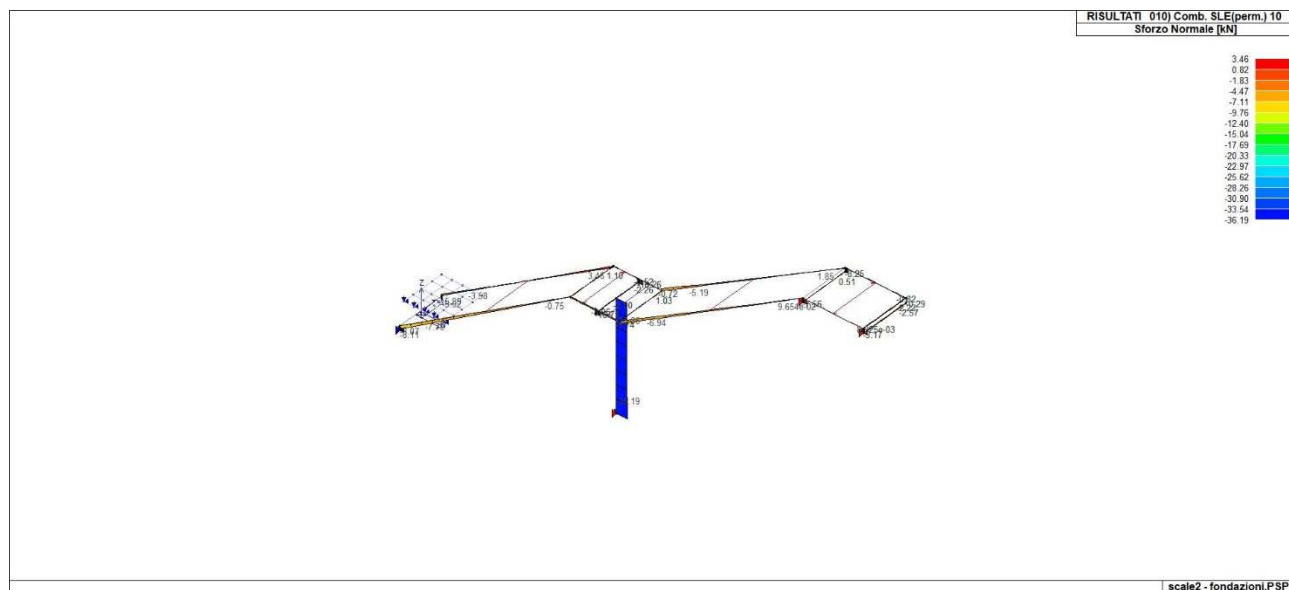
43\_RIS\_M3\_170\_Comb. SLE (SLO Operativo sism.) 170



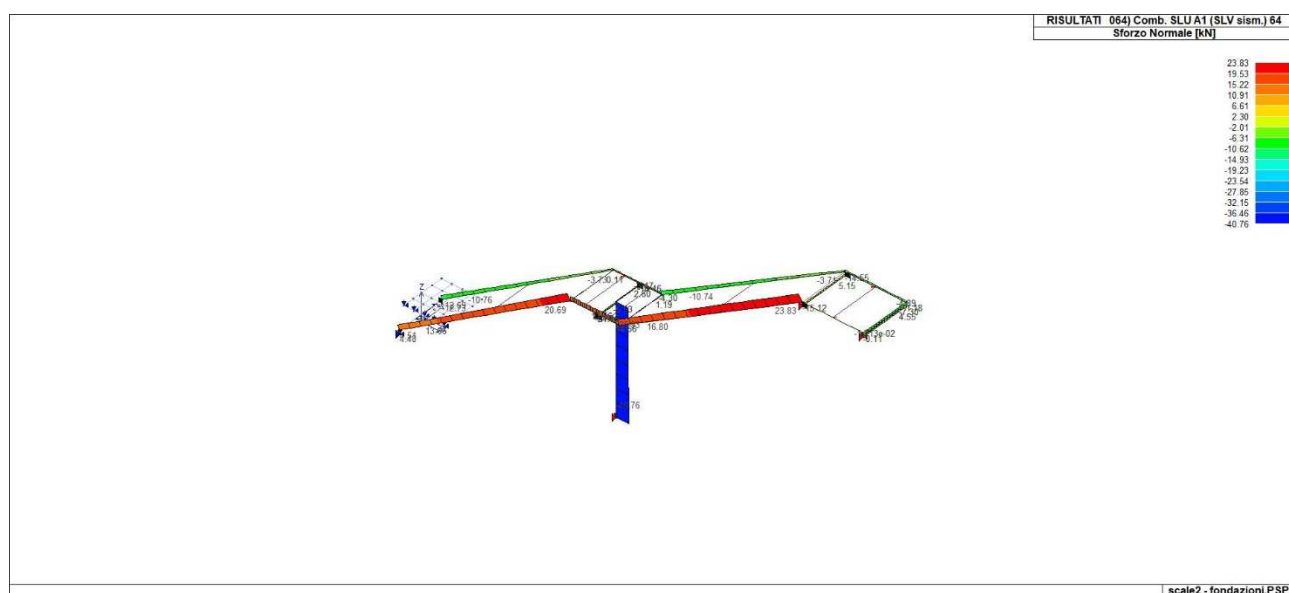
43\_RIS\_N\_002\_Comb. SLU A1 2



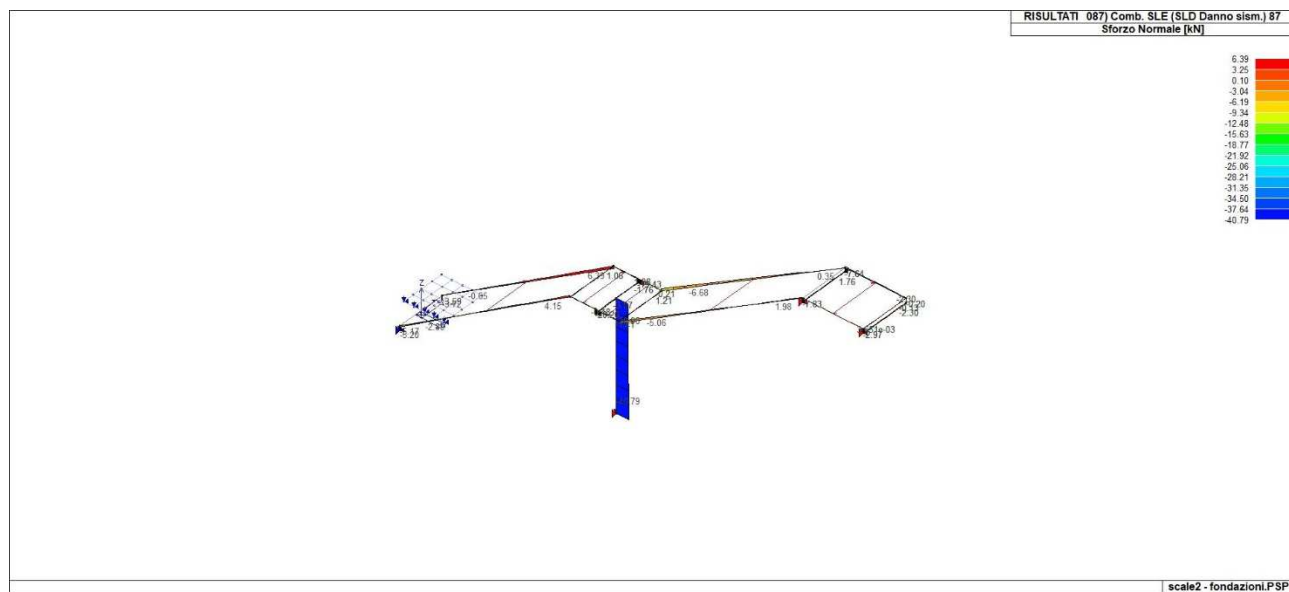




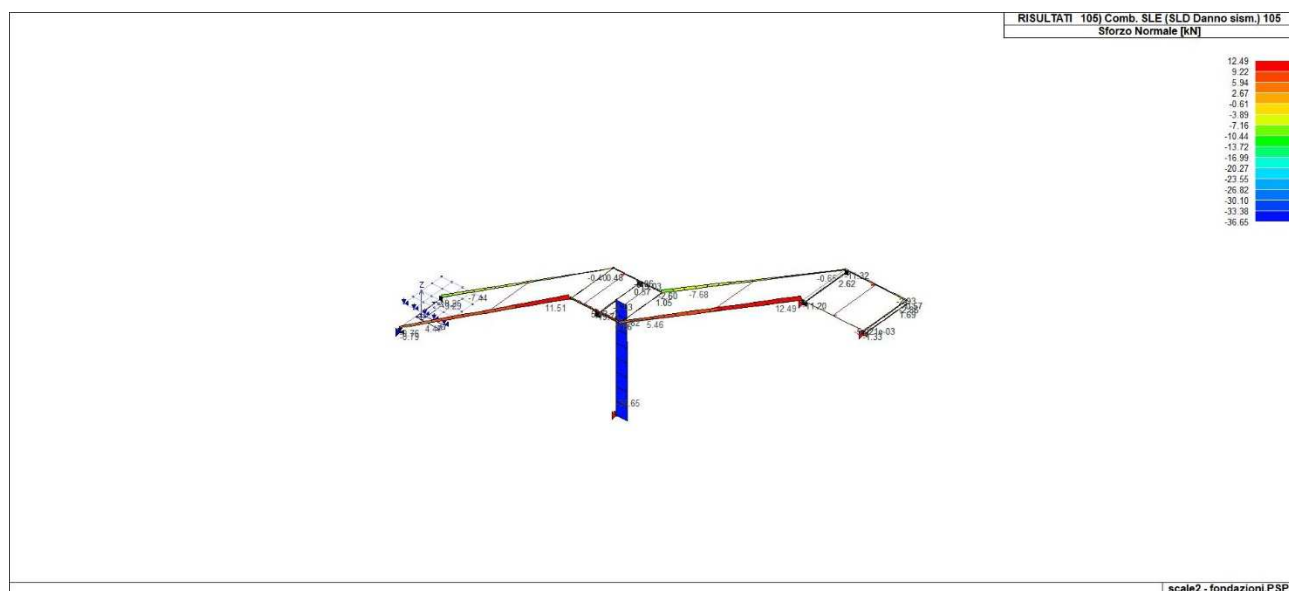
43\_RIS\_N\_010\_Comb. SLE(perm.) 10



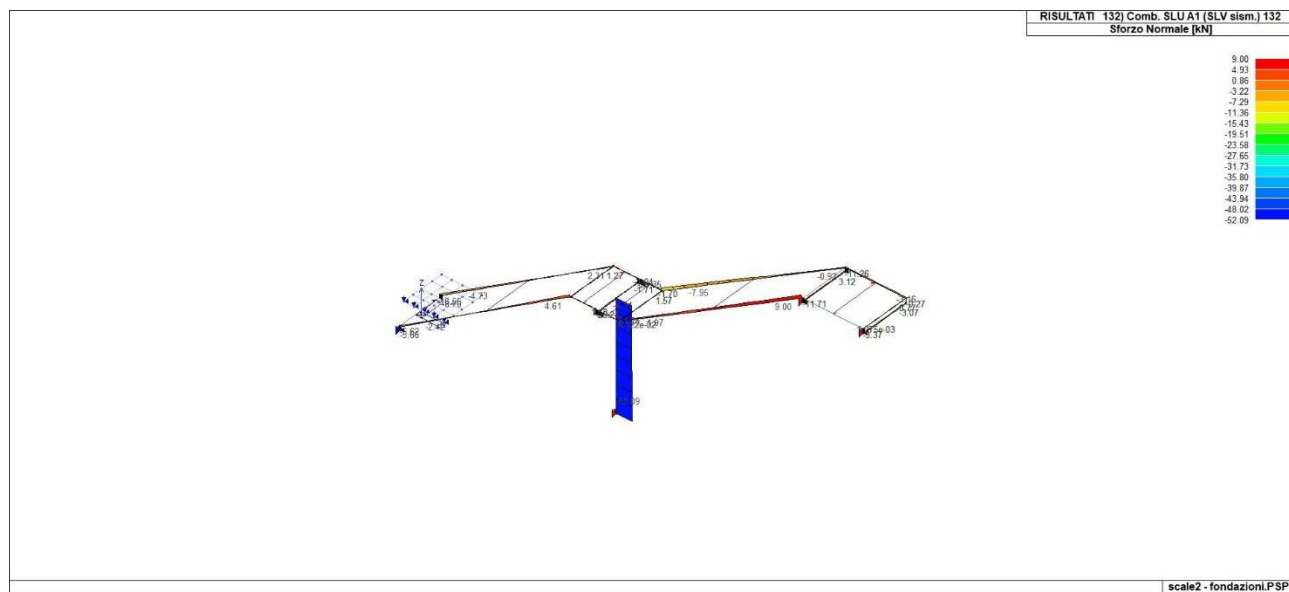
43\_RIS\_N\_064\_Comb. SLU A1 (SLV sism.) 64



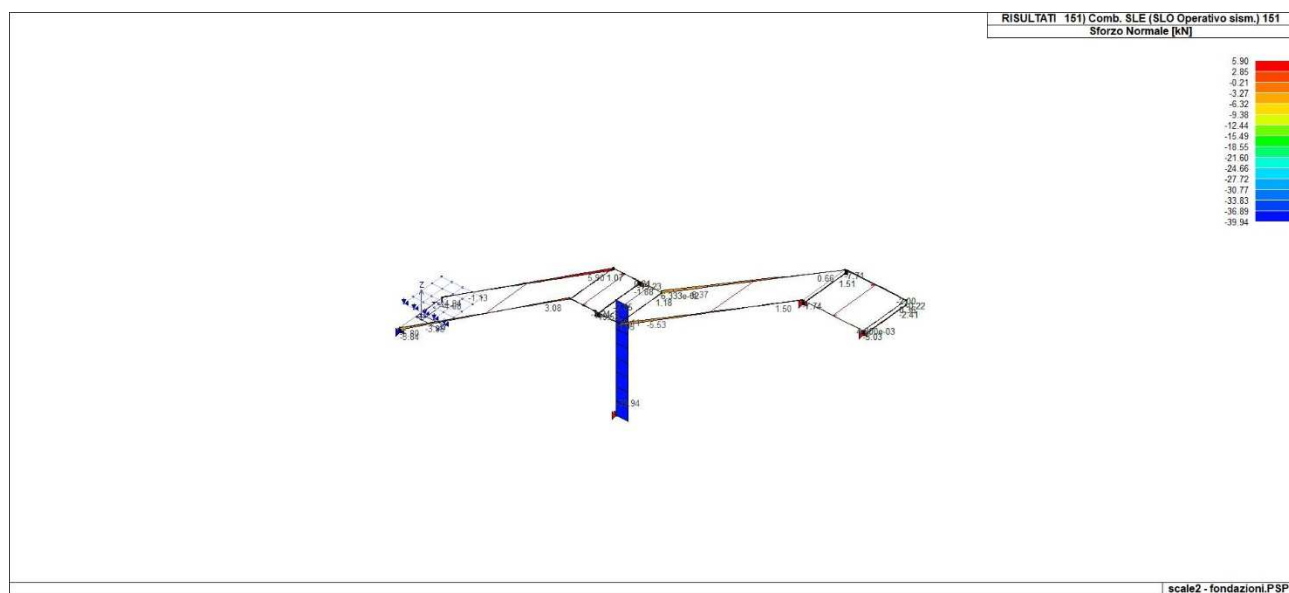
43\_RIS\_N\_087\_Comb. SLE (SLD Danno sism.) 87



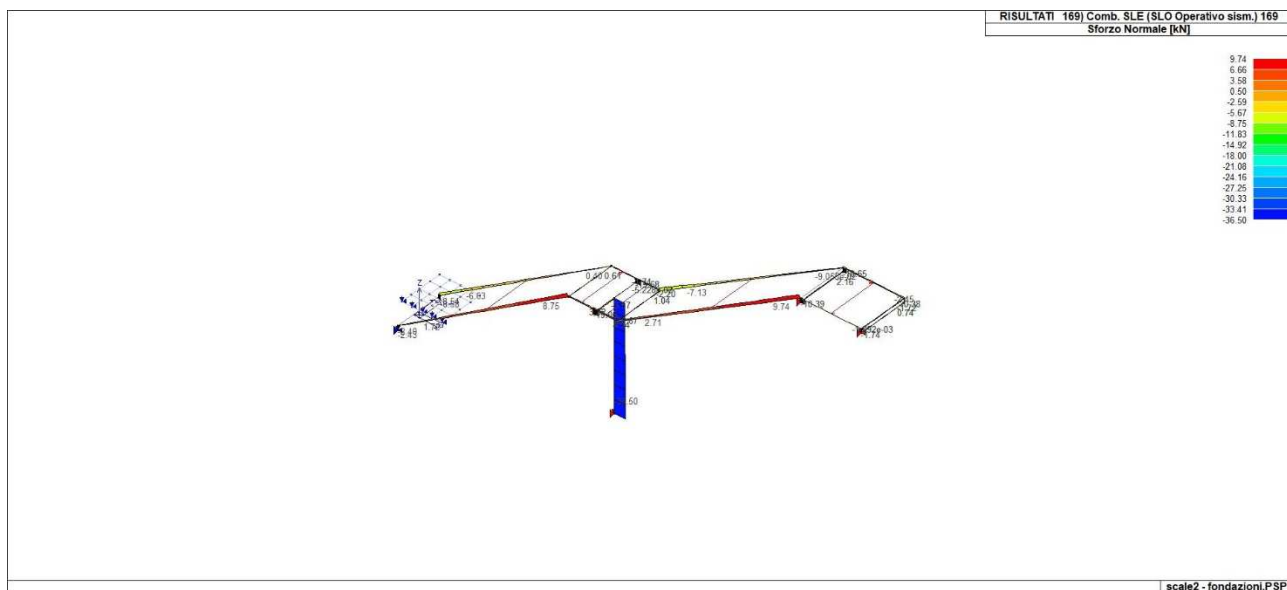
43\_RIS\_N\_105\_Comb. SLE (SLD Danno sism.) 105



43\_RIS\_N\_132\_Comb. SLU A1 (SLV sism.) 132



43\_RIS\_N\_151\_Comb. SLE (SLO Operativo sism.) 151



43\_RIS\_N\_169\_Comb. SLE (SLO Operativo sism.) 169

## VERIFICHE PER ELEMENTI IN ACCIAIO

### LEGENDA TABELLA VERIFICHE PER ELEMENTI IN ACCIAIO

Il programma consente la verifica dei seguenti tipi di elementi:

1. **aste**                      2. **travi**                      3. **pilastr**

L'esito delle verifiche è espresso con un codice come di seguito indicato

**Ok:**                      verifica con esito positivo  
**NV:**                      verifica con esito negativo  
**Nr:**                      verifica non richiesta.

Per comodità gli elementi vengono raggruppati in tabelle in relazione al tipo.

Ai fini delle verifiche (come da D.M. 17 Gennaio 2018 e circolare 21 Gennaio 2019 n.7) i tipi elementi differiscono per i seguenti aspetti:

Verifica	Aste	Travi	Pilastr
4.2.3.1 Classificazione	X	X	X
4.2.4.1.2.1 Trazione	X	X	X
4.2.4.1.2.2 Compressione	X	X	X
4.2.4.1.2.4 Taglio		X	X
4.2.4.1.2.5 Torsione		X	X
Flessione, taglio e forza assiale		X	X
4.2.4.1.3.1 Aste compresse	X	X	X
4.2.4.1.3.2 Instabilità flessio-torsionale		X	X
4.2.4.1.3.3 Membrature inflesse e compresse		X	X

Ai fini delle verifiche per strutture dissipative (come da D.M. 17 Gennaio 2018 e 2018 e circolare 21 Gennaio 2019 n.7) per strutture intelaiate e a controventi concentrici) si considerano le verifiche del capitolo 4 con azioni amplificate e le verifiche del capitolo 7:

Verifica	Travi	Pilastr
4.2.4.1.2.1 Trazione	X	X
4.2.4.1.2.2 Compressione	X	X
4.2.4.1.2.4 Taglio	X	X
4.2.4.1.2.5 Torsione	X	X

	Flessione, taglio e forza assiale	X	X
4.2.4.1.3.1	Aste compresse	X	X
4.2.4.1.3.2	Instabilità flesso-torsionale	X	X
4.2.4.1.3.3	Membrature inflesse e compresse	X	X
7.5.3	Sfruttamento per momento	X	
7.5.4	Sfruttamento per sforzo normale	X	
7.5.5	Sfruttamento per taglio da capacità flessionale	X	
7.5.9	Sfruttamento per taglio amplificato		X

Viene inoltre riportata la verifica della “Gerarchia delle resistenze trave-colonna” per ogni colonna, considerando piede e testa in entrambe le direzioni globali X e Y.

L'insieme delle verifiche sopra riportate è condotto sugli elementi purché dotati di sezione idonea come da tabella seguente:

Azione	SEZIONI GENERICHE	PROFILI SEMPLICI	PROFILI ACCOPPIATI
4.2.3.1 Classificazione automatica	L, doppio T, C, rettangolare cava, circolare cava	Tutti	Da profilo semplice
4.2.3.1 Classificazione di default 2	Circolare		
4.2.3.1 Classificazione di default 3	restanti		
4.2.4.1.2.1 Trazione	si	si	si
4.2.4.1.2.2 Compressione	si	si	si
4.2.4.1.2.4 Taglio	si	si	si
4.2.4.1.2.5 Torsione	si	si	si
Flessione, taglio e forza assiale	si	si	si
4.2.4.1.3.1 Aste compresse	si	si	per elementi ravvicinati e a croce o coppie calastrellate
4.2.4.1.3.2 Travi inflesse	doppio T simmetrica	doppio T	no

Le verifiche sono riportate in tabelle con il significato sotto indicato; le verifiche sono espresse dal rapporto tra l'azione di progetto e la capacità ultima, pertanto la verifica ha esito positivo per rapporti non superiori all'unità.

Asta	Trave	Pilastro	numero dell'elemento			
Stato			codice di verifica per resistenza, stabilità, svergolamento			
Note			sezione e materiali adottati per l'elemento			
V N			(ASTE) verifica come da par. 4.2.4.1.2 per punto (4.2.6) e (4.2.10)			
V V/T			(TRAVI E PILASTRI) verifica di resistenza come da par. 4.2.4.1.2 per azioni taglio-torsione (4.2.16 e 4.2.28)			
V N/M			(TRAVI E PILASTRI) verifica di resistenza come da par. 4.2.4.1.2 per azioni composte (4.2.33) con riduzione per taglio (4.2.40) ove richiesto			
N	M3	M2	V2	V3	T	sollecitazioni di interesse per la verifica
V stab			(ASTE) verifica come da par. 4.2.4.1.3.1 per punto (4.2.41)			
V stab			(TRAVI E PILASTRI) verifica come da par. 4.2.4.1.3 per punti (C4.2.32) o (C4.2.36) (membrature inflesse e compresse senza/con presenza di instabilità flesso-torsionale)			
BetaxL		B22xL	B33xL	lunghezze libere di inflessione (se indicato riferiti al piano di normale 22 o 33 rispettivamente)		
Snellezza			snellezza massima			
Classe			classe del profilo			
Chi mn			coefficiente di riduzione (della capacità) per la modalità di instabilità pertinente			
Rif. cmb			combinazioni in cui si sono rispettivamente attinti i valori di verifica più elevati			
V flst			(TRAVI E PILASTRI) verifica di stabilità come da par. 4.2.4.1.3.2 per punto (4.2.48)			
B1-1 x L			Beta1-1 x L: interasse tra i ritegni torsionali			
Chi LT			coefficiente di riduzione (della capacità) per la modalità di instabilità flesso-torsionale			
Snell adim			Valore della snellezza adimensionale, utilizzato per il controllo previsto al par. 7.5.5			

<b>v.Omeg</b>	Valore del rapporto capacità/domanda per l' azione di interesse (momento per travi e azione assiale per aste) utilizzato per l' amplificazione delle azioni
<b>f.Om. N</b>	Fattore di amplificazione delle azioni assiali per travi e colonne (prodotto di 1.1 x Omega x gamma rd materiale); utilizzato come specificato al par. 7.5.5
<b>f.Om. T</b>	Fattore di amplificazione delle azioni (assiali, flettenti e taglianti) per colonne (prodotto di 1.1 x Omega x gamma rd materiale); utilizzato come specificato al par. 7.5.4
<b>V.7.5.4 M Ed</b>	Verifica come prevista al punto 7.5.4 e valore dell' azione flettente
<b>V.7.5.5 N Ed</b>	Verifica come prevista al punto 7.5.5 e valore dell' azione assiale
<b>V.7.5.6 V Ed,G V Ed,M</b>	Verifica come prevista al punto 7.5.6 e valore dei tagli dovuti ai carichi e alla capacità
<b>V.7.5.10 V Ed</b>	Verifica come prevista al punto 7.5.10 e valore dell' azione di taglio
<b>sovr. Xi (Xf, Yi, Yf)</b>	Valore della sovraresistenza come prevista al par. 7.5.4.2 (i valori non sono normalizzati pertanto saranno maggiori uguali a gamma rd in base alla classe di duttilità)

**Nel caso in cui  $\lambda_{S}$  sia minore di 0.2, oppure nel caso in cui la sollecitazione di calcolo NEd sia inferiore a 0.04 Ncr, gli effetti legati ai fenomeni di instabilità sono trascurati, come da paragrafo 4.2.4.1.3.1**

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
3	ok	s=3,m=12	0.12	0.24	0.44	1	2.4	0.6	207.2	0.14	0.26	1.1	0.42	73,67,74,67
4	ok	s=3,m=12	0.04	0.32	0.33	1	2.4	0.6	207.2	0.14	0.35	1.1	0.42	2,74,56,74
5	ok	s=1,m=12	0.18	0.34		1					0.34	5.72e-02	1.00	2,2,0,2
6	ok	s=3,m=12	0.05	0.29		1					0.22	0.1	1.00	52,68,0,68
7	ok	s=3,m=12	0.05	0.27		1					0.21	9.95e-02	1.00	2,70,0,2
11	ok	s=1,m=12	0.09	0.39		1					0.34	0.1	1.00	2,2,0,2
12	ok	s=1,m=12	0.01	0.15		1					0.04	0.2	1.00	70,68,0,70
13	ok	s=3,m=12	0.04	0.40	0.85	1	2.5	0.7	217.7	0.13	0.61	1.1	0.40	2,61,61,74
14	ok	s=3,m=12	0.01	0.01		1					0.01	0.4	0.82	2,2,0,2
15	ok	s=3,m=12	0.04	0.26		1					0.34	1.1	0.40	2,47,0,69
16	ok	s=3,m=12	0.02	0.22		1					0.12	0.4	0.82	63,68,0,71
21	ok	s=1,m=12	0.20	0.37		1					0.37	5.71e-02	1.00	2,2,0,2
22	ok	s=3,m=12	0.06	0.28		1					0.22	9.99e-02	1.00	2,52,0,68
23	ok	s=3,m=12	0.06	0.28		1					0.21	0.1	1.00	2,2,0,2
24	ok	s=3,m=12	0.01	0.09		1					0.02	0.4	0.87	72,52,0,74
25	ok	s=3,m=12	9.98e-03	0.13		1					0.02	0.4	0.87	74,72,0,56
26	ok	s=3,m=12	0.01	0.11		1					0.06	0.4	0.87	70,73,0,70
Trave			V V/T	V N/M	V stab		LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	
										0.13			0.40	
			0.20	0.40	0.85		2.51	0.66	217.71		0.61	1.14		

Pilas.	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
1	ok	s=3,m=12	0.07	0.06		1					0.03	1.48e-02	1.00	50,66,0,50
2	ok	s=3,m=12	0.59	0.10		1					0.04	1.74e-02	1.00	68,68,0,71
10	ok	s=2,m=12	0.02	0.66	0.17	1	0.8	0.5	68.4	0.67	0.01	0.2	1.00	58,52,2,36
Pilas.			V V/T	V N/M	V stab		LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	
										0.67			1.00	
			0.59	0.66	0.17		0.79	0.48	68.39		0.04	0.24		

# STATI LIMITE D' ESERCIZIO ACCIAIO

## LEGENDA TABELLA STATI LIMITE D' ESERCIZIO ACCIAIO

In tabella vengono riportati i valori di interesse per il controllo degli stati limite d'esercizio.

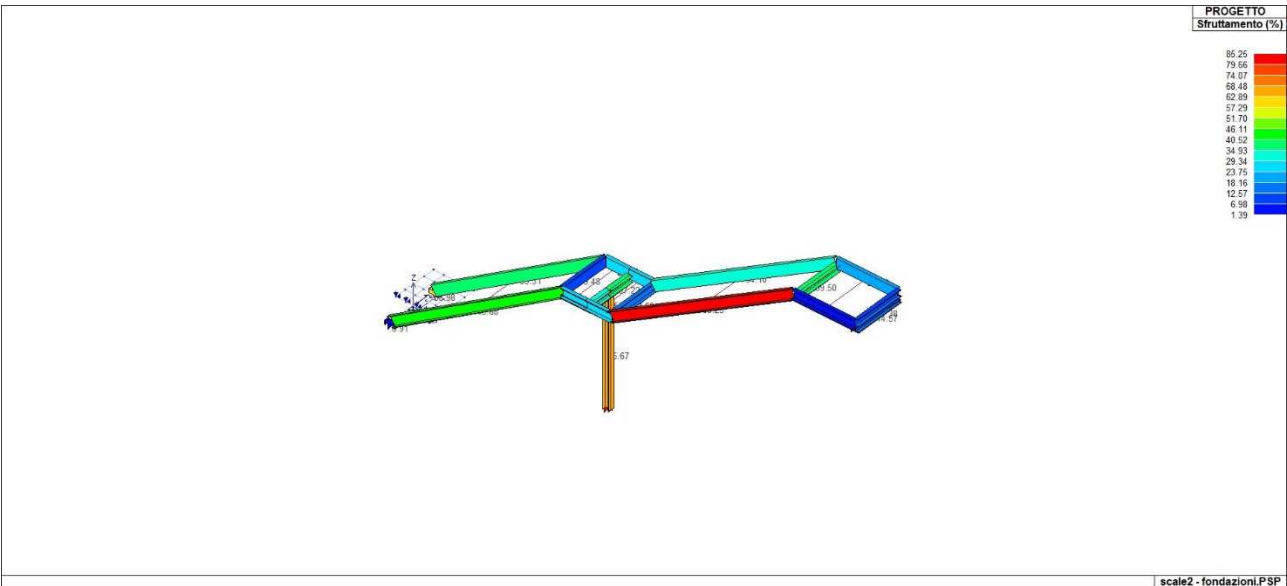
In particolare vengono riportati, per gli elementi trave, i risultati relativi alle combinazioni considerate (rare o caratteristiche).

I valori di interesse sono i seguenti:

<b>f*1000/L</b>	massima deformazione normalizzata in combinazioni rare
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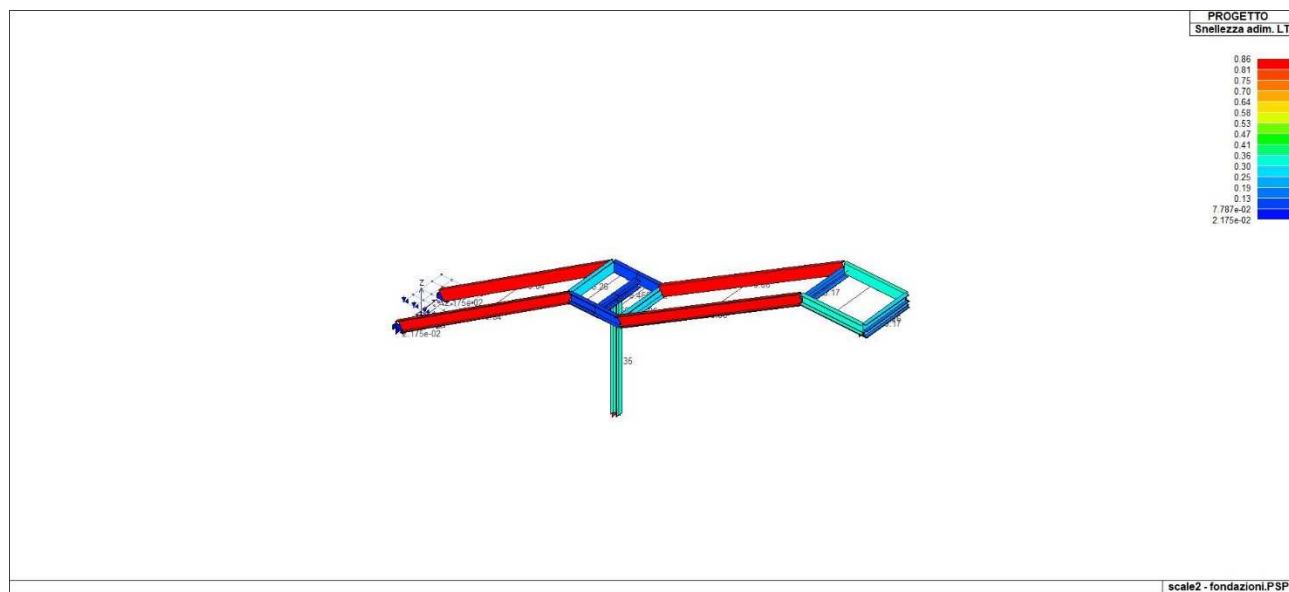
Si precisa che i valori di massima deformazione per travi sono riferiti ai due piani locali (1-2 con momenti flettenti 3-3 e 1-3 con momenti flettenti 2-2). Il valore riportato (massimo) è espresso in 1000/L per rendere agevole il confronto di più valori e in particolare di più range di valori ( ad esempio 2 rappresenta L/500, 4 L/250 e così via ).

Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L	Trave	f*1000/L
3	0.4	4	0.4	5	0.9	6	0.5	7	0.2	11	1.8	12	0.3
13	0.3	14	4.26e-03	15	0.5	16	1.4	21	2.7	22	0.4	23	0.7
24	1.7	25	1.9	26	0.2								

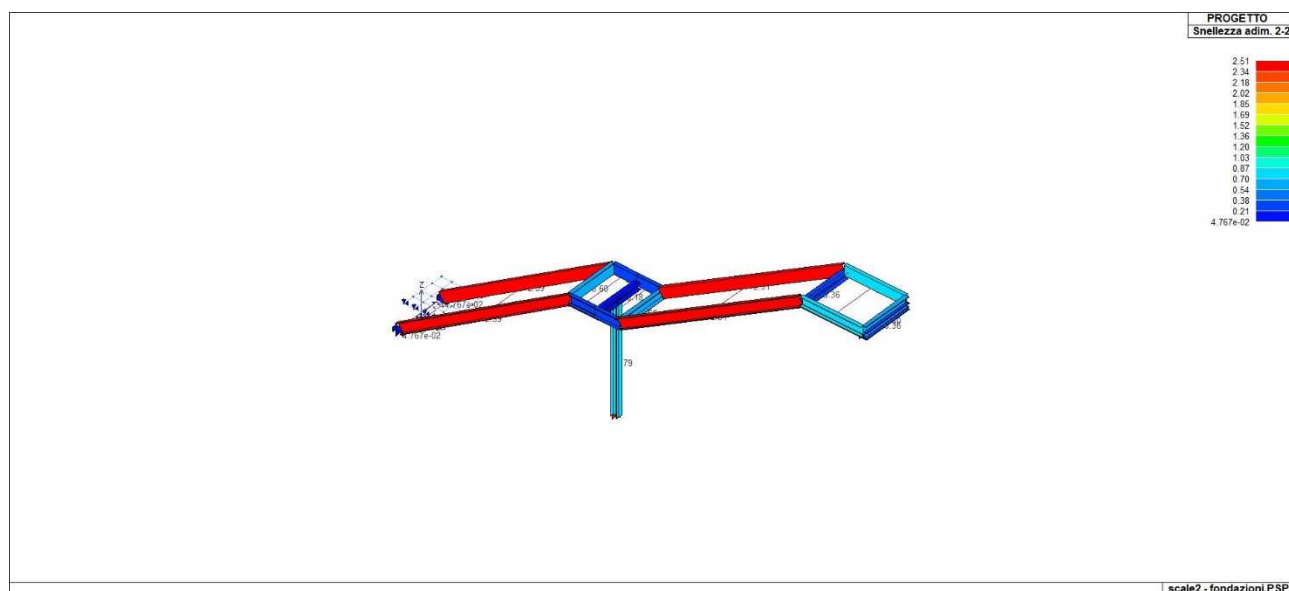


73\_PRO\_ST\_SFRUTTAMENTO

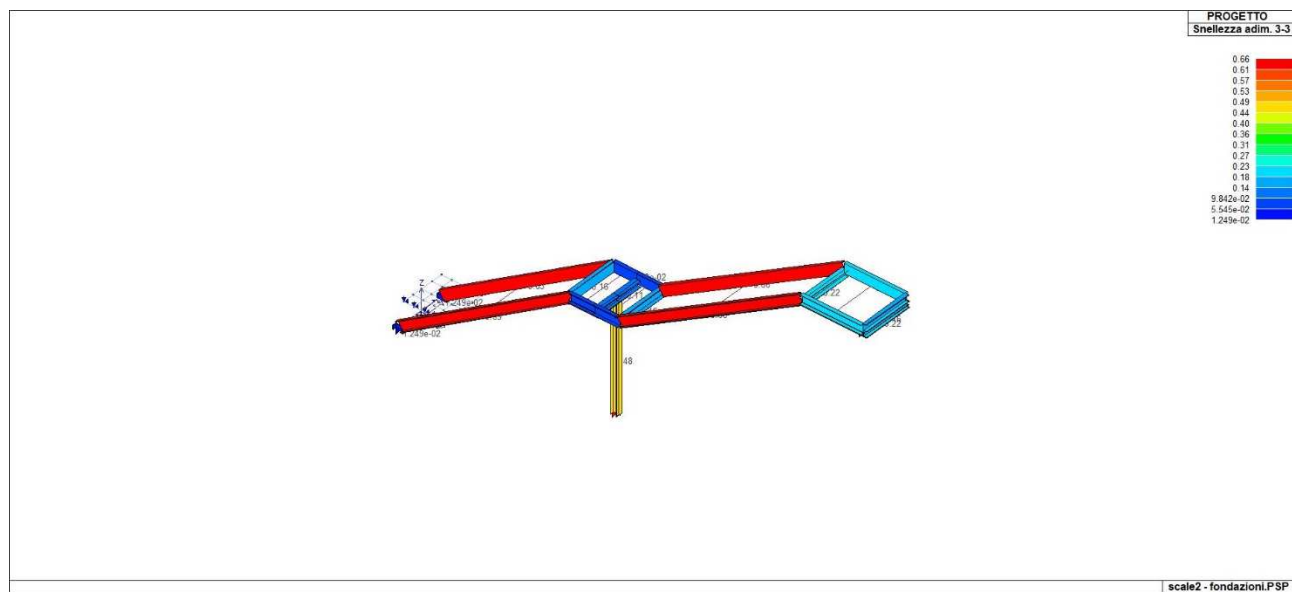




73\_PRO\_ST\_SNELLEZZATOR



73\_PRO\_ST\_SNELLEZZAXX



73\_PRO\_ST\_SNELLEZZAYY

# VERIFICHE ELEMENTI PARETE E/O GUSCIO IN C.A.

## LEGENDA TABELLA VERIFICHE ELEMENTI PARETE E GUSCIO IN C.A.

Per le pareti in c.a., in ottemperanza al cap. 7 del DM 17-01-18, viene effettuata una doppia progettazione: sia come *Singolo Elemento* sia come *Parete Sismica* o *Parete Debolmente Armata*.

Per la progettazione come *Singolo Elemento* di ogni elemento vengono riportati il codice dello stato di verifica con le sigle **Ok** e **NV**, il rapporto  $x/d$ , la verifica per sollecitazioni ultime (verifica a compressione media gli sforzi membranali, verifica a presso-flessionale e verifica a sollecitazioni taglianti), gli sforzi membranali e flessionali, il quantitativo di armatura nella direzione principale e secondaria sia inferiore che superiore e il quantitativo di armatura a taglio.

Per la progettazione come *Parete Sismica* o *Parete Debolmente Armata* vengono riportate invece le caratteristiche geometriche della parete e delle zone dissipative (quest'ultime solo nel caso di parete sismica), i coefficienti di verifica a compressione assiale, pressoflessione e sollecitazioni taglianti.

Inoltre vengono riportate per ogni quota significativa l'armatura principale e secondaria, l'armatura in zona confinata (solo per parete sismica) e non confinata, l'armatura concentrata all'estremità (per pareti debolmente armate), lo sforzo assiale aggiuntivo per  $q$  superiore a 2 e i valori di involuppo di taglio e momento. Per le pareti debolmente armate viene riportato anche lo stato di verifica relativo alla snellezza.

Le azioni derivate dall'analisi, in ogni combinazione di calcolo, sono elaborate come previsto al punto 7.4.4.5.1: traslazione del momento, incremento e variazione diagramma taglio, incremento e decremento sforzo assiale

La progettazione nel caso dei gusci viene effettuata una progettazione come *Singolo Elemento*, riportando in tabella il rapporto  $x/d$ , la verifica per sollecitazioni ultime, (verifica a compressione media gli sforzi membranali, verifica a presso-flessionale e verifica a sollecitazioni taglianti) di ogni elemento.

Per ogni elemento, viene riportata inoltre la maglia di armatura necessaria in relazione alle risultanze della progettazione dei nodi dell'elemento stesso. Le quantità di armature necessarie sono armature (disposte rispettivamente in direzione principale e secondaria, inferiore e superiore) distribuite nell'elemento ed espresse in centimetri quadri per sviluppo lineare pari ad un metro.

Nel caso dei gusci viene effettuata, inoltre, la verifica a punzonamento, riportando in tabella il codice dello stato di verifica, il coefficiente di verifica per piastre prive di armature a taglio lungo il perimetro resistente e lungo il perimetro del pilastro, coefficiente di incremento dovuto ai momenti flettenti, fattore di amplificazione per le fondazioni, il fattore di amplificazione dell'altezza utile per individuare il perimetro di verifica lungo il quale l'armatura a taglio non è richiesta, il quantitativo di armatura a punzonamento, il numero di serie di armature, il numero di braccia di armatura ed il riferimento alla combinazione più gravosa.

### Simbologia adottata nelle tabelle di verifica

Per gli elementi con progettazione "*Singolo Elemento* ..." è presente una tabella con i simboli di seguito descritti:

Macro Guscio	Numero del macroelemento di tipo guscio (elementi non verticali contigui ed analoghi per proprietà)
Macro Setto	Numero del macroelemento di tipo setto (elementi verticali contigui ed analoghi per proprietà)
Spessore	Spessore della parete
Id Materiale	Codice del materiale assegnato all'elemento
Id Criterio	Codice del criterio di progetto assegnato all'elemento
Progettazione	Sigla tipo di Elemento: - Singolo Elemento; - Singolo Elemento FONDAZIONE; - Singolo Elemento NON DISSIPATIVO

Per gli elementi con progettazione “*Parete Sismica o Parete Debolmente Armata*” è presente una tabella con i simboli di seguito descritti:

Parete	Numero della PARETE SISMICA
Parete PDA	Numero della PARETE DEBOLMENTE ARMATA
H totale	Altezza complessiva della parete
Spessore	Spessore della parete
H critica	Altezza come da punto 7.4.4.5.1 per traslazione momento (solo in Parete Sismica)
H critica V	Altezza della zona dissipativa (solo in Parete Sismica)
L totale	Larghezza di base della parete
L confinata	Lunghezza della zona dissipativa (solo in Parete Sismica)
Verif. N	Verifica di cui al punto 7.4.4.5.1 compressione semplice
Verif. N-M	Verifica di cui al punto 7.4.4.5.1 pressoflessione
Fattore V	Fattore di amplificazione del taglio di cui al punto 7.4.4.5.1
Diagramma V	Diagramma elaborato per effetto modi superiori come da fig. 7.4.4
Verif. V	Verifica di cui al punto 7.4.4.5.1 taglio (compressione cls, trazione acciaio, scorrimento in zona critica) (solo in Parete Sismica)
Verifica Snellezza	Verifica di cui al punto 7.4.4.5.1 limitazione compressione per prevenire l'instabilità (solo in Parete Debolmente Armata)
Prog. composta	Sigla per la progettazione composta

Per le verifiche degli elementi con progettazione “*Singolo Elemento ...*” e *Progettazione Composta* è presente una tabella con i simboli di seguito descritti:

Nodo	numero del nodo
Stato	codice di verifica dell'elemento <b>ok</b> o <b>NV</b>
x/d	rapporto tra posizione dell'asse neutro e altezza utile alla rottura della sezione (per sola flessione)
V N/M	Verifica delle sollecitazioni Normali (momento e sforzo normale)
Ver. rid	Rapporto Nd/Nu (Nu ottenuto con riduzione del 25% di fcd)
Af pr+	quantità di armatura richiesta in direzione principale relativa alla faccia positiva (estradosso piastre) (valore derivante da calcolo o minimo normativo)
Af pr-	quantità di armatura richiesta in direzione principale relativa alla faccia negativa (intradosso piastre) (valore derivante da calcolo o minimo normativo)
Af sec+	quantità di armatura richiesta in direzione secondaria relativa alla faccia positiva (estradosso piastre) (valore derivante da calcolo o minimo normativo)
Af sec-	quantità di armatura richiesta in direzione secondaria relativa alla faccia negativa (intradosso piastre) (valore derivante da calcolo o minimo normativo)
Nz No Nzo	Sforzi membranali per pareti e/o setti verticali
Mz Mo Mzo	Sforzi flessionali per pareti e/o setti verticali
Nx Ny Nxy	Sforzi membranali per gusci orizzontali
Mx Mx Mxy	Sforzi flessionali per gusci orizzontali

Nodo	numero del nodo
Stato	codice di verifica dell'elemento <b>ok</b> o <b>NV</b>
Max tau	Tensione tangenziale Massima
Ver V pr	Verifica a taglio nella direzione principale lato calcestruzzo
Ver V sec	Verifica a taglio nella direzione secondaria lato calcestruzzo
Af V pr	Armatura nella direzione principale
V pr-	Verifica dell'armatura nella direzione principale
Af V sec	Armatura nella direzione secondaria
V sec-	Verifica dell'armatura nella direzione secondaria

Per le verifiche degli elementi con progettazione “*Parete Sismica o Parete Debolmente Armata*”, oltre alla tabella con le verifiche per gli elementi con progettazione “*Singolo Elemento ...*”, è presente una tabella con i simboli di seguito descritti:

Quota	Ascissa verticale di riferimento
Af conf.	Numero e diametro armatura presente in una zona confinata
Af std	Diametro e passo armatura in zona non confinata (doppia maglia)

Af estremi	Diametro dei ferri di estremità del pannello; se posto uguale 0, viene utilizzato il diametro standard
Af V (ori)	Diametro e passo armatura orizzontale (doppia maglia)
Ver. N	Rapporto tra azione di calcolo e resistenza a compressione (normalizzato a 1 in quanto da confrontare con 40% in CDB e 35 % in CDA)
Ver. N/M	Rapporto tra azione di calcolo e resistenza a pressoflessione
Ver. V acc(7)	Rapporto tra azione di calcolo e resistenza a taglio-trazione per alfaS minore di 2 secondo paragrafo 7.4.4.5.1
Ver. V cls	Rapporto tra azione di calcolo e resistenza a taglio-compressione
Ver. V acc	Rapporto tra azione di calcolo e resistenza a taglio-trazione
Ver. V scorr.	Rapporto tra azione di calcolo e resistenza a taglio scorrimento
N add	Sforzo assiale di cui al punto 7.4.4.5.1 da sommare e sottrarre nelle verifiche quando q supera 2
N invil M invil	Inviluppo del Momento e Sforzo Normale come al punto 7.4.4.5.1 (informativo) (solo in Parete Sismica)

Quota	Ascissa verticale di riferimento
N v.N	Valore dello sforzo assiale per cui Ver. N attinge il massimo valore
N v.M/N, M v.M/N	Valore dello sforzo assiale e momento per cui Ver. N/M attinge il massimo valore
N v.M/N, M v.M/N Mo v.M/N	Valore dello sforzo assiale e dei momenti per cui Ver. N/M attinge il massimo valore (per le pareti estese debolmente armate)
N v.Vcls, V v.Vcls,	Valore dello sforzo assiale e taglio per cui Ver. V. cls attinge il massimo valore
N v.Vacc, M v.Vacc, V v.Vacc,	Valore dello sforzo assiale, momento e taglio per cui Ver. V. acc attinge il massimo valore
N v.Vscorr, M v.Vscorr, V v.Vscorr,	Valore dello sforzo assiale, momento e taglio per cui Ver. V. scorr.e
N v.N	Valore dello sforzo assiale per cui Ver. N attinge il massimo valore
N v.M/N, M v.M/N	Valore dello sforzo assiale e momento per cui Ver. N/M attinge il massimo valore
N v.M/N, M v.M/N Mo v.M/N	Valore dello sforzo assiale e dei momenti per cui Ver. N/M attinge il massimo valore (per le pareti estese debolmente armate)
N v.Vcls, V v.Vcls,	Valore dello sforzo assiale e taglio per cui Ver. V. cls attinge il massimo valore

Quota	Ascissa verticale di riferimento
CtgT Vcls	Valore di ctg(teta) adottato nella verifica V compressione cls
Vrsd Vcls	Valore della resistenza a taglio trazione (armatura di calcolo)
Vrcd Vcls	Valore della resistenza a taglio compressione
CtgT Vacc	Valore di ctg(teta) adottato nella verifica V trazione armatura
Vrsd Vacc	Valore della resistenza a taglio trazione (armatura presente)
Vrcd Vacc	Valore della resistenza a taglio compressione
Vdd	Valore del contributo alla resistenza allo scorrimento come da [7.4.20]
Vid	Valore del contributo alla resistenza allo scorrimento come da [7.4.21]
A s.i.	Somma delle aree di armature
Incli.	Angolo di inclinazione delle armature
Dist.	Distanza alla base tra le armature inclinate

Quota	Ascissa verticale di riferimento
V[7.4.16]	Verifica a taglio-trazione dell'armatura dell'anima (7.4.16)
N M V	Sollecitazioni di calcolo della condizione più gravosa
Alfas	Rapporto di Taglio
Vrd,c	Resistenza a taglio degli elementi non armati
VRd,s	Resistenza a taglio nei confronti dello scorrimento
V[7.4.17]	Verifica a taglio-trazione dell'armatura dell'anima (7.4.17)
roH	Rapporto tra l'armatura orizzontale e l'area della sezione relativa di calcestruzzo
roV	Rapporto tra l'armatura verticale e l'area della sezione relativa di calcestruzzo
roN	Sforzo normale adimensionalizzato Ned/(bw fyd)

Per la verifica a **Punzonamento** è presente una tabella con i simboli di seguito descritti:

Nodo	numero del nodo
Stato	codice di verifica dell'elemento <b>ok</b> o <b>NV</b>
V. 6.47	Fattore di sicurezza per la verifica per piastre prive di armature a taglio lungo il perimetro resistente U1
V. 6.53	Fattore di sicurezza per la verifica per piastre prive di armature a taglio lungo il perimetro del pilastro U0
Beta	Fattore di incremento dovuto ai momenti flettenti
f. a fon	fattore di amplificazione per le fondazioni (solo per gusci di fondazione)
f. Uout	fattore di amplificazione dell'altezza utile per individuare il perimetro di verifica lungo il quale l'armatura a taglio non è richiesta
Aw tot	Quantitativo di armatura per la verifica di piastre munite di armatura (formula 6.52 dell'EC2)
Asw,min	Quantitativo minimo di armatura previsto dai dettagli costruttivi (formula 9.11 dell'EC2)
n. x serie	Numero di serie di armature
n.ser 0(R)	Numero di braccia delle armature in direzione 0 (o numero di braccia radiale)
n.ser 90	Numero di braccia delle armature in direzione 90 (solo se armatura cruciforme)
Rif. cmb	Riferimento combinazioni da cui si generano le verifiche più gravose

## PROGETTAZIONE DELLE FONDAZIONI

Il D.M.17/01/2018 - par: 7.2.5 prevede:

“Sia per CD“A” sia per CD“B” il dimensionamento delle strutture di fondazione e la verifica di sicurezza del complesso fondazione-terreno devono essere eseguiti assumendo come azione in fondazione, trasmessa dagli elementi soprastanti, una tra le seguenti:

- quella derivante dall'analisi strutturale eseguita ipotizzando comportamento strutturale non dissipativo;
- [...];
- quella trasferita dagli elementi soprastanti nell'ipotesi di comportamento strutturale dissipativo, amplificata di un coefficiente pari a 1,30 in CD“A” e 1,10 in CD“B”;

Nel contesto visualizzazione risultati e nella stampa della relazione sulle fondazioni PRO\_SAP mostra le sollecitazioni che derivano dall'analisi non incrementate sia in termini di pressioni sul terreno che in termini di sollecitazioni.

La progettazione degli elementi strutturali con proprietà fondazione è effettuata da PRO\_SAP (per travi e platee) o da PRO\_CAD Plinti (per plinti e pali di fondazione) incrementando le sollecitazioni delle combinazioni con sisma di un coefficiente pari 1.1 in CDB e 1.3 in CDA per pali, plinti, travi e platee.

Per i bicchieri dei plinti di fondazione prefabbricati l'incremento delle sollecitazioni ha un fattore pari a 1.2 in CDB e 1.35 in CDA.

N.B.: nel caso di comportamento strutturale non dissipativo la progettazione viene effettuata senza nessun incremento.

Le verifiche geotecniche vengono effettuate dal modulo geotecnico incrementando automaticamente le sollecitazioni del fattore 1.1 in CDB e 1.3 in CDA per pali, plinti, travi e platee.

N.B.: nel caso di comportamento strutturale non dissipativo le verifiche geotecniche vengono effettuate senza nessun incremento.

Macro Guscio	Spessore	Id Materiale	Id Criterio	Progettazione
	cm			
1	30.00	4	2	Singolo elemento

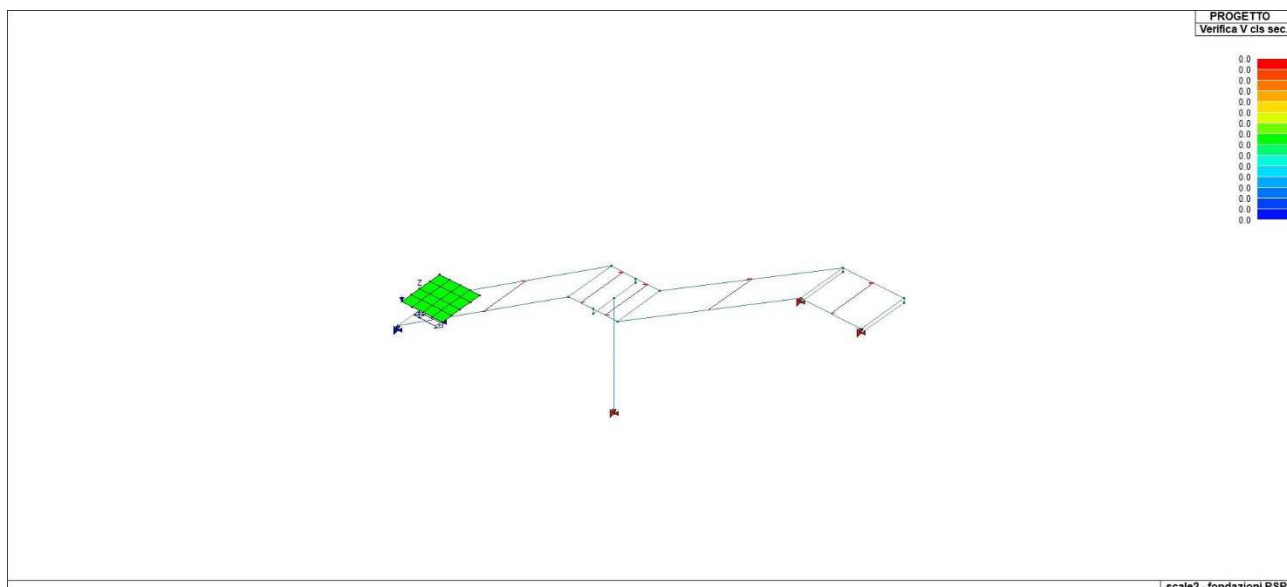
Nodo	Stato	x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N x	N y	N xy	M x	M y	M xy
									kN/ m	kN/ m	kN/ m	kN	kN	kN
2	ok	0.09	0.3	1.18e-03	3.9	3.9	3.9	3.9	1.5	0.5	-0.5	-9.0	-4.8	-3.5
23	ok	0.09	6.92e-02	3.29e-03	3.9	3.9	3.9	3.9	-6.4	-9.1	-4.2	-0.6	-1.1	0.8

Nodo	Stato	x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N x	N y	N xy	M x	M y	M xy
24	ok	0.09	2.83e-02	7.50e-05	3.9	3.9	3.9	3.9	0.4	0.1	4.43e-03	-0.6	-7.28e-02	-0.2
25	ok	0.09	7.84e-02	4.37e-03	3.9	3.9	3.9	3.9	-1.0	4.0	1.5	-0.4	-0.6	-0.1
26	ok	0.09	1.82e-02	1.49e-04	3.9	3.9	3.9	3.9	0.4	-1.63e-02	0.1	-0.5	8.84e-02	4.05e-03
27	ok	0.09	9.56e-02	4.13e-03	3.9	3.9	3.9	3.9	4.7	24.0	-7.4	-0.2	-0.3	3.77e-02
28	ok	0.09	7.84e-03	5.35e-05	3.9	3.9	3.9	3.9	3.56e-03	2.50e-02	3.09e-02	1.02e-02	6.82e-02	1.64e-02
29	ok	0.09	7.84e-03	5.12e-05	3.9	3.9	3.9	3.9	-0.2	0.1	-0.1	1.56e-02	-0.2	5.62e-02
30	ok	0.09	7.64e-02	4.68e-03	3.9	3.9	3.9	3.9	3.9	19.1	5.0	0.2	0.2	-7.23e-02
31	ok	0.09	0.1	2.56e-03	3.9	3.9	3.9	3.9	-0.2	-3.0	1.2	-1.6	-1.4	-2.2
32	ok	0.09	7.17e-02	2.51e-03	3.9	3.9	3.9	3.9	2.5	11.6	-7.3	-0.7	-0.4	0.3
33	ok	0.09	9.34e-02	3.19e-03	3.9	3.9	3.9	3.9	-0.7	9.4	-4.4	-0.6	-1.3	-0.2
34	ok	0.09	9.68e-02	4.34e-03	3.9	3.9	3.9	3.9	-0.8	9.6	-4.2	-0.3	-1.3	-6.89e-02
35	ok	0.09	0.1	2.07e-03	3.9	3.9	3.9	3.9	0.8	2.82e-02	0.2	-3.8	-1.5	-0.5
36	ok	0.09	4.99e-02	2.79e-03	3.9	3.9	3.9	3.9	0.6	4.0	-5.33e-02	-0.5	-0.3	-0.3
37	ok	0.09	4.60e-02	1.91e-03	3.9	3.9	3.9	3.9	-0.6	-3.5	-1.9	0.3	-0.7	-4.32e-02
38	ok	0.09	4.65e-02	1.82e-03	3.9	3.9	3.9	3.9	-2.98e-02	-2.5	0.1	-0.7	-0.2	-4.65e-03
39	ok	0.09	0.2	2.09e-03	3.9	3.9	3.9	3.9	4.2	9.6	-3.0	-4.6	-2.3	-1.2
40	ok	0.09	7.65e-02	2.06e-03	3.9	3.9	3.9	3.9	2.0	9.7	-4.0	-0.4	-1.5	-0.1
41	ok	0.09	3.99e-02	4.74e-04	3.9	3.9	3.9	3.9	-0.3	0.2	0.1	-1.1	-0.4	-0.5
42	ok	0.09	2.05e-02	8.11e-04	3.9	3.9	3.9	3.9	-0.7	-0.1	1.46e-02	-0.2	-0.4	-0.1
43	ok	0.09	0.1	5.40e-04	3.9	3.9	3.9	3.9	-0.2	-0.2	-0.6	-2.6	-1.8	-1.3
44	ok	0.09	4.39e-02	4.23e-04	3.9	3.9	3.9	3.9	1.0	-2.60e-02	-0.2	-0.6	-0.8	-0.1
45	ok	0.09	4.87e-02	9.33e-04	3.9	3.9	3.9	3.9	-6.74e-02	-0.4	-0.1	-5.24e-02	-0.9	-8.08e-02
46	ok	0.09	1.55e-02	9.87e-05	3.9	3.9	3.9	3.9	0.2	0.2	0.1	-0.3	-0.1	-0.3
Nodo		x/d	V N/M	ver. rid	Af pr-	Af pr+	Af sec-	Af sec+	N x	N y	N xy	M x	M y	M xy
									-6.38	-9.07	-7.41	-9.04	-4.81	-3.52
		0.09	0.31	4.68e-03	3.93	3.93	3.93	3.93	4.70	23.96	4.99	0.34	0.25	0.82

Nodo	Stato	Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
		daN/cm2					kN/ m	kN/ m
2	ok	0.80						
23	ok	0.43						
24	ok	0.14						
25	ok	0.13						
26	ok	0.12						
27	ok	0.15						
28	ok	0.05						
29	ok	0.14						
30	ok	0.11						
31	ok	0.68						
32	ok	0.15						
33	ok	0.68						
34	ok	0.26						
35	ok	0.43						
36	ok	0.11						
37	ok	0.13						
38	ok	0.15						
39	ok	0.80						
40	ok	0.26						
41	ok	0.36						
42	ok	0.13						
43	ok	0.80						
44	ok	0.80						
45	ok	0.25						
46	ok	0.08						
Nodo		Max tau	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr	V sec
		0.80						







72\_PRO\_CA\_D3\_VER\_VII

## STATI LIMITE D' ESERCIZIO

### LEGENDA TABELLA STATI LIMITE D' ESERCIZIO

In tabella vengono riportati i valori di interesse per il controllo degli stati limite d'esercizio.

In particolare vengono riportati, in relazione al tipo di elemento strutturale, i risultati relativi alle tre categorie di combinazione considerate:

- Combinazioni rare
- Combinazioni frequenti
- Combinazioni quasi permanenti.

I valori di interesse sono i seguenti:

<b>rRfck</b>	rapporto tra la massima compressione nel calcestruzzo e la tensione fck in combinazioni rare [normalizzato a 1]
<b>rRfyk</b>	rapporto tra la massima tensione nell'acciaio e la tensione fyk in combinazioni rare [normalizzato a 1]
<b>rPfck</b>	rapporto tra la massima compressione nel calcestruzzo e la tensione fck in combinazioni quasi permanenti [normalizzato a 1]
<b>wR</b>	apertura caratteristica delle fessure in combinazioni rare [mm]
<b>wF</b>	apertura caratteristica delle fessure in combinazioni frequenti [mm]
<b>wP</b>	apertura caratteristica delle fessure in combinazioni quasi permanenti [mm]
<b>dR</b>	massima deformazione in combinazioni rare
<b>dF</b>	massima deformazione in combinazioni frequenti
<b>dP</b>	massima deformazione in combinazioni quasi permanenti

Per ognuno dei nove valori soprariportati viene indicata (Rif.cmb) la combinazione in cui si è verificato.

In relazione al tipo di elemento strutturale i valori sono selezionati nel modo seguente:

pilastri	<b>rRfck</b>	<b>rRfyk</b>	<b>rPfck</b>	per sezioni significative
travi	<b>rRfck</b> <b>wR</b> <b>dR</b>	<b>rRfyk</b> <b>wF</b> <b>dF</b>	<b>rPfck</b> <b>wP</b> <b>dP</b>	per sezioni significative per sezioni significative massimi in campata
setti e gusci	<b>rRfck</b> <b>wR</b>	<b>rRfyk</b> <b>wF</b>	<b>rPfck</b> <b>wP</b>	massimi nei nodi dell'elemento massimi nei nodi dell'elemento

Si precisa che i valori di massima deformazione per travi sono riferiti al piano verticale (piano locale 1-2 con momenti flettenti 3-3).

Guscio	rRfck	rRfyk	rPfck	Rif. cmb	wR	wF	wP	Rif. cmb
					mm	mm	mm	
1	5.46e-03	0.02	4.71e-03	6,5,10	0.0	0.0	0.0	0,0,0
2	7.74e-03	0.03	6.71e-03	6,6,10	0.0	0.0	0.0	0,0,0
3	0.01	0.06	0.01	6,6,10	0.0	0.0	0.0	0,0,0
4	6.09e-03	0.03	5.55e-03	6,6,10	0.0	0.0	0.0	0,0,0
5	7.28e-03	0.02	6.32e-03	6,6,10	0.0	0.0	0.0	0,0,0
6	0.03	0.11	0.03	6,6,10	0.0	0.0	0.0	0,0,0
7	0.07	0.23	0.06	6,6,10	0.0	0.0	0.0	0,0,0
8	0.01	0.05	0.01	6,6,10	0.0	0.0	0.0	0,0,0
9	7.90e-03	0.02	6.74e-03	6,6,10	0.0	0.0	0.0	0,0,0
10	0.03	0.09	0.02	6,6,10	0.0	0.0	0.0	0,0,0
11	0.06	0.21	0.06	6,6,10	0.0	0.0	0.0	0,0,0
12	0.01	0.04	0.01	6,6,10	0.0	0.0	0.0	0,0,0
13	4.80e-03	0.01	4.11e-03	6,6,10	0.0	0.0	0.0	0,0,0
14	5.61e-03	0.02	4.84e-03	6,6,10	0.0	0.0	0.0	0,0,0
15	0.01	0.04	9.72e-03	6,6,10	0.0	0.0	0.0	0,0,0
16	4.17e-03	0.01	3.58e-03	6,6,10	0.0	0.0	0.0	0,0,0
<b>Guscio</b>	<b>rRfck</b>	<b>rRfyk</b>	<b>rPfck</b>		<b>wR</b>	<b>wF</b>	<b>wP</b>	
	0.07	0.23	0.06		0.0	0.0	0.0	