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## **RELAZIONE CALCOLO STRUTTURALE**

**COMMITTENTE:**

Comune di Gambara

**OGGETTO:**

PROGETTO DEFINITIVO ESECUTIVO LAVORI ADE-  
GUAMENTO SISMICO E RIFACIMENTO COPERTURA  
DELLA PALESTRA COMUNALE  
1° LOTTO

**CANTIERE:**

Via Giuseppe Tovini, Gambara (Brescia)

**DATA:**

Gambara, 08/08/2017

Il coordinatore della sicurezza  
Arch. Carlo Zupelli

Il committente  
Comune di Gambara

# **PROGETTO DEFINITIVO ED ESECUTIVO PER MESSA IN SICUREZZA COPERTURA PALESTRA COMUNALE GAMBARA (BS)**

**Relazione di calcolo strutturale impostata e redatta secondo le modalità  
previste nel D.M. 14 Gennaio 2008 cap. 10 “Redazione dei progetti  
strutturali esecutivi e delle relazioni di calcolo”.**

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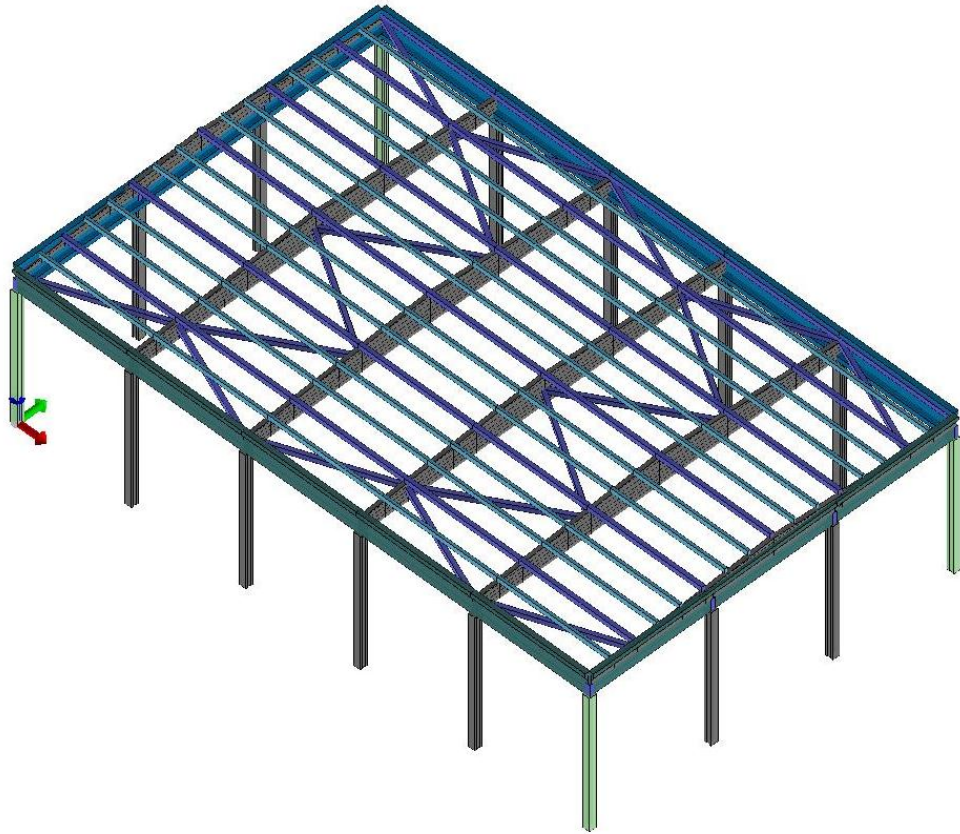
[info@2si.it](mailto:info@2si.it)

D.M. 14/01/08 cap. 10.2 Affidabilità dei codici utilizzati

<http://www.2si.it/software/Affidabilità.htm>

## INTESTAZIONE E CONTENUTI DELLA RELAZIONE

Progetto



Contenuti della relazione:

RELAZIONE DI CALCOLO STRUTTURALE

- *Origine e Caratteristiche dei Codici di Calcolo*
- *Affidabilità dei codici utilizzati*
- *Validazione dei codici*
- *Tipo di analisi svolta*
- *Modalità di presentazione dei risultati*
- *Informazioni generali sull'elaborazione*
- *Giudizio motivato di accettabilità dei risultati*

STAMPA DEI DATI DI INGRESSO

- *Normative prese a riferimento*
- *Criteri adottati per le misure di sicurezza*
- *Criteri seguiti nella schematizzazione della struttura, dei vincoli e delle sconnessioni*
- *Interazione tra terreno e struttura*
- *Legami costitutivi adottati per la modellazione dei materiali e dei terreni*
- *Schematizzazione delle azioni, condizioni e combinazioni di carico*
- *Metodologie numeriche utilizzate per l'analisi strutturale*
- *Metodologie numeriche utilizzate per la progettazione e la verifica degli elementi strutturali*

STAMPA DEI RISULTATI

Il Progettista: (Arch. Carlo Zupelli)

08 Agosto 2017

## RELAZIONE DI CALCOLO STRUTTURALE

### Premessa

La presente relazione di calcolo strutturale, in conformità al §10.1 del DM 14/01/08, è comprensiva di una descrizione generale dell'opera e dei criteri generali di analisi e verifica. Segue inoltre le indicazioni fornite al §10.2 del DM stesso per quanto concerne analisi e verifiche svolte con l'ausilio di codici di calcolo.

### Analisi storico-critica ed esito del rilievo geometrico-strutturale

Per edifici esistenti, in coerenza con il paragrafo 8.2 delle NTC-08, l'analisi storico-critica ed il rilievo geometrico-strutturale devono evidenziare i seguenti aspetti: (a) la costruzione riflette lo stato delle conoscenze al tempo della sua realizzazione; (b) possono essere insiti e non palesi difetti di impostazione e di realizzazione; (c) la costruzione può essere stata soggetta ad azioni, anche eccezionali, i cui effetti non siano completamente manifesti; (d) le strutture possono presentare degrado e/o modificazioni significative rispetto alla situazione originaria.

### Analisi storico-critica

Per edifici esistenti, viene indicata la documentazione reperita e vengono esplicitate le informazioni desunte da ciascuno dei documenti esaminati per le finalità indicate al paragrafo 8.5.1 delle NTC-08.

[Nel dettaglio, tramite accesso agli atti documentali conservati presso l'Ufficio Tecnico del Comune di Gambara, sono stati ritrovati tutti gli elaborati strutturali, le relazioni di calcolo e la pratica di collaudo statico redatte rispettivamente dall'Ing. Silvio Bonati \(tecnico progettista della struttura prefabbricata\) e dall'Ing. Alfredo Sottini \(tecnico collaudatore dell'opera\)](#)

### Esito del rilievo geometrico-strutturale

Per edifici esistenti, vengono descritte le modalità con cui è stato effettuato il rilievo geometrico strutturale e gli esiti di quest'ultimo, anche con riferimenti espliciti e puntuali agli elaborati grafici che saranno riportati nella parte "4.1. Rilievo geometrico-strutturale". Il rilievo delle strutture deve essere eseguito e restituito secondo le modalità e con le finalità riportate nei paragrafi 8.5.2 e 8.7 delle NTC-08.

[In corso di rilievo strumentale, realizzato dallo scrivente tecnico \(coadiuvato dai suoi collaboratori ed assistito da operaio specializzato del Comune di Gambara, abilitato all'utilizzo di piattaforma elevatrice\) nel giugno 2017. L'operazione ha restituito la perfetta conformità fra l'eseguito e le tavole progettuali ottenute in sede di ricerca \(vedasi tavole architettoniche allegate al progetto esecutivo in oggetto\).](#)

### Descrizione generale dell'opera

Si ritiene superfluo addentrarsi nella descrizione generale dell'opera, poiché ampiamente dibattuta in sede di inquadramento e descrizione delle opere di progetto.

Strutturalmente trattasi di edificio prefabbricato adibito ad uso palestra, costruito nell'anno 1988.

La struttura portante è realizzata con una serie di pilastri prefabbricati aventi schematicamente sezione ad H (incastro necessario all'alloggiamento dei pannelli di tamponamento dell'edificio, aventi asse orizzontale). La stessa geometria è utilizzata per i pilastri di facciata, mentre i pilastri della zona spogliatoi hanno sezione quadrangolare).

I pilastri sono alloggiati in bicchieri prefabbricati di fondazione, insistenti su piatta bande in calcestruzzo armato gettate in opera.

La struttura di copertura è realizzata mediante travi di bordo con funzione portante (aventi sezione molto articolata, ancorate mediante spinotto  $\phi 24$  ai pilastri di comparto (collegamento successivamente omesso nella valutazione sismica del modello quale parametro di sicurezza)), poste a sostegno di travi trasversali a Y poste a sostegno del manto di copertura stesso.

Scopo dell'intervento è quello di adeguare sismicamente l'edificio attraverso una serie di interventi, il più importante dei quali è quello di sostituzione integrale della struttura di copertura in calcestruzzo armato precompresso con una più performante copertura in legno lamellare, al fine di ridurre il carico agente sui pilastri di comparto, con conseguente riduzione delle azioni sismiche di progetto, attraverso la formazione di un nuovo impalcato a comportamento rigido (differentemente da quello esistente).

La sostituzione della copertura viene implementata anche attraverso:

- il consolidamento a taglio dei pilastri di comparto attraverso la messa in opera di angolari calastrellati;
- il collegamento delle lastre di tamponamento ad asse orizzontale ai relativi pilastri mediante la messa in opera di 4 squadrette per ogni lato di appoggio al pilastro;
- la formazione di piastre di ancoraggio delle travi di bordo dell'intero edificio ai pilastri di comparto.

I citati consolidamenti sismici vengono dimensionati e progettati al fine di non variare lo schema statico dell'edificio originario.

Descrizione generale dell'opera	
Fabbricato ad uso	PALESTRA COMUNALE
Ubicazione	Comune di GOTTOLENGO (BS) (Regione LOMBARDIA)
	Località GOTTOLENGO (BS)
	Longitudine 10.270, Latitudine 45.291
Numero di piani	Fuori terra: 1 piano fuori terra zona Palestra (intradosso trave di copertura m7.70 dal p.d.c.) e 1 per zona spogliatoi (intradosso trave di copertura m2.85 dal p.d.c.)
	Interrati 0
	le dimensioni dell'opera in pianta sono racchiuse in un rettangolo di m48.18 x m28.81
Numero vani scale	0
Numero vani ascensore	0
Tipo di fondazione	Fondazione indiretta a plinto sotto bicchieri in calcestruzzo armato precompresso, oltre a travi reggi pannello

Principali caratteristiche della struttura	
Struttura regolare in pianta	si
Struttura regolare in altezza	si
Classe di duttilità	B
Travi: ricalate o in spessore	

Pilastri	Calcestruzzo prefabbricato a sezione variabile
Pilastri in falso	NO
Tipo di fondazione	Fondazione indiretta a plinto sotto bicchieri in calcestruzzo armato precompresso, oltre a travi reggi pannello
Condizioni per cui è necessario considerare la componente verticale del sisma	Nessuna

Parametri della struttura			
Classe d'uso	Vita $V_n$ [anni]	Coeff. Uso	Periodo $V_r$ [anni]
IV	100.0	2.0	200.0

Fattore di struttura
Si è utilizzato un coefficiente di struttura cautelativo $q_{xx} - q_{yy}=2.5$

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. 14-01-2008
Progetto acciaio	D.M. 14-01-2008
Progetto legno	D.M. 14-01-2008
Progetto muratura	D.M. 14-01-2008
Azione sismica	
Norma applicata per l'azione sismica	D.M. 14-01-2008

Azioni di progetto sulla costruzione

Nei capitoli “**modellazione delle azioni**” e “**schematizzazione dei casi di carico**” sono indicate le azioni sulle 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 tenso-deformativo 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 tenso-deformativo 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:

$\mathbf{K} * \mathbf{u} = \mathbf{F}$       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 **TRUSS**                      (biella-D2)
- Elemento tipo **BEAM**                      (trave-D2)
- Elemento tipo **MEMBRANE**                      (membrana-D3)
- Elemento tipo **PLATE**                      (piastra-guscio-D3)
- Elemento tipo **BOUNDARY**                      (molla)
- Elemento tipo **STIFFNESS**                      (matrice di rigidezza)
- Elemento tipo **BRICK**                      (elemento solido)
- Elemento tipo **SOLAIO**                      (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 delle NTC-08, tale da garantirne la leggibilità, la corretta interpretazione e la riproducibilità.

Tipo di analisi strutturale	
Statica lineare	SI
Statica non lineare	NO
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 2017-01-176)
Produttore-Distributore:	2S.I. Software e Servizi per l'Ingegneria s.r.l., Ferrara
Dati utente finale:	*****
Codice Utente:	*****
Codice Licenza:	Licenza dsi3678

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: <http://www.2si.it/Software/Affidabilità.htm>

<b>Modellazione della geometria e proprietà meccaniche:</b>	
nodi	598
elementi D2 (per aste, travi, pilastri...)	143
elementi D3 (per pareti, platee, gusci...)	472
elementi solaio	80
elementi solidi	0
<b>Dimensione del modello strutturale [cm]:</b>	
X min =	0.00
Xmax =	3750.00
Ymin =	0.00
Ymax =	2388.00
Zmin =	0.00
Zmax =	1054.00
<b>Strutture verticali:</b>	
Elementi di tipo asta	NO
Pilastri	SI
Pareti	SI
Setti (a comportamento membranale)	NO
<b>Strutture non verticali:</b>	
Elementi di tipo asta	SI
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	NO
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)	NO
Combinazione frequente	NO
Combinazione quasi permanente (SLE)	NO
SLA (accidentale quale incendio)	SI

**Principali risultati**

I risultati devono costituire una sintesi completa ed efficace, presentata in modo da riassumere il comportamento della struttura, per ogni tipo di analisi svolta.

**2.8.1. Risultati dell'analisi modale**

Viene riportato il tipo di analisi modale condotta, restituiti i risultati della stessa e valutate le informazioni desumibili in merito al comportamento della struttura.

**2.8.2. Deformate e sollecitazioni per condizioni di carico**

Vengono riportati i principali risultati atti a descrivere il comportamento della struttura, in termini di stati di sollecitazione e di deformazione generalizzata, distinti per condizione elementare di carico o per combinazioni omogenee delle stesse.

2.8.3. Involuppo delle sollecitazioni maggiormente significative. L'analisi e la restituzione degli involuppi (nelle combinazioni considerate agli SLU e agli SLE) delle caratteristiche di sollecitazione devono essere finalizzate alla valutazione dello stato di sollecitazione nei diversi elementi della struttura.

**2.8.4. Reazioni vincolari**

Vengono riportate le reazioni dei vincoli nelle singole condizioni di carico e/o nelle combinazioni considerate.

**2.8.5. Altri risultati significativi**

Nella presente parte vengono riportati tutti gli altri risultati che il progettista ritiene di interesse per la descrizione e la comprensione del/i modello/i e del comportamento della struttura.

La presente relazione, oltre ad illustrare in modo esaustivo i dati in ingresso ed i risultati delle analisi in forma tabellare, riporta una serie di immagini:

per i dati in ingresso:

- modello solido della struttura
  - numerazione di nodi e ed elementi
  - configurazioni di carico statiche
  - configurazioni di carico sismiche con baricentri delle masse e eccentricità
- per le combinazioni più significative (statisticamente più gravose per la struttura)
- configurazioni deformate
  - diagrammi e involuppi delle azioni interne
  - mappe delle tensioni
  - reazioni vincolari
  - mappe delle pressioni sul terreno
- per il progetto-verifica degli elementi
- diagrammi di armatura
  - percentuali di sfruttamento
  - mappe delle verifiche più significative per i vari stati limite

**Informazioni generali sull'elaborazione e giudizio motivato di accettabilità dei risultati.**

Il programma prevede una serie di controlli automatici (check) che consentono l'individuazione di errori di modellazione. Al termine dell'analisi un controllo automatico identifica la presenza di spostamenti o

rotazioni abnormi. Si può pertanto asserire che l'elaborazione sia corretta e completa. I risultati delle elaborazioni sono stati sottoposti a controlli che ne comprovano l'attendibilità. Tale valutazione ha compreso il confronto con i risultati di semplici calcoli, eseguiti con metodi tradizionali e adottati, anche in fase di primo proporzionamento della struttura. Inoltre, sulla base di considerazioni riguardanti gli stati tensionali e deformativi determinati, si è valutata la validità delle scelte operate in sede di schematizzazione e di modellazione della struttura e delle azioni. Si allega al termine della presente relazione elenco sintetico dei controlli svolti (verifiche di equilibrio tra reazioni vincolari e carichi applicati, comparazioni tra i risultati delle analisi e quelli di valutazioni semplificate, etc.) .

#### 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 SLU 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 riportata informazioni esaustive relative all'elenco dei materiali impiegati e loro modalità di posa in opera e ai valori di calcolo.

## NORMATIVA DI RIFERIMENTO

1. D.Min. Infrastrutture Min. Interni e Prot. Civile 14 Gennaio 2008 e allegate "Norme tecniche per le costruzioni".
2. D.Min. Infrastrutture e trasporti 14 Settembre 2005 e allegate "Norme tecniche per le costruzioni".
3. 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".
4. 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>>".
5. D.M. LL.PP. 16 Gennaio 1996 "Norme tecniche per le costruzioni in zone sismiche".
6. 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.
7. 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.
8. D.M. LL.PP. 20 Novembre 1987 "Norme tecniche per la progettazione, esecuzione e collaudo degli edifici in muratura e per il loro consolidamento".
9. 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".
10. 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".
11. D.M. LL.PP. 3 Dicembre 1987 "Norme tecniche per la progettazione, esecuzione e collaudo delle costruzioni prefabbricate".
12. UNI 9502 - Procedimento analitico per valutare la resistenza al fuoco degli elementi costruttivi di conglomerato cementizio armato, normale e precompresso - edizione maggio 2001
13. 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.
14. UNI EN 1990:2006 13/04/2006 Eurocodice 0 - Criteri generali di progettazione strutturale.
15. UNI EN 1991-1-1:2004 01/08/2004 Eurocodice 1 - Azioni sulle strutture - Parte 1-1: Azioni in generale - Pesì per unità di volume, pesì propri e sovraccarichi per gli edifici.
16. UNI EN 1991-2:2005 01/03/2005 Eurocodice 1 - Azioni sulle strutture - Parte 2: Carichi da traffico sui ponti.
17. UNI EN 1991-1-3:2004 01/10/2004 Eurocodice 1 - Azioni sulle strutture - Parte 1-3: Azioni in generale - Carichi da neve.
18. UNI EN 1991-1-4:2005 01/07/2005 Eurocodice 1 - Azioni sulle strutture - Parte 1-4: Azioni in generale - Azioni del vento.
19. UNI EN 1991-1-5:2004 01/10/2004 Eurocodice 1 - Azioni sulle strutture - Parte 1-5: Azioni in generale - Azioni termiche.
20. 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.
21. 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.
22. 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.
23. UNI EN 1993-1-8:2005 01/08/2005 Eurocodice 3 - Progettazione delle strutture di acciaio - Parte 1-8: Progettazione dei collegamenti.
24. 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.
25. 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.
26. 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.
27. UNI EN 1995-2:2005 01/01/2005 Eurocodice 5 - Progettazione delle strutture di legno - Parte 2: Ponti.
28. 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.
29. 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.
30. UNI EN 1997-1:2005 01/02/2005 Eurocodice 7 - Progettazione geotecnica - Parte 1: Regole generali.
31. 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.
32. UNI EN 1998-3:2005 01/08/2005 Eurocodice 8 - Progettazione delle strutture per la resistenza sismica - Parte 3: Valutazione e adeguamento degli edifici.
- 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 sul 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 14.01.08 è dovuto o a progettazione simulata di edificio esistente o ad applicazione del punto 2.7 del DM 14.01.08

## 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:

<i>Young</i>	modulo di elasticità normale
<i>Poisson</i>	coefficiente di contrazione trasversale
<i>G</i>	modulo di elasticità tangenziale
<i>Gamma</i>	peso specifico
<i>Alfa</i>	coefficiente di dilatazione termica

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	<b>cemento armato</b>	<b>Rck</b> <b>Fctm</b>	resistenza caratteristica cubica resistenza media a trazione semplice
2	<b>acciaio</b>	<b>Ft</b> <b>Fy</b> <b>Fd</b> <b>Fdt</b> <b>Sadm</b> <b>Sadmt</b>	tensione di rottura a trazione tensione di snervamento resistenza di calcolo resistenza di calcolo per spess. t>40 mm tensione ammissibile tensione ammissibile per spess. t>40 mm
3	<b>muratura</b>	<b>Resist. Fk</b> <b>Resist. Fvko</b>	resistenza caratteristica a compressione resistenza caratteristica a taglio
4	<b>legno</b>	<b>Resist. fc0k</b> <b>Resist. ft0k</b> <b>Resist. fmk</b> <b>Resist. fvk</b> <b>Modulo E0,05</b> <b>Lamellare</b>	Resistenza caratteristica (tensione amm. per REGLES) per compressione 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

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

Con riferimento al **Documento di Affidabilità** "Test di validazione del software di calcolo PRO\_SAP e dei moduli aggiuntivi PRO\_SAP Modulo Geotecnico, PRO\_CAD nodi acciaio e PRO\_MST" - versione Maggio 2011, disponibile per il download sul sito [www.2si.it](http://www.2si.it), si segnalano i seguenti esempi applicativi:

#### Modellazione di strutture in c.a.

Test N°	Titolo
41	GERARCHIA DELLE RESISTENZE PER TRAVI IN C.A.
42	GERARCHIA DELLE RESISTENZE PER PILASTRI IN C.A.
43	VERIFICA ALLE TA DI STRUTTURE IN C.A.
44	VERIFICA AGLI SLU DI STRUTTURE IN C.A.
45	VERIFICA A PUNZONAMENTO ALLO SLU DI PIASTRE IN C.A.
46	VERIFICA A PUNZONAMENTO ALLO SLU DI TRAVI IN C.A.
47	PROGETTAZIONE A TAGLIO DI STRUTTURE IN C.A. SECONDO IL D.M. 9/1/96
48	PROGETTAZIONE A TAGLIO DI STRUTTURE IN C.A. SECONDO IL D.M. 14/1/2008
49	VERIFICA ALLO SLE (TENSIONI E FESSURAZIONE) DI STRUTTURE IN C.A.
50	VERIFICA ALLO SLE (DEFORMAZIONE) DI STRUTTURE IN C.A.
51	FATTORE DI STRUTTURA
52	SOVRARESISTENZE
53	DETTAGLI COSTRUTTIVI C.A.: LIMITI D'ARMATURA PILASTRI E NODI TRAVE-PILASTRO
54	PARETI IN C.A. SNELLE IN ZONA SISMICA
80	ANALISI PUSHOVER DI UN EDIFICIO IN C.A.
120	PROGETTO E VERIFICA DI TRAVI PREM

#### Modellazione di strutture in acciaio

Test N°	Titolo
55	VERIFICA DI STABILITA' DI ASTE COMPRESSE IN ACCIAIO – METODO OMEGA
56	LUCE LIBERA DI TRAVI E ASTE IN ACCIAIO
57	LUCE LIBERA DI COLONNE IN ACCIAIO
58	SVERGOLAMENTO DI TRAVI IN ACCIAIO
59	FATTORE DI STRUTTURA
60	ACCIAIO D.M.2008
61	ACCIAIO EC3
62	GERARCHIA RESISTENZE STRUTTURE IN ACCIAIO
63	STABILITA' DI ASTE COMPOSTE IN ACCIAIO

<b>73</b>	COLLEGAMENTI IN ACCIAIO: NODO TRAVE COLONNA FLANGIATO CON PRESENZA IRRIGIDIMENTI TRASVERSALI
<b>74</b>	COLLEGAMENTI IN ACCIAIO: NODO TRAVE COLONNA FLANGIATO CON PRESENZA DI UN PIATTO DI RINFORZO SALDATO ALL'ANIMA DELLA COLONNA
<b>75</b>	COLLEGAMENTI IN ACCIAIO: NODO TRAVE COLONNA FLANGIATO CON PRESENZA DI DUE PIATTI DI RINFORZO SALDATI ALL'ANIMA DELLA COLONNA
<b>76</b>	COLLEGAMENTI IN ACCIAIO: NODO TRAVE COLONNA FLANGIATO A DUE VIE SU ALI COLONNA
<b>77</b>	COLLEGAMENTI IN ACCIAIO: NODO TRAVE COLONNA FLANGIATO A UNA VIA CON DUE COMBINAZIONI DI CARICO
<b>78</b>	COLLEGAMENTI IN ACCIAIO: NODO TRAVE COLONNA FLANGIATO SU ANIMA SENZA RINFORZI A QUATTRO FILE DI BULLONI DI CUI UNA SU PIASTRA INFERIORE E UNA SU PIASTRA SUPERIORE
<b>79</b>	VERIFICA DELLA PIASTRA NODO TRAVE COLONNA
<b>85</b>	TELAIO ACCIAIO: CONTROVENTI CONCENTRICI

**Modellazione di strutture in muratura**

<b>Test N°</b>	<b>Titolo</b>
<b>81</b>	ANALISI PUSHOVER DI UNA STRUTTURA IN MURATURA
<b>84</b>	ANALISI ELASTO PLASTICA INCREMENTALE, PARETE IN MURATURA
<b>86</b>	VERIFICA NON SISMICA DELLE MURATURE (D.M. 87 TA)
<b>87</b>	VERIFICA NON SISMICA DELLE MURATURE (D.M. 2005 SL)
<b>88</b>	FATTORE DI STRUTTURA

**Modellazione di strutture in legno**

<b>Test N°</b>	<b>Titolo</b>
<b>17</b>	SOLAIO: MISTO LEGNO-CALCESTRUZZO
<b>89</b>	VERIFICA ALLO SLU DI STRUTTURE IN LEGNO SECONDO EC5
<b>90</b>	VERIFICA ALLO SLE DI STRUTTURE IN LEGNO SECONDO EC5
<b>91</b>	FATTORE DI STRUTTURA
<b>92</b>	VERIFICHE EC5
<b>93</b>	SNELLEZZE EC5
<b>94</b>	VERIFICA AL FUOCO DI STRUTTURE IN LEGNO SECONDO EC5

<b>117</b>	PROGETTO E VERIFICA DI GUSCI IN MATERIALE XLAM
<b>118</b>	PROGETTO E VERIFICA DI PARETI IN MATERIALE XLAM E RELATIVI COLLEGAMENTI
<b>119</b>	PROGETTO E VERIFICA DI SOLAI IN MATERIALE XLAM

Id	Tipo / Note		Young	Poisson	G	Gamma	Alfa
		daN/cm2	daN/cm2		daN/cm2	daN/cm3	
4	Calcestruzzo Classe C32/40		3.360e+05	0.20	1.400e+05	2.50e-03	1.00e-05
	Rck	400.0					
	fctm	31.0					
10	acciaio Fe360 - S235		2.100e+06	0.30	8.077e+05	7.80e-03	1.20e-05
	ft	3600.0					
	fy	2350.0					
	fd	2350.0					
	fdt	2100.0					
	sadm	1600.0					
	sadmt	1400.0					
43	legno lamellare omogeneo GL28h E = 1.260e+05		1.260e+05	0.0	6500.0	4.60e-04	0.0
	Modulo E0,05		1.050e+05				
	LamellareMateriale non massiccio e pertanto da considerare come lamellareSi						
	Resist. fc0k	280.0					
	Resist. ft0k	223.0					
	Resist. fmk	280.0					
	Resist. fvk	35.0					

Aste acc.	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
<b>Generalità</b>						
Beta assegnato	0.80					
Verifica come controvento	No					
Usa condizioni I e II	Si					
Coefficiente gamma M0	1.05					
Coefficiente gamma M1	1.05					
Coefficiente gamma M2	1.25					

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

Travi acc.	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
<b>Lunghezze libere</b>						
3-3 Beta * L automatico	Si					
3-3 Beta assegnato	1.00					
3-3 Beta assegnato [ cm ]	0.0					
2-2 Beta * L automatico	Si					
2-2 Beta assegnato	1.00					
2-2 Beta * L assegnato [ cm ]	0.0					
1-1 Beta * L automatico	Si					
1-1 Beta assegnato	1.00					
1-1 Beta * L assegnato [ cm ]	0.0					
<b>Generalità</b>						
Coefficiente gamma M0	1.05					
Coefficiente gamma M1	1.05					

Travi acc.	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
Coefficiente gamma M2	1.25					
Luce di taglio per GR [ cm ]	1.00					
Usa condizioni I e II	Si					
Momenti equivalenti	Si					

Pareti c.a.	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
<b>Generalità</b>						
Progetto armatura	Composto con parete sismica					
<b>Armatura</b>						
Inclinazione Av [ gradi ]	90.00					
Angolo Av-Ao [ gradi ]	90.00					
Minima tesa	0.25					
Massima tesa	4.00					
Maglia unica centrale	No					
Unico strato verticale	No					
Unico strato orizzontale	No					
Copriferro [ cm ]	2.00					
<b>Maglia V</b>						
diametro	10					
passo	25					
diametro aggiuntivi	12					
<b>Maglia O</b>						
diametro	8					
passo	25					
diametro aggiuntivi	8					
<b>Stati limite ultimi</b>						
Tensione fy [daN/cm <sup>2</sup> ]	4500.00					
Tipo acciaio	tipo C					
Coefficiente gamma s	1.15					
Coefficiente gamma c	1.50					
Fattore di confidenza FC	0.0					
Verifiche con N costante	Si					
<b>Tensioni ammissibili</b>						
Tensione amm. cls [daN/cm <sup>2</sup> ]	97.50					
Tensione amm. acciaio [daN/cm <sup>2</sup> ]	2600.00					
Rapporto omogeneizzazione N	15.00					
Massimo rapporto area compressa/tesa	1.00					
<b>Parete sismica</b>						
Fattore amplificazione taglio V	1.50					
Hcrit. par. 7.4.4.5.1 [ cm ]	0.0					
Hcrit. par. 7.4.6.1.4 [ cm ]	0.0					
Usa diagramma di fig. 7.4.2	Si					
Vincolo lati	nessun lato					
Verifica come fascia	No					
Diametro di estremità	0					
<b>Zona confinata</b>						
Minima tesa	1.00					
Massima tesa	4.00					
Distanza barre [ cm ]	2.00					
Interferro	2					
<b>Armatura inclinata</b>						
Area barre [ cm <sup>2</sup> ]	0.0					
Angolo orizzontale [ gradi ]	0.0					
Distanza di base [ cm ]	0.0					
<b>Resistenza al fuoco</b>						
3- intradosso	No					
3+ estradosso	No					
Tempo di esposizione R	15					

Gusci c.a.	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
<b>Armatura</b>						
Inclinazione Ax [ gradi ]	0.0					
Angolo Ax-Ay [ gradi ]	90.00					
Minima tesa	0.31					
Massima tesa	0.78					
Maglia unica centrale	No					
Copriferro [ cm ]	2.00					
<b>Maglia x</b>						
diametro	10					

<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>
passo	20					
diametro aggiuntivi	12					
<b>Maglia y</b>						
diametro	10					
passo	20					
diametro aggiuntivi	12					
<b>Stati limite ultimi</b>						
Tensione fy [daN/cm <sup>2</sup> ]	4500.00					
Tipo acciaio	tipo C					
Coefficiente gamma s	1.15					
Coefficiente gamma c	1.50					
Fattore di confidenza FC	0.0					
Verifiche con N costante	Si					
Applica SLU da DIN	No					
<b>Tensioni ammissibili</b>						
Tensione amm. cls [daN/cm <sup>2</sup> ]	97.50					
Tensione amm. acciaio [daN/cm <sup>2</sup> ]	2600.00					
Rapporto omogeneizzazione N	15.00					
Massimo rapporto area compressa/tesa	1.00					
<b>Resistenza al fuoco</b>						
3- intradosso	No					
3+ estradosso	No					
Tempo di esposizione R	15					

<b>Travi 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>
<b>Generalità</b>						
Progetta a filo	No					
Af inf: da q*L*L /	0.0					
<b>Armatura</b>						
Minima tesa	0.31					
Minima compressa	0.31					
Massima tesa	0.78					
Da sezione	Si					
Usa armatura teorica	No					
<b>Stati limite ultimi</b>						
Tensione fy [daN/cm <sup>2</sup> ]	4500.00					
Tensione fy staffe [daN/cm <sup>2</sup> ]	4500.00					
Tipo acciaio	tipo C					
Coefficiente gamma s	1.15					
Coefficiente gamma c	1.50					
Fattore di confidenza FC	0.0					
Verifiche con N costante	Si					
Fattore di redistribuzione	0.0					
<b>Modello per il confinamento</b>						
Relazione tensio-deformativa	Mander					
Incrudimento acciaio	5.000e-03					
Fattore lambda	1.00					
epsilon max,s	4.000e-02					
epsilon cu2	4.500e-03					
epsilon c2	0.0					
epsilon cy	0.0					
<b>Tensioni ammissibili</b>						
Tensione amm. cls [daN/cm <sup>2</sup> ]	97.50					
Tensione amm. acciaio [daN/cm <sup>2</sup> ]	2600.00					
Rapporto omogeneizzazione N	15.00					
Massimo rapporto area compressa/tesa	1.00					
<b>Staffe</b>						
Diametro staffe	0.0					
Passo minimo [ cm ]	4.00					
Passo massimo [ cm ]	30.00					
Passo raffittito [ cm ]	15.00					
Lunghezza zona raffittita [ cm ]	50.00					
Ctg(Teta) Max	2.50					
Percentuale sagomati	0.0					
Luce di taglio per GR [ cm ]	1.00					
Adotta scorrimento medio	No					
Torsione non essenziale inclusa	Si					

<b>Pilastrì 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>
<b>Generalità</b>						
Progetto armatura	Privilegia lati					

<b>Pilastri 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>
Progetta a filo	No					
Effetti del 2 ordine	Si					
Beta per 2-2	1.00					
Beta per 3-3	1.00					
<b>Armatura</b>						
Massima tesa	4.00					
Minima tesa	1.00					
<b>Stati limite ultimi</b>						
Tensione fy [daN/cm <sup>2</sup> ]	4500.00					
Tensione fy staffe [daN/cm <sup>2</sup> ]	4500.00					
Tipo acciaio	tipo C					
Coefficiente gamma s	1.15					
Coefficiente gamma c	1.50					
Fattore di confidenza FC	0.0					
Verifiche con N costante	Si					
<b>Modello per il confinamento</b>						
Relazione tensio-deformativa	Mander					
Incrudimento acciaio	5.000e-03					
Fattore lambda	1.00					
epsilon max,s	4.000e-02					
epsilon cu2	4.500e-03					
epsilon c2	0.0					
epsilon cy	0.0					
<b>Tensioni ammissibili</b>						
Tensione amm. cls [daN/cm <sup>2</sup> ]	97.50					
Tensione amm. acciaio [daN/cm <sup>2</sup> ]	2600.00					
Rapporto omogeneizzazione N	15.00					
<b>Staffe</b>						
Diametro staffe	0.0					
Passo minimo [ cm ]	5.00					
Passo massimo [ cm ]	25.00					
Passo raffittito [ cm ]	15.00					
Lunghezza zona raffittita [ cm ]	45.00					
Ctg(Teta) Max	2.50					
Luce di taglio per GR [ cm ]	1.00					
Massimizza gerarchia	Si					

<b>Legno</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>Lunghezze libere</b>						
<b>aste</b>						
Beta assegnato	0.80					
<b>travi</b>						
3-3 Beta * L automatico	Si					
3-3 Beta assegnato	1.00					
3-3 Beta * L assegnato [ cm ]	0.0					
2-2 Beta * L automatico	Si					
2-2 Beta assegnato	1.00					
2-2 Beta * L assegnato [ cm ]	0.0					
1-1 Beta * L automatico	Si					
1-1 Beta assegnato	1.00					
1-1 Beta * L assegnato [ cm ]	0.0					
<b>pilastri</b>						
Metodo di calcolo 3-3	Assegnato					
3-3 Beta assegnato	2.00					
3-3 Beta * L assegnato [ cm ]	0.0					
Metodo di calcolo 2-2	Assegnato					
2-2 Beta assegnato	2.00					
2-2 Beta * L assegnato [ cm ]	0.0					
1-1 Beta assegnato	1.00					
1-1 Beta * L assegnato [ cm ]	0.0					
<b>Generalità</b>						
Gamma non sismico	1.50					
Gamma sismico	1.50					
Fattore di confidenza FC	0.0					
<b>Classificazione</b>						
Classe di servizio	2 (media umidità)					
<b>Per classe di servizio 1</b>						
Kmod permanente	0.60					
Kmod lunga	0.70					
Kmod media	0.80					
Kmod breve	0.90					
Kmod istantanea	1.00					
Kdef	0.60					

<b>Legno</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>Per classe di servizio 2</b>						
Kmod permanente	0.60					
Kmod lunga	0.70					
Kmod media	0.80					
Kmod breve	0.90					
Kmod istantanea	1.00					
Kdef	0.80					
<b>Per classe di servizio 3</b>						
Kmod permanente	0.50					
Kmod lunga	0.55					
Kmod media	0.65					
Kmod breve	0.70					
Kmod istantanea	0.90					
Kdef	2.00					

<b>XLAM</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>						
L direzione 1 [*] [ cm ]	1.00					
L direzione 2 [ cm ]	0.0					
Verifica V da D.38	No					
Verifica M da M.5-45	No					
Media valori elementi	Si					
<b>Connessioni pareti</b>						
rvpk [daN/cm ]	50.00					
rvtk [daN/cm ]	50.00					
rvlk [daN/cm ]	50.00					
RHk [daN ]	5000.00					
dH [ cm ]	25.00					
fcH90k [daN/cm2 ]	20.00					
<b>Pannelli solaio</b>						
f ist<L/	500.00					
f inf<L/	350.00					
Verifica vibrazioni (EC5 7.3)	No					
E massetto collaborante [daN/cm2 ]	200000.00					
t massetto collaborante [ cm ]	4.00					
Smorzamento percentuale	0.0					
<b>Resistenza al fuoco</b>						
Spessore carbonizzazione [ cm ]	0.0					
3- intradosso	No					
3+ estradosso	No					

# EDIFICI ESISTENTI: INTERVENTI DI RINFORZO

## LEGENDA TABELLE INTERVENTI DI RINFORZO

Per le verifiche da condurre sugli elementi rinforzati il programma attinge le informazioni da archivi di rinforzi. Gli archivi utilizzati e la modalità di applicazione della specifica tecnica dipendono ovviamente dal tipo e materiale dell'elemento strutturale. In particolare nelle tabelle successive vengono dettagliati:

- I rinforzi FRP per c.a. (implementati secondo il punto "C8A.7.3 PLACCATURA E FASCIATURA IN MATERIALI COMPOSITI" e "Linee guida per la Progettazione, l'Esecuzione ed il Collaudo di Interventi di Rinforzo di strutture di c.a., c.a.p. e murarie mediante FRP")
- I rinforzi tipo CAM o angolari con calastrelli (implementati secondo il punto C8A.7.2 INCAMICIATURA IN ACCIAIO)
- I rinforzi FRP per murature (implementati come da "Linee guida per la Progettazione, l'Esecuzione ed il Collaudo di Interventi di Rinforzo di strutture di c.a., c.a.p. e murarie mediante FRP")

Titolo colonna	Descrizione	Nota
Id	Indice nell'archivio	
Sigla FRP per c.a.	Nome nell'archivio o riferimento al prodotto commerciale	
Spess.	Spessore del fibrorinforzo	Strati sovrapposti si modellano assegnando lo spessore totale
Mod. E	Modulo elastico del fibrorinforzo	Elastico lineare fino a rottura
eps r	Tensione caratteristica di rottura	
Direz.	Schema di disposizione delle fibre	Da uniassiale a quadriassiale
Applicaz.	Applicazione tipo A o B	Utilizzato in Tabella 2-1
Espos.	Interna, esterna, ambiente aggressivo	Utilizzato in Tabella 2-3
Fibra	Arammidica, vetro, carbonio, altro	Utilizzato in Tabella 2-3
L fasc.	Larghezza delle fasce	Definizione geometrica della fasciatura, se L.fasc=P fasc. o uno dei 2 è nullo, si ritiene applicata un ricoprimento completo
P fasc.	Passo delle fasce	Definizione geometrica della fasciatura, se L.fasc=P fasc. o uno dei 2 è nullo, si ritiene applicata un ricoprimento completo
R curv.	Raggio di curvatura utilizzato nell'arrotondamento degli spigoli	

Titolo colonna	Descrizione	Nota
Id	Indice nell'archivio	
Sigla CAM	Nome nell'archivio o riferimento al prodotto commerciale	Utilizzato anche per incamiciatura in acciaio con profili generici.
Sez.	Angolare utilizzato	Nel caso il profilo non sia presente nell'archivio delle sezioni si riporta "altro"
A	Area dell'angolare	
L	Lato dell'angolare	
s L	Spessore dell'angolare	
f <sub>yk</sub>	Tensione caratteristica di snervamento angolare	
s cal.	Spessore dei nastri o calastrelli	
L cal.	Altezza dei nastri o calastrelli	
P cal.	Passo dei nastri o calastrelli	
M nas.	Numero dei nastri	Utilizzato nel caso in cui si utilizzino più nastri sovrapposti
f <sub>yk c</sub>	Tensione caratteristica di snervamento dei nastri o calastrelli	
f <sub>tk c</sub>	Tensione caratteristica di rottura dei nastri o calastrelli	
R curv.	Raggio di curvatura utilizzato nell'arrotondamento degli spigoli	

Titolo colonna	Descrizione	Nota
Id	Indice nell'archivio	
Sigla FRP per mur.	Nome nell'archivio o riferimento al prodotto commerciale	
Spess.	Spessore del fibrorinforzo	Strati sovrapposti si modellano sommando gli spessori
Mod. E	Modulo elastico del fibrorinforzo	Elastico lineare fino a rottura
eps r	Tensione caratteristica di rottura	
eps d	Tensione di progetto assegnata	Valore della tensione massima nel fibrorinforzo, nel caso si adottino dispositivi di ancoraggio. Se pari a 0 viene calcolata dal programma automaticamente
Applicaz.	Applicazione tipo A o B	Utilizzato in Tabella 2-1
Espos.	Interna, esterna, ambiente aggressivo	Utilizzato in Tabella 2-3
Fibra	Arammidica, vetro, carbonio, altro	Utilizzato in Tabella 2-3
L fasc. O	Larghezza delle fasce orizzontali	
P fasc. O	Passo delle fasce orizzontali	
L fasc. V	Larghezza delle fasce verticali	

P fasc. V	Passo delle fasce verticali	
A conc.	Area di rinforzo concentrato alle estremità del maschio murario	
Conf.	Fibrorinforzo adottato per conseguire un effetto di confinamento sulla muratura	Utilizzato per elementi Pilastro in muratura
R curv.	Raggio di curvatura utilizzato nell'arrotondamento degli spigoli	

Per i materiali degli elementi in muratura consolidata, in relazione alla Tabella C8A.2.2 "Coefficienti correttivi dei parametri meccanici (indicati in Tabella C8A.2.1) da applicarsi in presenza di: malta di caratteristiche buone o ottime; giunti sottili; ricorsi o listature; sistematiche connessioni trasversali; nucleo interno particolarmente scadente e/o ampio; consolidamento con iniezioni di malta; consolidamento con intonaco armato" si riportano le informazioni atte a definire la tecnica di rinforzo adottata e gli eventuali incrementi in termini di rigidità e resistenza conseguiti. Una specifica tabella di immediata lettura ne consente l'agevole lettura.

A seguire vengono dettagliati gli interventi per le strutture in c.a. con la seguente suddivisione tabellare:

- Nodi: con gli interventi applicati in ottemperanza ai punti C8A.7.1 INCAMICIATURA IN C.A.; C8A.7.2 INCAMICIATURA IN ACCIAIO; C8A.7.3 PLACCATURA E FASCIATURA IN MATERIALI COMPOSITI
- Pilastrini: con gli interventi applicati in ottemperanza ai punti C8A.7.1 INCAMICIATURA IN C.A.; C8A.7.2 INCAMICIATURA IN ACCIAIO C8A.7.3 PLACCATURA E FASCIATURA IN MATERIALI COMPOSITI
- Travi: con gli interventi applicati in ottemperanza ai punti C8A.7.1 INCAMICIATURA IN C.A.; C8A.7.2 INCAMICIATURA IN ACCIAIO
- Travi: con gli interventi applicati in ottemperanza ai punti C8A.7.3 PLACCATURA E FASCIATURA IN MATERIALI COMPOSITI
- Travi con gli interventi applicati secondo la tecnica del beton plaque

Titolo colonna	Descrizione	Nota
Pilas. I	Pilastro sottostante il nodo rinforzato	
Nodo	Numero del nodo rinforzato	
sez a-o	Sezione del pilastro sottostante ante-operam	
sez p-o	Sezione del pilastro sottostante post-operam	Il nodo viene verificato con la sezione del pilastro post-operam se il pilastro ha camicia con continuità flessionale. L'incremento di capacità si cumula a quello di eventuali altri rinforzi, ma per la verifica si considera il coeff. riduttivo 0.9
Diam.	Diametro della armatura orizzontale aggiuntiva nel nodo	L'armatura è riferita a una sola faccia
Passo	Passo dell'armatura orizzontale aggiuntiva nel nodo	
f <sub>yk</sub> arm.	Tensione caratteristica di snervamento dell'armatura orizzontale aggiuntiva nel nodo	
Spess.	Spessore della piastra di rinforzo applicata nel nodo	La piastra è applicata a una sola faccia
f <sub>yk</sub> plt.	Tensione caratteristica di snervamento per la piastra di rinforzo applicata nel nodo	
rinforzo frp	Nome nell'archivio o riferimento al prodotto commerciale	Il rinforzo è applicato a una sola faccia

Titolo colonna	Descrizione	Nota
Pilas.	Pilastro di interesse	Gli interventi con tecnologie diverse sono esclusivi, per l'intervento con FRP è prevista la possibilità di attivare separatamente il rinforzo FRP V per taglio e duttilità (*) e quello FRP F per capacità flessionale (**). (*) incremento di duttilità considerato solo nelle verifiche con $q=1$ . (**) incremento di capacità considerato solo nelle verifiche con $q>1$
sez a-o	Sezione del pilastro ante-operam	
sez p-o	Sezione del pilastro post-operam	Differente se l'intervento consiste in C8A.7.1 INCAMICIATURA IN C.A
Cont. fless.	Armature longitudinali o angolari opportunamente ancorati alla base e in sommità	Per la camicia in c.a. e acciaio è possibile considerare la continuità del rinforzo interpieno e in questo caso l'incremento di capacità flessionale
rinf. CAM	Nome nell'archivio o riferimento al prodotto commerciale	In applicazione del C8A.7.2 INCAMICIATURA IN ACCIAIO
rinf. FRP V	Nome nell'archivio o riferimento al prodotto commerciale	In applicazione del C8A.7.3 PLACCATURA E FASCIATURA IN MATERIALI COMPOSITI
rinf. FRP F	Nome nell'archivio o riferimento al prodotto commerciale	In applicazione del C8A.7.3 PLACCATURA E FASCIATURA IN MATERIALI COMPOSITI
li V, lc V, lf V	Suddivisione in tre tratti per l'applicazione dei rinforzi CAM o FRP V (per taglio)	Assegnato uno o più tratti i restanti vengono definiti per differenza. Se tutti i valori sono nulli (non riportati) si intende applicato per l'intera lunghezza
li F, lc F, lf F	Suddivisione in tre tratti per l'applicazione dei rinforzi FRP F (per flessione)	Come sopra

Titolo colonna	Descrizione	Nota
Trave	Trave di interesse	
sez a-o	Sezione della trave ante-operam	
sez p-o	Sezione della trave post-operam	Differente se l'intervento consiste in C8A.7.1 INCAMICIATURA IN C.A
Cont. fless.	Armature longitudinali o angolari opportunamente ancorati alle estremità	Per la camicia in c.a. e acciaio è possibile considerare la continuità del rinforzo e in questo caso l'incremento di capacità flessionale
rinf. CAM	Nome nell'archivio o riferimento al prodotto commerciale	In applicazione del C8A.7.2 INCAMICIATURA IN ACCIAIO

li V, lc V, lf V	Suddivisione in tre tratti per l'applicazione dei rinforzi CAM	Assegnato uno o più tratti i restanti vengono definiti per differenza. Se tutti i valori sono nulli (non riportati) si intende applicato per l'intera lunghezza
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Titolo colonna	Descrizione	Nota
Trave	Trave di interesse	Per l'intervento con FRP è prevista la possibilità di attivare separatamente il rinforzo FRP V per taglio e duttilità (*) e quello FRP F per capacità flessionale (**). (*) incremento di duttilità considerato solo nelle verifiche con $q=1$ . (**) incremento di capacità considerato solo nelle verifiche con $q>1$
rinf. FRP V	Nome nell'archivio o riferimento al prodotto commerciale	In applicazione del C8A.7.3 PLACCATURA E FASCIATURA IN MATERIALI COMPOSITI
rinf. FRP F	Nome nell'archivio o riferimento al prodotto commerciale	In applicazione C8A.7.3 PLACCATURA E FASCIATURA IN MATERIALI COMPOSITI
li V, lc V, lf V	Suddivisione in tre tratti per l'applicazione del rinforzo FRP V	Assegnato uno o più tratti i restanti vengono definiti per differenza. Se tutti i valori sono nulli (non riportati) si intende applicato per l'intera lunghezza
B sup	Larghezza di applicazione del rinforzo FRP F superiore	
li F, lc F, lf F	Suddivisione in tre tratti per l'applicazione dei rinforzi FRP F superiore	Assegnato uno o più tratti i restanti vengono definiti per differenza. Se tutti i valori sono nulli (non riportati) si intende applicato per l'intera lunghezza
B inf	Larghezza di applicazione del rinforzo FRP F inferiore	
li F, lc F, lf F	Suddivisione in tre tratti per l'applicazione dei rinforzi FRP F inferiore	Assegnato uno o più tratti i restanti vengono definiti per differenza. Se tutti i valori sono nulli (non riportati) si intende applicato per l'intera lunghezza

Titolo colonna	Descrizione	Nota
Trave	Trave di interesse	Per l'intervento con BETON PLAQUE è prevista la possibilità di attivare separatamente il rinforzo per taglio da quello per flessione(*). (*) incremento di capacità considerato solo nelle verifiche con $q\#1$
fyk plt	Tensione caratteristica di snervamento per le piastre di rinforzo	
Spess.	Spessore del rinforzo applicato per il taglio	Il rinforzo si considera adeguatamente ancorato sui due lati dell'anima della trave
li V, lc V, lf V	Suddivisione in tre tratti per l'applicazione del rinforzo a taglio	Assegnato uno o più tratti i restanti vengono definiti per differenza. Se tutti i valori sono nulli (non riportati) si intende applicato per l'intera lunghezza
A sup	Area complessiva della piastra applicata all'estradosso	
li F, lc F, lf F	Suddivisione in tre tratti per l'applicazione del rinforzo superiore	Assegnato uno o più tratti i restanti vengono definiti per differenza. Se tutti i valori sono nulli (non riportati) si intende applicato per l'intera lunghezza
A inf	Area complessiva della piastra applicata all'intradosso	
li F, lc F, lf F	Suddivisione in tre tratti per l'applicazione dei rinforzi FRP F inferiore	Assegnato uno o più tratti i restanti vengono definiti per differenza. Se tutti i valori sono nulli (non riportati) si intende applicato per l'intera lunghezza

**C8A (APPENDICE AL CAPITOLO C8) - MATERIALI DI RINFORZO UTILIZZATI**

## MODELLAZIONE DELLE SEZIONI

### LEGENDA TABELLA DATI SEZIONI


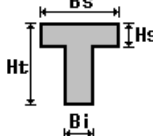
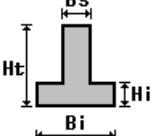
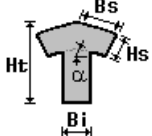
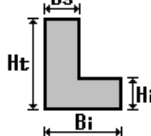
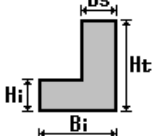
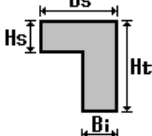
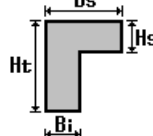
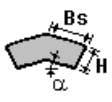
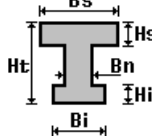
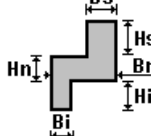
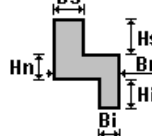
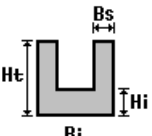
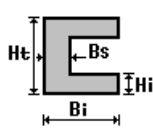
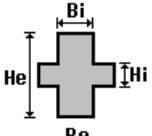
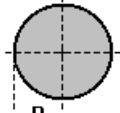
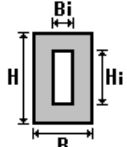
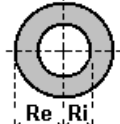
Il programma consente l'uso di sezioni diverse. Sono previsti i seguenti tipi di sezione:

- 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

Con riferimento al **Documento di Affidabilità** "Test di validazione del software di calcolo PRO\_SAP e dei moduli aggiuntivi PRO\_SAP Modulo Geotecnico, PRO\_CAD nodi acciaio e PRO\_MST" - versione Settembre 2014, disponibile per il download sul sito **www.2si.it**, si segnalano i seguenti esempi applicativi:

Test N°	Titolo
<b>1</b>	CARATTERISTICHE GEOMETRICHE E INERZIALI
<b>45</b>	VERIFICA AGLI SLU DI STRUTTURE IN C.A.
<b>48</b>	PROGETTAZIONE A TAGLIO DI STRUTTURE IN C.A. SECONDO IL D.M. 9/1/96
<b>49</b>	PROGETTAZIONE A TAGLIO DI STRUTTURE IN C.A. SECONDO IL D.M. 14/1/2008
<b>50</b>	VERIFICA ALLO SLE (TENSIONI E FESSURAZIONE) DI STRUTTURE IN C.A.
<b>51</b>	VERIFICA ALLO SLE (DEFORMAZIONE) DI STRUTTURE IN C.A.
<b>104</b>	ANALISI DI RESISTENZA AL FUOCO

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	PILASTRO	1736.00	0.0	0.0	3.497e+05	2.359e+05	3.048e+05	1.072e+04	1.371e+04	1.740e+04	2.024e+04
4	PILASTRO D'ANGOLO	1736.00	0.0	0.0	4.227e+05	2.686e+05	2.686e+05	1.167e+04	1.167e+04	1.878e+04	1.878e+04
5	TRAVETTO	544.00	453.33	453.33	3.266e+04	1.161e+04	5.241e+04	1450.67	3082.67	2176.00	4624.00
6	PUNTONE	672.00	560.00	560.00	6.267e+04	3.226e+04	4.390e+04	2688.00	3136.00	4032.00	4704.00

# 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 sotto riportate 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. 14/01/08

## 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	2388.0	870.0	4	750.0	2388.0	870.0	6	1500.0	2388.0	870.0
8	2250.0	0.0	870.0	10	3750.0	2388.0	870.0	12	0.0	0.0	870.0
14	750.0	0.0	870.0	16	1500.0	0.0	870.0	18	3000.0	0.0	870.0
20	3750.0	0.0	870.0	22	0.0	1592.0	870.0	24	0.0	796.0	870.0
26	3750.0	1592.0	870.0	28	3750.0	796.0	870.0	29	3000.0	1343.3	870.0
30	3000.0	1343.3	920.0	31	3000.0	1343.3	945.0	32	2250.0	1044.8	1033.0
33	2250.0	1194.0	1033.0	34	2250.0	1194.0	870.0	35	2250.0	1194.0	1054.0
36	2250.0	0.0	970.0	37	2250.0	1194.0	1001.5	38	2250.0	149.3	980.5
39	2250.0	298.5	991.0	40	2250.0	447.8	1001.5	41	2250.0	597.0	1012.0
42	2250.0	746.3	1022.5	43	2250.0	895.5	1033.0	44	2250.0	1044.8	1043.5
45	1500.0	0.0	970.0	46	1500.0	149.3	980.5	47	1500.0	298.5	991.0
48	1500.0	447.8	1001.5	49	1500.0	597.0	1012.0	50	1500.0	746.3	1022.5
51	1500.0	895.5	1033.0	52	1500.0	1044.8	1043.5	53	1500.0	1194.0	1054.0
54	2250.0	1194.0	970.0	55	2250.0	0.0	895.0	56	2250.0	149.3	895.0
57	2250.0	149.3	870.0	58	2250.0	0.0	920.0	59	2250.0	149.3	920.0
60	2250.0	0.0	945.0	61	2250.0	149.3	945.0	62	2250.0	149.3	970.0
63	2250.0	298.5	895.0	64	2250.0	298.5	870.0	65	2250.0	298.5	920.0
66	2250.0	298.5	945.0	67	2250.0	298.5	970.0	68	2250.0	447.8	895.0
69	2250.0	447.8	870.0	70	2250.0	447.8	920.0	71	2250.0	447.8	945.0
72	2250.0	447.8	970.0	73	2250.0	597.0	895.0	74	2250.0	597.0	870.0
75	2250.0	597.0	920.0	76	2250.0	597.0	945.0	77	2250.0	597.0	970.0
78	2250.0	746.3	895.0	79	2250.0	746.3	870.0	80	2250.0	746.3	920.0
81	2250.0	746.3	945.0	82	2250.0	746.3	970.0	83	2250.0	895.5	895.0
84	2250.0	895.5	870.0	85	2250.0	895.5	920.0	86	2250.0	895.5	945.0
87	2250.0	895.5	970.0	88	2250.0	1044.8	895.0	89	2250.0	1044.8	870.0
90	2250.0	1044.8	920.0	91	2250.0	1044.8	945.0	92	2250.0	1044.8	970.0
93	2250.0	1194.0	895.0	94	2250.0	1194.0	920.0	95	2250.0	1194.0	945.0
96	2250.0	597.0	1001.5	97	2250.0	746.3	1001.5	98	2250.0	895.5	1001.5
99	2250.0	1044.8	1001.5	100	2250.0	2388.0	870.0	101	3000.0	1343.3	970.0
102	2250.0	1343.3	1033.0	103	0.0	597.0	1001.5	104	0.0	298.5	945.0
105	0.0	298.5	970.0	106	2250.0	2388.0	970.0	107	3000.0	1791.0	1001.5
108	2250.0	2238.8	980.5	109	2250.0	2089.5	991.0	110	2250.0	1940.3	1001.5
111	2250.0	1791.0	1012.0	112	2250.0	1641.8	1022.5	113	2250.0	1492.5	1033.0
114	2250.0	1343.3	1043.5	115	1500.0	2388.0	970.0	116	1500.0	2238.8	980.5
117	1500.0	2089.5	991.0	118	1500.0	1940.3	1001.5	119	1500.0	1791.0	1012.0
120	1500.0	1641.8	1022.5	121	1500.0	1492.5	1033.0	122	1500.0	1343.3	1043.5
123	2250.0	1343.3	1001.5	124	3000.0	1641.8	1001.5	125	2250.0	2388.0	895.0
126	2250.0	2238.8	895.0	127	2250.0	2238.8	870.0	128	2250.0	2388.0	920.0
129	2250.0	2238.8	920.0	130	2250.0	2388.0	945.0	131	2250.0	2238.8	945.0
132	2250.0	2238.8	970.0	133	2250.0	2089.5	895.0	134	2250.0	2089.5	870.0

# ZUPELLI DESIGN ARCHITETTURA

135	2250.0	2089.5	920.0	136	2250.0	2089.5	945.0	137	2250.0	2089.5	970.0
138	2250.0	1940.3	895.0	139	2250.0	1940.3	870.0	140	2250.0	1940.3	920.0
141	2250.0	1940.3	945.0	142	2250.0	1940.3	970.0	143	2250.0	1791.0	895.0
144	2250.0	1791.0	870.0	145	2250.0	1791.0	920.0	146	2250.0	1791.0	945.0
147	2250.0	1791.0	970.0	148	2250.0	1641.8	895.0	149	2250.0	1641.8	870.0
150	2250.0	1641.8	920.0	151	2250.0	1641.8	945.0	152	2250.0	1641.8	970.0
153	2250.0	1492.5	895.0	154	2250.0	1492.5	870.0	155	2250.0	1492.5	920.0
156	2250.0	1492.5	945.0	157	2250.0	1492.5	970.0	158	2250.0	1343.3	895.0
159	2250.0	1343.3	870.0	160	2250.0	1343.3	920.0	161	2250.0	1343.3	945.0
162	2250.0	1343.3	970.0	163	3000.0	1492.5	1001.5	164	0.0	1641.8	1001.5
165	0.0	746.3	1001.5	166	2250.0	1791.0	1001.5	167	2250.0	1641.8	1001.5
168	2250.0	1492.5	1001.5	169	0.0	895.5	1001.5	170	0.0	447.8	945.0
171	1500.0	1044.8	1033.0	172	1500.0	1194.0	1033.0	173	1500.0	1194.0	870.0
174	0.0	447.8	970.0	175	0.0	1940.3	945.0	176	1500.0	1194.0	1001.5
177	0.0	1940.3	970.0	178	0.0	1044.8	1001.5	179	0.0	597.0	945.0
180	0.0	597.0	970.0	181	0.0	796.0	945.0	182	0.0	1343.3	945.0
183	0.0	1641.8	945.0	184	750.0	0.0	970.0	185	750.0	149.3	980.5
186	750.0	298.5	991.0	187	750.0	447.8	1001.5	188	750.0	597.0	1012.0
189	750.0	746.3	1022.5	190	750.0	895.5	1033.0	191	750.0	1044.8	1043.5
192	750.0	1194.0	1054.0	193	1500.0	1194.0	970.0	194	1500.0	0.0	895.0
195	1500.0	149.3	895.0	196	1500.0	149.3	870.0	197	1500.0	0.0	920.0
198	1500.0	149.3	920.0	199	1500.0	0.0	945.0	200	1500.0	149.3	945.0
201	1500.0	149.3	970.0	202	1500.0	298.5	895.0	203	1500.0	298.5	870.0
204	1500.0	298.5	920.0	205	1500.0	298.5	945.0	206	1500.0	298.5	970.0
207	1500.0	447.8	895.0	208	1500.0	447.8	870.0	209	1500.0	447.8	920.0
210	1500.0	447.8	945.0	211	1500.0	447.8	970.0	212	1500.0	597.0	895.0
213	1500.0	597.0	870.0	214	1500.0	597.0	920.0	215	1500.0	597.0	945.0
216	1500.0	597.0	970.0	217	1500.0	746.3	895.0	218	1500.0	746.3	870.0
219	1500.0	746.3	920.0	220	1500.0	746.3	945.0	221	1500.0	746.3	970.0
222	1500.0	895.5	895.0	223	1500.0	895.5	870.0	224	1500.0	895.5	920.0
225	1500.0	895.5	945.0	226	1500.0	895.5	970.0	227	1500.0	1044.8	895.0
228	1500.0	1044.8	870.0	229	1500.0	1044.8	920.0	230	1500.0	1044.8	945.0
231	1500.0	1044.8	970.0	232	1500.0	1194.0	895.0	233	1500.0	1194.0	920.0
234	1500.0	1194.0	945.0	235	1500.0	597.0	1001.5	236	1500.0	746.3	1001.5
237	1500.0	895.5	1001.5	238	1500.0	1044.8	1001.5	239	0.0	746.3	945.0
240	0.0	746.3	970.0	241	1500.0	1343.3	1033.0	242	0.0	2238.8	945.0
243	0.0	2238.8	970.0	244	0.0	0.0	945.0	245	0.0	2388.0	945.0
246	3750.0	298.5	945.0	247	3750.0	2089.5	945.0	248	3750.0	1343.3	1033.0
249	3750.0	1194.0	1033.0	250	3750.0	2388.0	945.0	251	3750.0	0.0	970.0
252	3750.0	149.3	980.5	253	3750.0	298.5	991.0	254	750.0	2388.0	970.0
255	750.0	2238.8	980.5	256	750.0	2089.5	991.0	257	750.0	1940.3	1001.5
258	750.0	1791.0	1012.0	259	750.0	1641.8	1022.5	260	750.0	1492.5	1033.0
261	750.0	1343.3	1043.5	262	1500.0	1343.3	1001.5	263	3750.0	447.8	1001.5
264	1500.0	2388.0	895.0	265	1500.0	2238.8	895.0	266	1500.0	2238.8	870.0
267	1500.0	2388.0	920.0	268	1500.0	2238.8	920.0	269	1500.0	2388.0	945.0
270	1500.0	2238.8	945.0	271	1500.0	2238.8	970.0	272	1500.0	2089.5	895.0
273	1500.0	2089.5	870.0	274	1500.0	2089.5	920.0	275	1500.0	2089.5	945.0
276	1500.0	2089.5	970.0	277	1500.0	1940.3	895.0	278	1500.0	1940.3	870.0
279	1500.0	1940.3	920.0	280	1500.0	1940.3	945.0	281	1500.0	1940.3	970.0
282	1500.0	1791.0	895.0	283	1500.0	1791.0	870.0	284	1500.0	1791.0	920.0
285	1500.0	1791.0	945.0	286	1500.0	1791.0	970.0	287	1500.0	1641.8	895.0
288	1500.0	1641.8	870.0	289	1500.0	1641.8	920.0	290	1500.0	1641.8	945.0
291	1500.0	1641.8	970.0	292	1500.0	1492.5	895.0	293	1500.0	1492.5	870.0
294	1500.0	1492.5	920.0	295	1500.0	1492.5	945.0	296	1500.0	1492.5	970.0
297	1500.0	1343.3	895.0	298	1500.0	1343.3	870.0	299	1500.0	1343.3	920.0
300	1500.0	1343.3	945.0	301	1500.0	1343.3	970.0	302	3750.0	597.0	1012.0
303	3750.0	746.3	1022.5	304	3750.0	895.5	1033.0	305	1500.0	1791.0	1001.5
306	1500.0	1641.8	1001.5	307	1500.0	1492.5	1001.5	308	3750.0	1044.8	1043.5
309	3750.0	1194.0	1054.0	310	750.0	1044.8	1033.0	311	750.0	1194.0	1033.0
312	750.0	1194.0	870.0	313	3750.0	2388.0	970.0	314	3750.0	2238.8	980.5
315	750.0	1194.0	1001.5	316	3750.0	2089.5	991.0	317	3750.0	1940.3	1001.5
318	3750.0	1791.0	1012.0	319	3750.0	1641.8	1022.5	320	3750.0	1492.5	1033.0
321	3750.0	1343.3	1043.5	322	3750.0	2238.8	945.0	323	0.0	0.0	970.0
324	0.0	149.3	980.5	325	0.0	298.5	991.0	326	0.0	447.8	1001.5
327	0.0	597.0	1012.0	328	0.0	746.3	1022.5	329	0.0	895.5	1033.0
330	0.0	1044.8	1043.5	331	0.0	1194.0	1054.0	332	750.0	1194.0	970.0
333	750.0	0.0	895.0	334	750.0	149.3	895.0	335	750.0	149.3	870.0
336	750.0	0.0	920.0	337	750.0	149.3	920.0	338	750.0	0.0	945.0
339	750.0	149.3	945.0	340	750.0	149.3	970.0	341	750.0	298.5	895.0
342	750.0	298.5	870.0	343	750.0	298.5	920.0	344	750.0	298.5	945.0
345	750.0	298.5	970.0	346	750.0	447.8	895.0	347	750.0	447.8	870.0
348	750.0	447.8	920.0	349	750.0	447.8	945.0	350	750.0	447.8	970.0
351	750.0	597.0	895.0	352	750.0	597.0	870.0	353	750.0	597.0	920.0
354	750.0	597.0	945.0	355	750.0	597.0	970.0	356	750.0	746.3	895.0
357	750.0	746.3	870.0	358	750.0	746.3	920.0	359	750.0	746.3	945.0
360	750.0	746.3	970.0	361	750.0	895.5	895.0	362	750.0	895.5	870.0
363	750.0	895.5	920.0	364	750.0	895.5	945.0	365	750.0	895.5	970.0

366	750.0	1044.8	895.0	367	750.0	1044.8	870.0	368	750.0	1044.8	920.0
369	750.0	1044.8	945.0	370	750.0	1044.8	970.0	371	750.0	1194.0	895.0
372	750.0	1194.0	920.0	373	750.0	1194.0	945.0	374	750.0	597.0	1001.5
375	750.0	746.3	1001.5	376	750.0	895.5	1001.5	377	750.0	1044.8	1001.5
378	3750.0	2238.8	970.0	379	3750.0	1044.8	1033.0	380	750.0	1343.3	1033.0
381	0.0	1044.8	1033.0	382	3750.0	1492.5	945.0	383	0.0	1592.0	945.0
384	0.0	1492.5	945.0	385	3750.0	1194.0	1001.5	386	0.0	1791.0	945.0
387	3750.0	796.0	945.0	388	0.0	1194.0	1001.5	389	0.0	895.5	945.0
390	0.0	895.5	970.0	391	0.0	1791.0	970.0	392	0.0	1343.3	970.0
393	0.0	2388.0	970.0	394	0.0	2238.8	980.5	395	0.0	2089.5	991.0
396	0.0	1940.3	1001.5	397	0.0	1791.0	1012.0	398	0.0	1641.8	1022.5
399	0.0	1492.5	1033.0	400	0.0	1343.3	1043.5	401	750.0	1343.3	1001.5
402	3750.0	1194.0	970.0	403	750.0	2388.0	895.0	404	750.0	2238.8	895.0
405	750.0	2238.8	870.0	406	750.0	2388.0	920.0	407	750.0	2238.8	920.0
408	750.0	2388.0	945.0	409	750.0	2238.8	945.0	410	750.0	2238.8	970.0
411	750.0	2089.5	895.0	412	750.0	2089.5	870.0	413	750.0	2089.5	920.0
414	750.0	2089.5	945.0	415	750.0	2089.5	970.0	416	750.0	1940.3	895.0
417	750.0	1940.3	870.0	418	750.0	1940.3	920.0	419	750.0	1940.3	945.0
420	750.0	1940.3	970.0	421	750.0	1791.0	895.0	422	750.0	1791.0	870.0
423	750.0	1791.0	920.0	424	750.0	1791.0	945.0	425	750.0	1791.0	970.0
426	750.0	1641.8	895.0	427	750.0	1641.8	870.0	428	750.0	1641.8	920.0
429	750.0	1641.8	945.0	430	750.0	1641.8	970.0	431	750.0	1492.5	895.0
432	750.0	1492.5	870.0	433	750.0	1492.5	920.0	434	750.0	1492.5	945.0
435	750.0	1492.5	970.0	436	750.0	1343.3	895.0	437	750.0	1343.3	870.0
438	750.0	1343.3	920.0	439	750.0	1343.3	945.0	440	750.0	1343.3	970.0
441	3750.0	1492.5	970.0	442	3750.0	1641.8	970.0	443	0.0	1343.3	1001.5
444	750.0	1791.0	1001.5	445	750.0	1641.8	1001.5	446	750.0	1492.5	1001.5
447	0.0	1044.8	945.0	448	0.0	1044.8	970.0	449	3750.0	0.0	945.0
450	3750.0	149.3	945.0	451	3750.0	149.3	970.0	452	3750.0	2089.5	970.0
453	3750.0	1791.0	1001.5	454	0.0	1194.0	970.0	455	0.0	1492.5	970.0
456	3750.0	298.5	970.0	457	3750.0	1641.8	1001.5	458	0.0	1641.8	970.0
459	0.0	2089.5	945.0	460	3750.0	447.8	945.0	461	3750.0	447.8	970.0
462	3750.0	1940.3	945.0	463	3750.0	1940.3	970.0	464	0.0	1492.5	1001.5
465	3750.0	597.0	945.0	466	3750.0	597.0	970.0	467	3750.0	1592.0	945.0
468	3750.0	1343.3	945.0	469	0.0	1194.0	945.0	470	3750.0	746.3	945.0
471	3750.0	746.3	970.0	472	0.0	149.3	945.0	473	3750.0	1791.0	945.0
474	0.0	149.3	970.0	475	3750.0	895.5	945.0	476	3750.0	895.5	970.0
477	3750.0	1791.0	970.0	478	3750.0	1343.3	970.0	479	3750.0	1343.3	1001.5
480	3750.0	1044.8	945.0	481	3750.0	1044.8	970.0	483	3750.0	1492.5	1001.5
485	0.0	2089.5	970.0	486	3750.0	1194.0	945.0	487	3750.0	597.0	1001.5
488	3750.0	746.3	1001.5	489	3000.0	1044.8	1033.0	490	3000.0	1194.0	1033.0
491	3000.0	1194.0	870.0	492	3000.0	1194.0	1054.0	493	3000.0	0.0	970.0
494	3000.0	1194.0	1001.5	495	3000.0	149.3	980.5	496	3000.0	298.5	991.0
497	3000.0	447.8	1001.5	498	3000.0	597.0	1012.0	499	3000.0	746.3	1022.5
500	3000.0	895.5	1033.0	501	3000.0	1044.8	1043.5	502	3000.0	1194.0	970.0
503	3000.0	0.0	895.0	504	3000.0	149.3	895.0	505	3000.0	149.3	870.0
506	3000.0	0.0	920.0	507	3000.0	149.3	920.0	508	3000.0	0.0	945.0
509	3000.0	149.3	945.0	510	3000.0	149.3	970.0	511	3000.0	298.5	895.0
512	3000.0	298.5	870.0	513	3000.0	298.5	920.0	514	3000.0	298.5	945.0
515	3000.0	298.5	970.0	516	3000.0	447.8	895.0	517	3000.0	447.8	870.0
518	3000.0	447.8	920.0	519	3000.0	447.8	945.0	520	3000.0	447.8	970.0
521	3000.0	597.0	895.0	522	3000.0	597.0	870.0	523	3000.0	597.0	920.0
524	3000.0	597.0	945.0	525	3000.0	597.0	970.0	526	3000.0	746.3	895.0
527	3000.0	746.3	870.0	528	3000.0	746.3	920.0	529	3000.0	746.3	945.0
530	3000.0	746.3	970.0	531	3000.0	895.5	895.0	532	3000.0	895.5	870.0
533	3000.0	895.5	920.0	534	3000.0	895.5	945.0	535	3000.0	895.5	970.0
536	3000.0	1044.8	895.0	537	3000.0	1044.8	870.0	538	3000.0	1044.8	920.0
539	3000.0	1044.8	945.0	540	3000.0	1044.8	970.0	541	3000.0	1194.0	895.0
542	3000.0	1194.0	920.0	543	3000.0	1194.0	945.0	544	3000.0	597.0	1001.5
545	3000.0	746.3	1001.5	546	3000.0	895.5	1001.5	547	3000.0	1044.8	1001.5
548	3000.0	2388.0	870.0	549	3750.0	895.5	1001.5	550	3000.0	1343.3	1033.0
551	3750.0	1044.8	1001.5	552	0.0	1791.0	1001.5	553	3750.0	1641.8	945.0
554	3000.0	2388.0	970.0	555	0.0	1343.3	1033.0	556	3000.0	2238.8	980.5
557	3000.0	2089.5	991.0	558	3000.0	1940.3	1001.5	559	3000.0	1791.0	1012.0
560	3000.0	1641.8	1022.5	561	3000.0	1492.5	1033.0	562	3000.0	1343.3	1043.5
563	3000.0	1343.3	1001.5	564	0.0	1194.0	1033.0	565	3000.0	2388.0	895.0
566	3000.0	2238.8	895.0	567	3000.0	2238.8	870.0	568	3000.0	2388.0	920.0
569	3000.0	2238.8	920.0	570	3000.0	2388.0	945.0	571	3000.0	2238.8	945.0
572	3000.0	2238.8	970.0	573	3000.0	2089.5	895.0	574	3000.0	2089.5	870.0
575	3000.0	2089.5	920.0	576	3000.0	2089.5	945.0	577	3000.0	2089.5	970.0
578	3000.0	1940.3	895.0	579	3000.0	1940.3	870.0	580	3000.0	1940.3	920.0
581	3000.0	1940.3	945.0	582	3000.0	1940.3	970.0	583	3000.0	1791.0	895.0
584	3000.0	1791.0	870.0	585	3000.0	1791.0	920.0	586	3000.0	1791.0	945.0
587	3000.0	1791.0	970.0	588	3000.0	1641.8	895.0	589	3000.0	1641.8	870.0
590	3000.0	1641.8	920.0	591	3000.0	1641.8	945.0	592	3000.0	1641.8	970.0
593	3000.0	1492.5	895.0	594	3000.0	1492.5	870.0	595	3000.0	1492.5	920.0
596	3000.0	1492.5	945.0	597	3000.0	1492.5	970.0	598	3000.0	1343.3	895.0

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	2388.0	0.0	v=111111						
3	750.0	2388.0	0.0	v=111111						
5	1500.0	2388.0	0.0	v=111111						
7	3000.0	2388.0	0.0	v=111111						
9	3750.0	2388.0	0.0	v=111111						
11	0.0	0.0	0.0	v=111111						
13	750.0	0.0	0.0	v=111111						
15	1500.0	0.0	0.0	v=111111						
17	3000.0	0.0	0.0	v=111111						
19	3750.0	0.0	0.0	v=111111						
21	0.0	1592.0	0.0	v=111111						
23	0.0	796.0	0.0	v=111111						
25	3750.0	1592.0	0.0	v=111111						
27	3750.0	796.0	0.0	v=111111						
482	2250.0	2388.0	0.0	v=111111						
484	2250.0	0.0	0.0	v=111111						

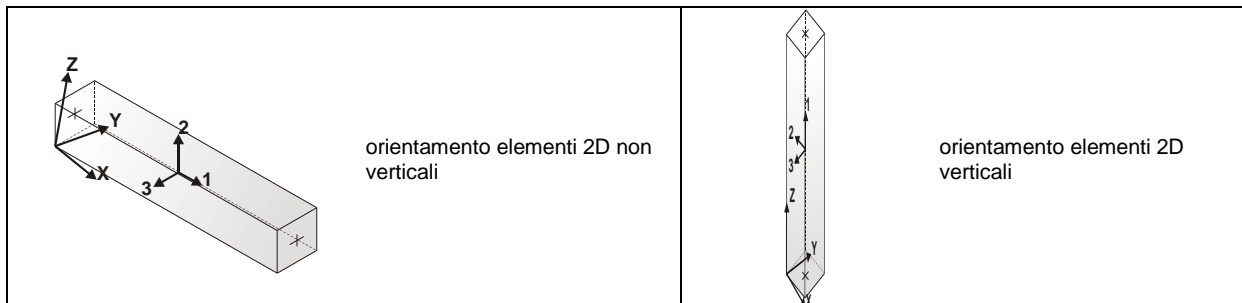
## MODELLAZIONE STRUTTURA: ELEMENTI TRAVE

### 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

Con riferimento al **Documento di Affidabilità** “*Test di validazione del software di calcolo PRO\_SAP e dei moduli aggiuntivi PRO\_SAP Modulo Geotecnico, PRO\_CAD nodi acciaio e PRO\_MST*” - versione Settembre 2014, disponibile per il download sul sito **www.2si.it**, si segnalano i seguenti esempi applicativi:

Test N°	Titolo
2	TRAVI A UNA CAMPATA
3	TRAVE A PIU' CAMPATE
4	TRAVE A UNA CAMPATA SU TERRENO ALLA WINKLER
5	TRAVI SU TERRENO ALLA WINKLER CON CARICO TRASVERSALE
6	TELAI PIANI CON CERNIERE ALLA BASE
7	TELAI PIANI CON INCASTRI ALLA BASE
11	STRUTTURE SOGGETTE A VARIAZIONI TERMICHE
12	STRUTTURE SU TERRENO ALLA WINKLER SOTTOPOSTE A CARICHI DISTRIBUITI TRIANGOLARI
21	DRILLING
24	TENSIONI E ROTAZIONI RISPETTO ALLA CORDA DI ELEMENTI TRAVE
27	FRECCIA DI ELEMENTI TRAVE
42	GERARCHIA DELLE RESISTENZE PER TRAVI IN C.A.
43	GERARCHIA DELLE RESISTENZE PER PILASTRI IN C.A.
44	VERIFICA ALLE TA DI STRUTTURE IN C.A.
45	VERIFICA AGLI SLU DI STRUTTURE IN C.A.
47	VERIFICA A PUNZONAMENTO ALLO SLU DI TRAVI IN C.A.
48	PROGETTAZIONE A TAGLIO DI STRUTTURE IN C.A. SECONDO IL D.M. 9/1/96
49	PROGETTAZIONE A TAGLIO DI STRUTTURE IN C.A. SECONDO IL D.M. 14/1/2008
50	VERIFICA ALLO SLE (TENSIONI E FESSURAZIONE) DI STRUTTURE IN C.A.
51	VERIFICA ALLO SLE (DEFORMAZIONE) DI STRUTTURE IN C.A.
52	FATTORE DI STRUTTURA
53	SOVRARESISTENZE
54	DETTAGLI COSTRUTTIVI C.A.: LIMITI D'ARMATURA PILASTRI E NODI TRAVE-PILASTRO
56	VERIFICA DI STABILITA' DI ASTE COMPRESSE IN ACCIAIO – METODO OMEGA
57	LUCE LIBERA DI TRAVI E ASTE IN ACCIAIO
58	LUCE LIBERA DI COLONNE IN ACCIAIO

<b>59</b>	SVERGOLAMENTO DI TRAVI IN ACCIAIO
<b>64</b>	STABILITA' DI ASTE COMPOSTE IN ACCIAIO
<b>73</b>	VALUTAZIONE EFFETTO P- $\delta$ SU PILASTRATA
<b>74</b>	VALUTAZIONE EFFETTO P- $\delta$ SU TELAIO 3D
<b>85</b>	ANALISI PUSHOVER DI UN EDIFICIO IN C.A.
<b>87</b>	ANALISI ELASTO PLASTICA INCREMENTALE
<b>88</b>	ANALISI ELASTO PLASTICA INCREMENTALE
<b>98</b>	VERIFICA ALLO SLU DI STRUTTURE IN LEGNO SECONDO EC5
<b>99</b>	VERIFICA ALLO SLE DI STRUTTURE IN LEGNO SECONDO EC5
<b>102</b>	SNELLEZZE EC5
<b>130</b>	PROGETTO E VERIFICA DI TRAVI PREM

Elem.	Note	Nodo I	Nodo J	Mat.	Sez.	Rotaz. gradi	Svincolo I	Svincolo J	Wink V daN/cm3	Wink O daN/cm3
1	Asta	570	247	43	6					
2	Asta	508	246	43	6					
3	Asta	414	269	43	6					
4	Asta	344	220	43	6					
5	Asta	373	220	43	6					
6	Asta	245	414	43	6					
7	Asta	66	508	43	6					
8	Asta	95	591	43	6					
9	Asta	136	591	43	6					
10	Asta	136	570	43	6					
11	Asta	66	529	43	6					
12	Asta	95	529	43	6					
13	Asta	199	66	43	6					
14	Asta	269	136	43	6					
15	Asta	244	344	43	6					
16	Asta	344	199	43	6					
17	Asta	373	290	43	6					
18	Asta	414	290	43	6					
19	Trave	18	20	43	6		000011	000011		
20	Trave	4	6	43	6		000011	000011		
21	Trave	6	100	43	6		000011	000011		
22	Trave	548	10	43	6		000011	000011		
23	Trave	20	28	43	6		000011	000011		
24	Trave	12	24	43	6		000011	000011		
25	Trave	26	10	43	6		000011	000011		
26	Trave	22	2	43	6		000011	000011		
27	Trave	28	26	43	6		000011	000011		
28	Trave	24	22	43	6		000011	000011		
29	Pilas.	1	2	4	4					
30	Trave	47	39	43	6		000011	000011		
31	Trave	50	42	43	6		000011	000011		
32	Trave	52	44	43	5		000011	000011		
33	Trave	45	36	43	5		000011	000011		
34	Trave	53	35	43	6		000011	000011		
35	Trave	46	38	43	5		000011	000011		
36	Trave	48	40	43	5		000011	000011		
37	Trave	49	41	43	5		000011	000011		
38	Trave	51	43	43	5		000011	000011		
39	Pilas.	3	4	4	1	-90.00				
40	Trave	117	109	43	6		000011	000011		
41	Trave	120	112	43	6		000011	000011		
42	Trave	122	114	43	5		000011	000011		
43	Trave	115	106	43	5		000011	000011		

# Z U P E L L I   D E S I G N   A R C H I T E T T U R A

44	Trave	121	113	43	5		000011	000011
45	Trave	116	108	43	5		000011	000011
46	Trave	118	110	43	5		000011	000011
47	Trave	119	111	43	5		000011	000011
48	Pilas.	5	6	4	1	-90.00		
49	Pilas.	7	548	4	1	-90.00		
50	Pilas.	9	10	4	4	-90.00		
51	Pilas.	482	100	4	1	-90.00		
52	Pilas.	484	8	4	1	90.00		
53	Trave	8	18	43	6		000011	000011
54	Trave	100	548	43	6		000011	000011
55	Pilas.	11	12	4	4	90.00		
56	Pilas.	13	14	4	1	90.00		
57	Pilas.	15	16	4	1	90.00		
58	Pilas.	17	18	4	1	90.00		
59	Pilas.	19	20	4	4	-180.00		
60	Pilas.	21	22	4	1			
61	Pilas.	23	24	4	1			
62	Pilas.	25	26	4	1	180.00		
63	Pilas.	27	28	4	1	180.00		
64	Trave	2	4	43	6		000011	000011
65	Trave	12	14	43	6		000011	000011
66	Trave	14	16	43	6		000011	000011
67	Trave	16	8	43	6		000011	000011
68	Trave	186	47	43	6		000011	000011
69	Trave	189	50	43	6		000011	000011
70	Trave	191	52	43	5		000011	000011
71	Trave	184	45	43	5		000011	000011
72	Trave	192	53	43	6		000011	000011
73	Trave	185	46	43	5		000011	000011
74	Trave	187	48	43	5		000011	000011
75	Trave	188	49	43	5		000011	000011
76	Trave	190	51	43	5		000011	000011
77	Trave	256	117	43	6		000011	000011
78	Trave	259	120	43	6		000011	000011
79	Trave	261	122	43	5		000011	000011
80	Trave	254	115	43	5		000011	000011
81	Trave	260	121	43	5		000011	000011
82	Trave	255	116	43	5		000011	000011
83	Trave	257	118	43	5		000011	000011
84	Trave	258	119	43	5		000011	000011
85	Trave	325	186	43	6		000011	000011
86	Trave	328	189	43	6		000011	000011
87	Trave	330	191	43	5		000011	000011
88	Trave	323	184	43	5		000011	000011
89	Trave	331	192	43	6		000011	000011
90	Trave	324	185	43	5		000011	000011
91	Trave	326	187	43	5		000011	000011
92	Trave	327	188	43	5		000011	000011
93	Trave	329	190	43	5		000011	000011
94	Trave	395	256	43	6		000011	000011
95	Trave	398	259	43	6		000011	000011
96	Trave	400	261	43	5		000011	000011
97	Trave	393	254	43	5		000011	000011
98	Trave	399	260	43	5		000011	000011
99	Trave	394	255	43	5		000011	000011
100	Trave	396	257	43	5		000011	000011
101	Trave	397	258	43	5		000011	000011
102	Trave	39	496	43	6		000011	000011
103	Trave	42	499	43	6		000011	000011
104	Trave	44	501	43	5		000011	000011
105	Trave	36	493	43	5		000011	000011
106	Trave	35	492	43	6		000011	000011
107	Trave	38	495	43	5		000011	000011
108	Trave	40	497	43	5		000011	000011
109	Trave	41	498	43	5		000011	000011
110	Trave	43	500	43	5		000011	000011
111	Trave	109	557	43	6		000011	000011
112	Trave	112	560	43	6		000011	000011
113	Trave	114	562	43	5		000011	000011
114	Trave	106	554	43	5		000011	000011
115	Trave	113	561	43	5		000011	000011
116	Trave	108	556	43	5		000011	000011

117	Trave	110	558	43	5	000011	000011
118	Trave	111	559	43	5	000011	000011
119	Trave	496	253	43	6	000011	000011
120	Trave	499	303	43	6	000011	000011
121	Trave	501	308	43	5	000011	000011
122	Trave	493	251	43	5	000011	000011
123	Trave	492	309	43	6	000011	000011
124	Trave	495	252	43	5	000011	000011
125	Trave	497	263	43	5	000011	000011
126	Trave	498	302	43	5	000011	000011
127	Trave	500	304	43	5	000011	000011
128	Trave	557	316	43	6	000011	000011
129	Trave	560	319	43	6	000011	000011
130	Trave	562	321	43	5	000011	000011
131	Trave	554	313	43	5	000011	000011
132	Trave	561	320	43	5	000011	000011
133	Trave	556	314	43	5	000011	000011
134	Trave	558	317	43	5	000011	000011
135	Trave	559	318	43	5	000011	000011
136	Pilas.	26	467	10	6		
137	Pilas.	28	387	10	6		
138	Pilas.	20	449	10	6		
139	Pilas.	10	250	10	6		
140	Pilas.	22	383	10	6		
141	Pilas.	24	181	10	6		
142	Pilas.	12	244	10	6		
143	Pilas.	2	245	10	6		

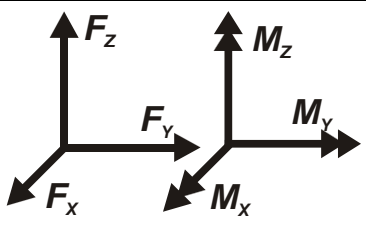
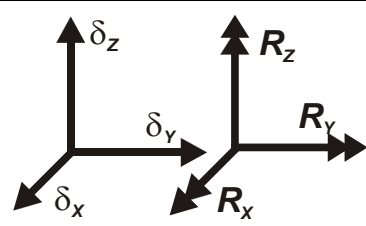
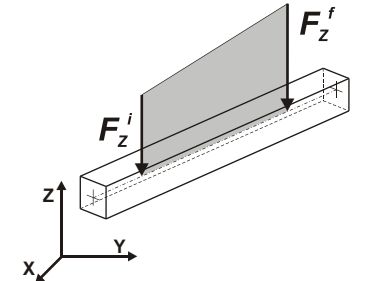
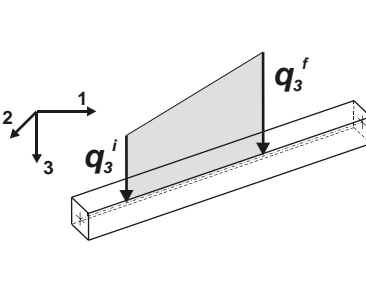
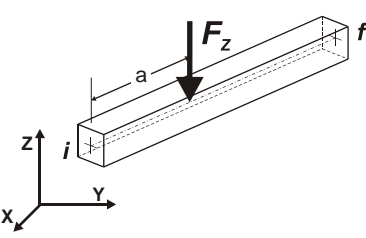
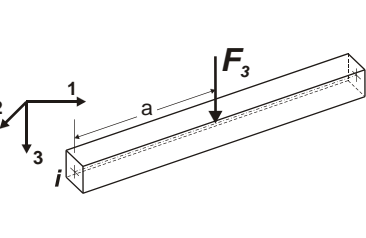
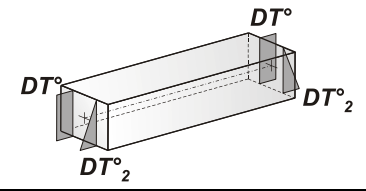
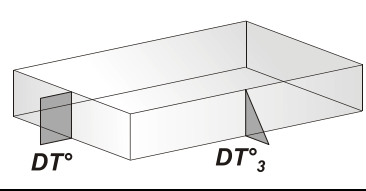
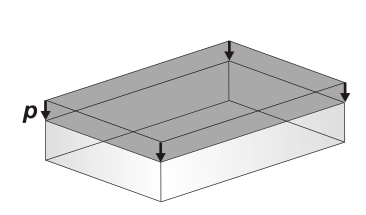
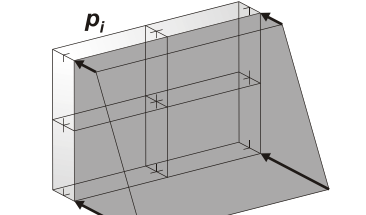
## MODELLAZIONE DELLE AZIONI

### 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
<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>

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

<b>CDC</b>	<b>Tipo</b>	<b>Sigla Id</b>	<b>Note</b>
1	Ggk	CDC=Ggk (peso proprio della struttura)	
2	Gsk	CDC=G1sk (permanente solai-coperture)	
3	Gsk	CDC=G2sk (permanente solai-coperture n.c.d.)	
4	Qsk	CDC=Qsk (variabile solai)	
5	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=G2sk (permanente solai-coperture n.c.d.)
			partecipazione:1.00 per 4 CDC=Qsk (variabile solai)
6	Edk	CDC=Ed (dinamico SLU) alfa=0.0 (ecc. -)	come precedente CDC sismico
7	Edk	CDC=Ed (dinamico SLU) alfa=90.00 (ecc. +)	come precedente CDC sismico
8	Edk	CDC=Ed (dinamico SLU) alfa=90.00 (ecc. -)	come precedente CDC sismico
9	Edk	CDC=Ed (dinamico SLO) alfa=0.0 (ecc. +)	come precedente CDC sismico
10	Edk	CDC=Ed (dinamico SLO) alfa=0.0 (ecc. -)	come precedente CDC sismico
11	Edk	CDC=Ed (dinamico SLO) alfa=90.00 (ecc. +)	come precedente CDC sismico
12	Edk	CDC=Ed (dinamico SLO) alfa=90.00 (ecc. -)	come precedente CDC sismico

## 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

$$\gamma G_1 \cdot G_1 + \gamma G_2 \cdot G_2 + \gamma P \cdot P + \gamma Q_1 \cdot Q_{k1} + \gamma Q_2 \cdot \psi_{02} \cdot Q_{k2} + \gamma Q_3 \cdot \psi_{03} \cdot Q_{k3} + \dots$$

#### Combinazione caratteristica (rara) SLE

$$G_1 + G_2 + P + Q_{k1} + \psi_{02} \cdot Q_{k2} + \psi_{03} \cdot Q_{k3} + \dots$$

#### Combinazione frequente SLE

$$G_1 + G_2 + P + \psi_{11} \cdot Q_{k1} + \psi_{22} \cdot Q_{k2} + \psi_{23} \cdot Q_{k3} + \dots$$

#### Combinazione quasi permanente SLE

$$G_1 + G_2 + P + \psi_{21} \cdot Q_{k1} + \psi_{22} \cdot Q_{k2} + \psi_{23} \cdot Q_{k3} + \dots$$

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

$$E + G_1 + G_2 + P + \psi_{21} \cdot Q_{k1} + \psi_{22} \cdot Q_{k2} + \dots$$

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

$$G_1 + G_2 + P + \psi_{21} \cdot Q_{k1} + \psi_{22} \cdot Q_{k2} + \dots$$

Dove:

NTC 2008 Tabella 2.5.I

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 $\leq 30\text{kN}$ )	0,70	0,70	0,60
Categoria G Rimesse e parcheggi (autoveicoli $> 30\text{kN}$ )	0,70	0,50	0,30
Categoria H Coperture	0,00	0,00	0,00
Vento	0,60	0,20	0,00
Neve a quota $\leq 1000\text{ m}$	0,50	0,20	0,00
Neve a quota $> 1000\text{ m}$	0,70	0,50	0,20
Variazioni Termiche	0,60	0,50	0,00

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 2008 Tabella 2.6.I

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

Cmb	Tipo	Sigla Id	effetto P-delta
1	SLU	Comb. SLU A1 (SLV sism.) 1	
2	SLU	Comb. SLU A1 (SLV sism.) 2	
3	SLU	Comb. SLU A1 (SLV sism.) 3	
4	SLU	Comb. SLU A1 (SLV sism.) 4	
5	SLU	Comb. SLU A1 (SLV sism.) 5	
6	SLU	Comb. SLU A1 (SLV sism.) 6	
7	SLU	Comb. SLU A1 (SLV sism.) 7	
8	SLU	Comb. SLU A1 (SLV sism.) 8	
9	SLU	Comb. SLU A1 (SLV sism.) 9	
10	SLU	Comb. SLU A1 (SLV sism.) 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	SLD(sis)	Comb. SLE (SLO Operativo sism.) 33	
34	SLD(sis)	Comb. SLE (SLO Operativo sism.) 34	
35	SLD(sis)	Comb. SLE (SLO Operativo sism.) 35	
36	SLD(sis)	Comb. SLE (SLO Operativo sism.) 36	
37	SLD(sis)	Comb. SLE (SLO Operativo sism.) 37	
38	SLD(sis)	Comb. SLE (SLO Operativo sism.) 38	
39	SLD(sis)	Comb. SLE (SLO Operativo sism.) 39	
40	SLD(sis)	Comb. SLE (SLO Operativo sism.) 40	
41	SLD(sis)	Comb. SLE (SLO Operativo sism.) 41	
42	SLD(sis)	Comb. SLE (SLO Operativo sism.) 42	
43	SLD(sis)	Comb. SLE (SLO Operativo sism.) 43	
44	SLD(sis)	Comb. SLE (SLO Operativo sism.) 44	
45	SLD(sis)	Comb. SLE (SLO Operativo sism.) 45	
46	SLD(sis)	Comb. SLE (SLO Operativo sism.) 46	
47	SLD(sis)	Comb. SLE (SLO Operativo sism.) 47	
48	SLD(sis)	Comb. SLE (SLO Operativo sism.) 48	
49	SLD(sis)	Comb. SLE (SLO Operativo sism.) 49	
50	SLD(sis)	Comb. SLE (SLO Operativo sism.) 50	
51	SLD(sis)	Comb. SLE (SLO Operativo sism.) 51	
52	SLD(sis)	Comb. SLE (SLO Operativo sism.) 52	
53	SLD(sis)	Comb. SLE (SLO Operativo sism.) 53	
54	SLD(sis)	Comb. SLE (SLO Operativo sism.) 54	
55	SLD(sis)	Comb. SLE (SLO Operativo sism.) 55	
56	SLD(sis)	Comb. SLE (SLO Operativo sism.) 56	
57	SLD(sis)	Comb. SLE (SLO Operativo sism.) 57	
58	SLD(sis)	Comb. SLE (SLO Operativo sism.) 58	
59	SLD(sis)	Comb. SLE (SLO Operativo sism.) 59	
60	SLD(sis)	Comb. SLE (SLO Operativo sism.) 60	
61	SLD(sis)	Comb. SLE (SLO Operativo sism.) 61	
62	SLD(sis)	Comb. SLE (SLO Operativo sism.) 62	
63	SLD(sis)	Comb. SLE (SLO Operativo sism.) 63	
64	SLD(sis)	Comb. SLE (SLO Operativo sism.) 64	
65	SLU(acc.)	Comb. SLU (Accid.) 65	
66	SLU(acc.)	Comb. SLU (Accid.) 66	

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	1.00	1.00	1.00	0.30	-1.00	0.0	-0.30	0.0	0.0	0.0	0.0	0.0		
2	1.00	1.00	1.00	0.30	-1.00	0.0	0.30	0.0	0.0	0.0	0.0	0.0		
3	1.00	1.00	1.00	0.30	1.00	0.0	-0.30	0.0	0.0	0.0	0.0	0.0		
4	1.00	1.00	1.00	0.30	1.00	0.0	0.30	0.0	0.0	0.0	0.0	0.0		
5	1.00	1.00	1.00	0.30	-1.00	0.0	0.0	-0.30	0.0	0.0	0.0	0.0		
6	1.00	1.00	1.00	0.30	-1.00	0.0	0.0	0.30	0.0	0.0	0.0	0.0		
7	1.00	1.00	1.00	0.30	1.00	0.0	0.0	-0.30	0.0	0.0	0.0	0.0		
8	1.00	1.00	1.00	0.30	1.00	0.0	0.0	0.30	0.0	0.0	0.0	0.0		
9	1.00	1.00	1.00	0.30	0.0	-1.00	-0.30	0.0	0.0	0.0	0.0	0.0		
10	1.00	1.00	1.00	0.30	0.0	-1.00	0.30	0.0	0.0	0.0	0.0	0.0		
11	1.00	1.00	1.00	0.30	0.0	1.00	-0.30	0.0	0.0	0.0	0.0	0.0		
12	1.00	1.00	1.00	0.30	0.0	1.00	0.30	0.0	0.0	0.0	0.0	0.0		
13	1.00	1.00	1.00	0.30	0.0	-1.00	0.0	-0.30	0.0	0.0	0.0	0.0		
14	1.00	1.00	1.00	0.30	0.0	-1.00	0.0	0.30	0.0	0.0	0.0	0.0		
15	1.00	1.00	1.00	0.30	0.0	1.00	0.0	-0.30	0.0	0.0	0.0	0.0		
16	1.00	1.00	1.00	0.30	0.0	1.00	0.0	0.30	0.0	0.0	0.0	0.0		
17	1.00	1.00	1.00	0.30	-0.30	0.0	-1.00	0.0	0.0	0.0	0.0	0.0		
18	1.00	1.00	1.00	0.30	-0.30	0.0	1.00	0.0	0.0	0.0	0.0	0.0		
19	1.00	1.00	1.00	0.30	0.30	0.0	-1.00	0.0	0.0	0.0	0.0	0.0		
20	1.00	1.00	1.00	0.30	0.30	0.0	1.00	0.0	0.0	0.0	0.0	0.0		
21	1.00	1.00	1.00	0.30	0.0	-0.30	-1.00	0.0	0.0	0.0	0.0	0.0		
22	1.00	1.00	1.00	0.30	0.0	-0.30	1.00	0.0	0.0	0.0	0.0	0.0		
23	1.00	1.00	1.00	0.30	0.0	0.30	-1.00	0.0	0.0	0.0	0.0	0.0		
24	1.00	1.00	1.00	0.30	0.0	0.30	1.00	0.0	0.0	0.0	0.0	0.0		
25	1.00	1.00	1.00	0.30	-0.30	0.0	0.0	-1.00	0.0	0.0	0.0	0.0		
26	1.00	1.00	1.00	0.30	-0.30	0.0	0.0	1.00	0.0	0.0	0.0	0.0		
27	1.00	1.00	1.00	0.30	0.30	0.0	0.0	-1.00	0.0	0.0	0.0	0.0		
28	1.00	1.00	1.00	0.30	0.30	0.0	0.0	1.00	0.0	0.0	0.0	0.0		
29	1.00	1.00	1.00	0.30	0.0	-0.30	0.0	-1.00	0.0	0.0	0.0	0.0		
30	1.00	1.00	1.00	0.30	0.0	-0.30	0.0	1.00	0.0	0.0	0.0	0.0		
31	1.00	1.00	1.00	0.30	0.0	0.30	0.0	-1.00	0.0	0.0	0.0	0.0		
32	1.00	1.00	1.00	0.30	0.0	0.30	0.0	1.00	0.0	0.0	0.0	0.0		
33	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	-1.00	0.0	-0.30	0.0		
34	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	-1.00	0.0	0.30	0.0		
35	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	1.00	0.0	-0.30	0.0		
36	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	1.00	0.0	0.30	0.0		
37	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	-1.00	0.0	0.0	-0.30		
38	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	-1.00	0.0	0.0	0.30		
39	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	1.00	0.0	0.0	-0.30		
40	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	1.00	0.0	0.0	0.30		
41	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	-1.00	-0.30	0.0		
42	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	-1.00	0.30	0.0		
43	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	1.00	-0.30	0.0		
44	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	1.00	0.30	0.0		
45	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	-0.30		
46	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	0.30		
47	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	1.00	0.0	-0.30		
48	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.30		
49	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	-0.30	0.0	-1.00	0.0		
50	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	-0.30	0.0	1.00	0.0		
51	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.30	0.0	-1.00	0.0		
52	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.30	0.0	1.00	0.0		
53	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	-0.30	-1.00	0.0		
54	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	-0.30	1.00	0.0		
55	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.30	-1.00	0.0		
56	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.30	1.00	0.0		
57	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	-0.30	0.0	0.0	-1.00		
58	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	-0.30	0.0	0.0	1.00		
59	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.30	0.0	0.0	-1.00		
60	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.30	0.0	0.0	1.00		
61	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	-1.00		
62	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	1.00		
63	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.30	0.0	-1.00		
64	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.30	0.0	1.00		
65	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
66	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

## 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):

ag: accelerazione orizzontale massima del terreno;

Fo: 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
IV	100.0	2.0	200.0	D	T1

Individuati su reticolo di riferimento i parametri di pericolosità sismica si valutano i parametri spettrali riportati in tabella:

S è il coefficiente che tiene conto della categoria di sottosuolo e delle condizioni topografiche

mediante la relazione seguente  $S = S_s \cdot S_t$  (3.2.5)

Fo è il fattore che quantifica l'amplificazione spettrale massima, su sito di riferimento rigido orizzontale

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

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.

Id nodo	Longitudine	Latitudine	Distanza
			Km
Loc.	10.270	45.291	
13385	10.227	45.241	6.477
13386	10.298	45.243	5.751
13164	10.295	45.292	1.952
13163	10.224	45.291	3.587

SL	Pver	Tr	ag	Fo	T*c
		Anni	g		sec
SLO	81.0	120.0	0.063	2.520	0.270
SLD	63.0	201.0	0.080	2.510	0.280
SLV	10.0	1898.0	0.193	2.490	0.280
SLC	5.0	2475.0	0.212	2.490	0.280

SL	ag	S	Fo	Fv	Tb	Tc	Td
	g				sec	sec	sec
SLO	0.063	1.800	2.520	0.857	0.217	0.650	1.854
SLD	0.080	1.800	2.510	0.955	0.220	0.661	1.918
SLV	0.193	1.680	2.490	1.476	0.220	0.661	2.371
SLC	0.212	1.610	2.490	1.546	0.220	0.661	2.446

# RISULTATI ANALISI SISMICHE

## LEGENDA TABELLA ANALISI SISMICHE

Il programma consente l'analisi di diverse configurazioni sismiche.

Sono previsti, infatti, i seguenti casi di carico:

- |                |  |
|----------------|--|
| <b>9. Esk</b>  | caso di carico sismico con analisi statica equivalente |
| <b>10. Edk</b> | 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 di struttura q</b>	Fattore 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  $\eta_T$  (dr) degli elementi strutturali verticali. Per semplicità di consultazione il livello è espresso anche in unità  $1000 \cdot \eta_T/h$  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  $\eta_T$ ,  $\eta_P$  e  $\eta_D$  degli elementi strutturali verticali. Per semplicità di consultazione il livello è espresso in unità  $1000 \cdot \eta_T/h$  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 l'allegato 10.A dell'Ordinanza 3274 e smi. In particolare la tabella, per ogni combinazione SLU (SLC per il DM 14-01-2008) sismica riporta il codice di verifica e i valori utilizzati per la verifica: spostamento  $d_E$ , area ridotta e dimensione A2, azione verticale, deformazioni di taglio dell' elastomero e tensioni nell' acciaio.

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

Con riferimento al **Documento di Affidabilità “Test di validazione del software di calcolo PRO\_SAP e dei moduli aggiuntivi PRO\_SAP Modulo Geotecnico, PRO\_CAD nodi acciaio e PRO\_MST”** - versione Maggio 2011, disponibile per il download sul sito **www.2si.it**, si segnalano i seguenti esempi applicativi:

Test N°	Titolo
<b>23</b>	DM 2008: SPETTRO
<b>29</b>	SISMICA 1000/H, SOMMA V, EFFETTO P- $\delta$
<b>30</b>	ANALISI DI UN EDIFICIO CON ISOLATORI SISMICI
<b>70</b>	MASSE SISMICHE
<b>75</b>	PROGETTO DI ISOLATORI ELASTOMERICI
<b>76</b>	VERIFICA DI ISOLATORI ELASTOMERICI
<b>77</b>	VERIFICA DI ISOLATORI FRICTION PENDULUM

CDC	Tipo	Sigla Id	Note
5	Edk	CDC=Ed (dinamico SLU) alfa=0.0 (ecc. +)	
			categoria suolo: D
			fattore di sito S = 1.680
			ordinata spettro (tratto Tb-Tc) = 0.323 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 2.575 sec.
			fattore di struttura q: 2.500
			fattore per spost. mu d: 2.500
			classe di duttilità CD: B
			numero di modi considerati: 9
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	rapp. r/Ls	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
1054.00	2.824e+04	1875.00	1194.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1043.50	7.960e+04	1875.00	1194.00	0.0	-14.93	0.0	0.0	0.0	0.0	0.0
1033.00	6.885e+04	1875.00	1194.00	0.0	-29.85	1875.00	1194.00	1.169	0.0	0.0
1022.50	7.168e+04	1875.00	1194.00	0.0	-44.78	0.0	0.0	0.0	0.0	0.0
1012.00	7.007e+04	1875.00	1194.00	0.0	-59.70	0.0	0.0	0.0	0.0	0.0
1001.50	7.384e+04	1875.00	1194.00	0.0	-74.63	1875.00	1194.00	1.099	0.0	0.0
991.00	6.851e+04	1875.00	1194.00	0.0	-89.55	0.0	0.0	0.0	0.0	0.0
980.50	7.960e+04	1875.00	1194.00	0.0	-104.48	0.0	0.0	0.0	0.0	0.0
970.00	3.289e+04	1875.00	1194.02	0.0	-119.40	1875.00	1194.00	0.998	0.0	0.0
945.00	9519.86	1875.00	1193.95	0.0	-119.40	1875.00	1194.00	0.653	0.0	0.0
920.00	2636.35	1875.00	1194.00	0.0	-119.40	1875.00	1194.00	0.885	0.0	0.0

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	rapp. r/Ls	rapp. ex/rx	rapp. ey/ry
895.00	2636.35	1875.00	1194.00	0.0	-119.40	1875.00	1194.00	0.885	0.0	0.0
870.00	3.689e+04	1875.00	1194.00	0.0	-119.40	1875.00	1194.00	1.342	0.0	0.0
Risulta	6.250e+05									

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	0.388	2.575	0.076	6.114e+05	97.8	2.23	3.57e-04	4.81e-04	0.0	0.0	0.0
2	0.740	1.351	0.158	111.50	1.78e-02	1.608e+05	25.7	1.99e-04	0.0	0.0	0.0
3	0.794	1.260	0.169	15.58	2.49e-03	4.339e+05	69.4	6.92e-03	1.11e-06	0.0	0.0
4	1.112	0.899	0.237	51.74	8.28e-03	2.446e+04	3.9	0.05	8.17e-06	0.0	0.0
5	1.134	0.882	0.242	1.129e+04	1.8	269.19	4.31e-02	1.31	2.09e-04	0.0	0.0
6	1.456	0.687	0.310	14.46	2.31e-03	1546.68	0.2	565.55	9.05e-02	0.0	0.0
7	1.456	0.687	0.311	0.0	0.0	2.41	3.86e-04	3.649e+05	58.4	0.0	0.0
8	1.457	0.686	0.311	5.68e-04	0.0	0.04	6.18e-06	1.93	3.08e-04	0.0	0.0
9	1.457	0.686	0.311	4.40e-04	0.0	4.86e-03	0.0	1.134e+04	1.8	0.0	0.0
Risulta				6.229e+05		6.210e+05		3.768e+05			
In percentuale				99.67		99.36		60.30			

CDC	Tipo	Sigla Id	Note
6	Edk	CDC=Ed (dinamico SLU) alfa=0.0 (ecc. -)	
			categoria suolo: D
			fattore di sito S = 1.680
			ordinata spettro (tratto Tb-Tc) = 0.323 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 2.575 sec.
			fattore di struttura q: 2.500
			fattore per spost. mu d: 2.500
			classe di duttilità CD: B
			numero di modi considerati: 9
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	rapp. r/Ls	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
1054.00	2.824e+04	1875.00	1194.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1043.50	7.960e+04	1875.00	1194.00	0.0	14.93	0.0	0.0	0.0	0.0	0.0
1033.00	6.885e+04	1875.00	1194.00	0.0	29.85	1875.00	1194.00	1.169	0.0	0.0
1022.50	7.168e+04	1875.00	1194.00	0.0	44.78	0.0	0.0	0.0	0.0	0.0
1012.00	7.007e+04	1875.00	1194.00	0.0	59.70	0.0	0.0	0.0	0.0	0.0
1001.50	7.384e+04	1875.00	1194.00	0.0	74.63	1875.00	1194.00	1.099	0.0	0.0
991.00	6.851e+04	1875.00	1194.00	0.0	89.55	0.0	0.0	0.0	0.0	0.0
980.50	7.960e+04	1875.00	1194.00	0.0	104.48	0.0	0.0	0.0	0.0	0.0
970.00	3.289e+04	1875.00	1194.02	0.0	119.40	1875.00	1194.00	0.998	0.0	0.0
945.00	9519.86	1875.00	1193.95	0.0	119.40	1875.00	1194.00	0.653	0.0	0.0
920.00	2636.35	1875.00	1194.00	0.0	119.40	1875.00	1194.00	0.885	0.0	0.0
895.00	2636.35	1875.00	1194.00	0.0	119.40	1875.00	1194.00	0.885	0.0	0.0
870.00	3.689e+04	1875.00	1194.00	0.0	119.40	1875.00	1194.00	1.342	0.0	0.0
Risulta	6.250e+05									

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	0.388	2.575	0.076	6.115e+05	97.8	1.70	2.72e-04	5.39e-04	0.0	0.0	0.0
2	0.740	1.351	0.158	87.08	1.39e-02	1.604e+05	25.7	5.36e-04	0.0	0.0	0.0
3	0.794	1.260	0.169	12.52	2.00e-03	4.344e+05	69.5	2.97e-03	0.0	0.0	0.0
4	1.112	0.899	0.237	84.28	1.35e-02	2.438e+04	3.9	1.83e-05	0.0	0.0	0.0
5	1.134	0.882	0.242	1.125e+04	1.8	345.78	5.53e-02	1.37	2.19e-04	0.0	0.0
6	1.456	0.687	0.310	14.61	2.34e-03	1546.98	0.2	552.22	8.84e-02	0.0	0.0
7	1.456	0.687	0.311	2.59e-06	0.0	2.33	3.72e-04	3.649e+05	58.4	0.0	0.0
8	1.457	0.686	0.311	5.20e-04	0.0	0.04	6.89e-06	1.93	3.09e-04	0.0	0.0
9	1.457	0.686	0.311	4.45e-04	0.0	4.26e-03	0.0	1.134e+04	1.8	0.0	0.0
Risulta				6.229e+05		6.210e+05		3.768e+05			
In percentuale				99.67		99.36		60.29			

CDC	Tipo	Sigla Id	Note
7	Edk	CDC=Ed (dinamico SLU) alfa=90.00 (ecc. +)	
			categoria suolo: D
			fattore di sito S = 1.680
			ordinata spettro (tratto Tb-Tc) = 0.323 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 1.190 sec.
			fattore di struttura q: 2.500
			fattore per spost. $\mu$ d: 2.500
			classe di duttilità CD: B
			numero di modi considerati: 9
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	rapp. r/Ls	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
1054.00	2.824e+04	1875.00	1194.00	187.50	0.0	0.0	0.0	0.0	0.0	0.0
1043.50	7.960e+04	1875.00	1194.00	187.50	0.0	0.0	0.0	0.0	0.0	0.0
1033.00	6.885e+04	1875.00	1194.00	187.50	0.0	1875.00	1194.00	1.169	0.0	0.0
1022.50	7.168e+04	1875.00	1194.00	187.50	0.0	0.0	0.0	0.0	0.0	0.0
1012.00	7.007e+04	1875.00	1194.00	187.50	0.0	0.0	0.0	0.0	0.0	0.0
1001.50	7.384e+04	1875.00	1194.00	187.50	0.0	1875.00	1194.00	1.099	0.0	0.0
991.00	6.851e+04	1875.00	1194.00	187.50	0.0	0.0	0.0	0.0	0.0	0.0
980.50	7.960e+04	1875.00	1194.00	187.50	0.0	0.0	0.0	0.0	0.0	0.0
970.00	3.289e+04	1875.00	1194.02	187.50	0.0	1875.00	1194.00	0.998	0.0	0.0
945.00	9519.86	1875.00	1193.95	187.50	0.0	1875.00	1194.00	0.653	0.0	0.0
920.00	2636.35	1875.00	1194.00	112.50	0.0	1875.00	1194.00	0.885	0.0	0.0
895.00	2636.35	1875.00	1194.00	112.50	0.0	1875.00	1194.00	0.885	0.0	0.0
870.00	3.689e+04	1875.00	1194.00	187.50	0.0	1875.00	1194.00	1.342	0.0	0.0
Risulta	6.250e+05									

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	0.389	2.572	0.076	6.117e+05	97.9	0.02	3.30e-06	5.14e-04	0.0	0.0	0.0
2	0.713	1.403	0.152	0.35	5.56e-05	2.771e+05	44.3	2.94e-04	0.0	0.0	0.0
3	0.840	1.190	0.179	0.08	1.34e-05	3.202e+05	51.2	5.08e-03	0.0	0.0	0.0
4	0.999	1.001	0.213	0.15	2.42e-05	2.043e+04	3.3	0.01	1.98e-06	0.0	0.0
5	1.134	0.882	0.242	1.128e+04	1.8	0.04	6.66e-06	1.36	2.17e-04	0.0	0.0
6	1.456	0.687	0.310	0.02	3.80e-06	2.37e-06	0.0	2.532e+05	40.5	0.0	0.0
7	1.457	0.686	0.311	9.22e-04	0.0	0.0	0.0	9.217e+04	14.7	0.0	0.0
8	1.457	0.686	0.311	6.43e-03	1.03e-06	3.33e-06	0.0	2.121e+04	3.4	0.0	0.0
9	1.458	0.686	0.311	6.52e-03	1.04e-06	0.0	0.0	1.123e+04	1.8	0.0	0.0
Risulta				6.229e+05		6.178e+05		3.778e+05			
In percentuale				99.67		98.85		60.45			

CDC	Tipo	Sigla Id	Note
8	Edk	CDC=Ed (dinamico SLU) alfa=90.00 (ecc. -)	
			categoria suolo: D
			fattore di sito S = 1.680
			ordinata spettro (tratto Tb-Tc) = 0.323 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 1.286 sec.
			fattore di struttura q: 2.500
			fattore per spost. $\mu$ d: 2.500
			classe di duttilità CD: B
			numero di modi considerati: 9
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	rapp. r/Ls	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
1054.00	2.824e+04	1875.00	1194.00	-187.50	0.0	0.0	0.0	0.0	0.0	0.0
1043.50	7.960e+04	1875.00	1194.00	-187.50	0.0	0.0	0.0	0.0	0.0	0.0
1033.00	6.885e+04	1875.00	1194.00	-187.50	0.0	1875.00	1194.00	1.169	0.0	0.0
1022.50	7.168e+04	1875.00	1194.00	-187.50	0.0	0.0	0.0	0.0	0.0	0.0

# ZUPELLI DESIGN ARCHITETTURA

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	rapp. r/Ls	rapp. ex/rx	rapp. ey/ry
1012.00	7.007e+04	1875.00	1194.00	-187.50	0.0	0.0	0.0	0.0	0.0	0.0
1001.50	7.384e+04	1875.00	1194.00	-187.50	0.0	1875.00	1194.00	1.099	0.0	0.0
991.00	6.851e+04	1875.00	1194.00	-187.50	0.0	0.0	0.0	0.0	0.0	0.0
980.50	7.960e+04	1875.00	1194.00	-187.50	0.0	0.0	0.0	0.0	0.0	0.0
970.00	3.289e+04	1875.00	1194.02	-187.50	0.0	1875.00	1194.00	0.998	0.0	0.0
945.00	9519.86	1875.00	1193.95	-187.50	0.0	1875.00	1194.00	0.653	0.0	0.0
920.00	2636.35	1875.00	1194.00	-112.50	0.0	1875.00	1194.00	0.885	0.0	0.0
895.00	2636.35	1875.00	1194.00	-112.50	0.0	1875.00	1194.00	0.885	0.0	0.0
870.00	3.689e+04	1875.00	1194.00	-187.50	0.0	1875.00	1194.00	1.342	0.0	0.0
Risulta	6.250e+05									

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	0.389	2.572	0.076	6.117e+05	97.9	2.27e-03	0.0	5.16e-04	0.0	0.0	0.0
2	0.741	1.349	0.158	0.29	4.63e-05	1.186e+05	19.0	2.68e-03	0.0	0.0	0.0
3	0.778	1.286	0.166	0.14	2.30e-05	4.773e+05	76.4	1.60e-03	0.0	0.0	0.0
4	1.134	0.882	0.242	1.128e+04	1.8	0.08	1.35e-05	1.36	2.18e-04	0.0	0.0
5	1.271	0.787	0.271	2.20e-03	0.0	2.264e+04	3.6	0.02	2.63e-06	0.0	0.0
6	1.456	0.687	0.311	0.01	1.79e-06	0.0	0.0	2.757e+05	44.1	0.0	0.0
7	1.457	0.686	0.311	0.01	1.70e-06	0.0	0.0	6.246e+04	10.0	0.0	0.0
8	1.457	0.686	0.311	5.51e-04	0.0	5.44e-06	0.0	3.820e+04	6.1	0.0	0.0
9	1.458	0.686	0.311	0.02	2.43e-06	1.16e-05	0.0	1451.08	0.2	0.0	0.0
Risulta				6.229e+05		6.186e+05		3.778e+05			
In percentuale				99.67		98.97		60.45			

CDC	Tipo	Sigla Id	Note
9	Edk	CDC=Ed (dinamico SLO) alfa=0.0 (ecc. +)	
			categoria suolo: D
			fattore di sito S = 1.800
			ordinata spettro (tratto Tb-Tc) = 0.288 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 2.575 sec.
			numero di modi considerati: 9
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	rapp. r/Ls	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
1054.00	2.824e+04	1875.00	1194.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1043.50	7.960e+04	1875.00	1194.00	0.0	-14.93	0.0	0.0	0.0	0.0	0.0
1033.00	6.885e+04	1875.00	1194.00	0.0	-29.85	1875.00	1194.00	1.169	0.0	0.0
1022.50	7.168e+04	1875.00	1194.00	0.0	-44.78	0.0	0.0	0.0	0.0	0.0
1012.00	7.007e+04	1875.00	1194.00	0.0	-59.70	0.0	0.0	0.0	0.0	0.0
1001.50	7.384e+04	1875.00	1194.00	0.0	-74.63	1875.00	1194.00	1.099	0.0	0.0
991.00	6.851e+04	1875.00	1194.00	0.0	-89.55	0.0	0.0	0.0	0.0	0.0
980.50	7.960e+04	1875.00	1194.00	0.0	-104.48	0.0	0.0	0.0	0.0	0.0
970.00	3.289e+04	1875.00	1194.02	0.0	-119.40	1875.00	1194.00	0.998	0.0	0.0
945.00	9519.86	1875.00	1193.95	0.0	-119.40	1875.00	1194.00	0.653	0.0	0.0
920.00	2636.35	1875.00	1194.00	0.0	-119.40	1875.00	1194.00	0.885	0.0	0.0
895.00	2636.35	1875.00	1194.00	0.0	-119.40	1875.00	1194.00	0.885	0.0	0.0
870.00	3.689e+04	1875.00	1194.00	0.0	-119.40	1875.00	1194.00	1.342	0.0	0.0
Risulta	6.250e+05									

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	0.388	2.575	0.052	6.114e+05	97.8	2.23	3.57e-04	4.81e-04	0.0	0.0	0.0
2	0.740	1.351	0.138	111.50	1.78e-02	1.608e+05	25.7	1.99e-04	0.0	0.0	0.0
3	0.794	1.260	0.148	15.58	2.49e-03	4.339e+05	69.4	6.92e-03	1.11e-06	0.0	0.0
4	1.112	0.899	0.208	51.74	8.28e-03	2.446e+04	3.9	0.05	8.17e-06	0.0	0.0
5	1.134	0.882	0.212	1.129e+04	1.8	269.19	4.31e-02	1.31	2.09e-04	0.0	0.0
6	1.456	0.687	0.272	14.46	2.31e-03	1546.68	0.2	565.55	9.05e-02	0.0	0.0
7	1.456	0.687	0.272	0.0	0.0	2.41	3.86e-04	3.649e+05	58.4	0.0	0.0
8	1.457	0.686	0.272	5.68e-04	0.0	0.04	6.18e-06	1.93	3.08e-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
9	1.457	0.686	0.272	4.40e-04	0.0	4.86e-03	0.0	1.134e+04	1.8	0.0	0.0
Risulta				6.229e+05		6.210e+05		3.768e+05			
In percentuale				99.67		99.36		60.30			

CDC	Tipo	Sigla Id	Note
10	Edk	CDC=Ed (dinamico SLO) alfa=0.0 (ecc. -)	
			categoria suolo: D
			fattore di sito S = 1.800
			ordinata spettro (tratto Tb-Tc) = 0.288 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 2.575 sec.
			numero di modi considerati: 9
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	rapp. r/Ls	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
1054.00	2.824e+04	1875.00	1194.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1043.50	7.960e+04	1875.00	1194.00	0.0	14.93	0.0	0.0	0.0	0.0	0.0
1033.00	6.885e+04	1875.00	1194.00	0.0	29.85	1875.00	1194.00	1.169	0.0	0.0
1022.50	7.168e+04	1875.00	1194.00	0.0	44.78	0.0	0.0	0.0	0.0	0.0
1012.00	7.007e+04	1875.00	1194.00	0.0	59.70	0.0	0.0	0.0	0.0	0.0
1001.50	7.384e+04	1875.00	1194.00	0.0	74.63	1875.00	1194.00	1.099	0.0	0.0
991.00	6.851e+04	1875.00	1194.00	0.0	89.55	0.0	0.0	0.0	0.0	0.0
980.50	7.960e+04	1875.00	1194.00	0.0	104.48	0.0	0.0	0.0	0.0	0.0
970.00	3.289e+04	1875.00	1194.02	0.0	119.40	1875.00	1194.00	0.998	0.0	0.0
945.00	9519.86	1875.00	1193.95	0.0	119.40	1875.00	1194.00	0.653	0.0	0.0
920.00	2636.35	1875.00	1194.00	0.0	119.40	1875.00	1194.00	0.885	0.0	0.0
895.00	2636.35	1875.00	1194.00	0.0	119.40	1875.00	1194.00	0.885	0.0	0.0
870.00	3.689e+04	1875.00	1194.00	0.0	119.40	1875.00	1194.00	1.342	0.0	0.0
Risulta	6.250e+05									

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	0.388	2.575	0.052	6.115e+05	97.8	1.70	2.72e-04	5.39e-04	0.0	0.0	0.0
2	0.740	1.351	0.138	87.08	1.39e-02	1.604e+05	25.7	5.36e-04	0.0	0.0	0.0
3	0.794	1.260	0.148	12.52	2.00e-03	4.344e+05	69.5	2.97e-03	0.0	0.0	0.0
4	1.112	0.899	0.208	84.28	1.35e-02	2.438e+04	3.9	1.83e-05	0.0	0.0	0.0
5	1.134	0.882	0.212	1.125e+04	1.8	345.78	5.53e-02	1.37	2.19e-04	0.0	0.0
6	1.456	0.687	0.272	14.61	2.34e-03	1546.98	0.2	552.22	8.84e-02	0.0	0.0
7	1.456	0.687	0.272	2.59e-06	0.0	2.33	3.72e-04	3.649e+05	58.4	0.0	0.0
8	1.457	0.686	0.272	5.20e-04	0.0	0.04	6.89e-06	1.93	3.09e-04	0.0	0.0
9	1.457	0.686	0.272	4.45e-04	0.0	4.26e-03	0.0	1.134e+04	1.8	0.0	0.0
Risulta				6.229e+05		6.210e+05		3.768e+05			
In percentuale				99.67		99.36		60.29			

CDC	Tipo	Sigla Id	Note
11	Edk	CDC=Ed (dinamico SLO) alfa=90.00 (ecc. +)	
			categoria suolo: D
			fattore di sito S = 1.800
			ordinata spettro (tratto Tb-Tc) = 0.288 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 1.190 sec.
			numero di modi considerati: 9

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	rapp. r/Ls	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
1054.00	2.824e+04	1875.00	1194.00	187.50	0.0	0.0	0.0	0.0	0.0	0.0
1043.50	7.960e+04	1875.00	1194.00	187.50	0.0	0.0	0.0	0.0	0.0	0.0
1033.00	6.885e+04	1875.00	1194.00	187.50	0.0	1875.00	1194.00	1.169	0.0	0.0
1022.50	7.168e+04	1875.00	1194.00	187.50	0.0	0.0	0.0	0.0	0.0	0.0
1012.00	7.007e+04	1875.00	1194.00	187.50	0.0	0.0	0.0	0.0	0.0	0.0
1001.50	7.384e+04	1875.00	1194.00	187.50	0.0	1875.00	1194.00	1.099	0.0	0.0
991.00	6.851e+04	1875.00	1194.00	187.50	0.0	0.0	0.0	0.0	0.0	0.0
980.50	7.960e+04	1875.00	1194.00	187.50	0.0	0.0	0.0	0.0	0.0	0.0
970.00	3.289e+04	1875.00	1194.02	187.50	0.0	1875.00	1194.00	0.998	0.0	0.0
945.00	9519.86	1875.00	1193.95	187.50	0.0	1875.00	1194.00	0.653	0.0	0.0
920.00	2636.35	1875.00	1194.00	112.50	0.0	1875.00	1194.00	0.885	0.0	0.0
895.00	2636.35	1875.00	1194.00	112.50	0.0	1875.00	1194.00	0.885	0.0	0.0
870.00	3.689e+04	1875.00	1194.00	187.50	0.0	1875.00	1194.00	1.342	0.0	0.0
Risulta	6.250e+05									

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	0.389	2.572	0.052	6.117e+05	97.9	0.02	3.30e-06	5.14e-04	0.0	0.0	0.0
2	0.713	1.403	0.133	0.35	5.56e-05	2.771e+05	44.3	2.94e-04	0.0	0.0	0.0
3	0.840	1.190	0.157	0.08	1.34e-05	3.202e+05	51.2	5.08e-03	0.0	0.0	0.0
4	0.999	1.001	0.187	0.15	2.42e-05	2.043e+04	3.3	0.01	1.98e-06	0.0	0.0
5	1.134	0.882	0.212	1.128e+04	1.8	0.04	6.66e-06	1.36	2.17e-04	0.0	0.0
6	1.456	0.687	0.272	0.02	3.80e-06	2.37e-06	0.0	2.532e+05	40.5	0.0	0.0
7	1.457	0.686	0.272	9.22e-04	0.0	0.0	0.0	9.217e+04	14.7	0.0	0.0
8	1.457	0.686	0.272	6.43e-03	1.03e-06	3.33e-06	0.0	2.121e+04	3.4	0.0	0.0
9	1.458	0.686	0.272	6.52e-03	1.04e-06	0.0	0.0	1.123e+04	1.8	0.0	0.0
Risulta				6.229e+05		6.178e+05		3.778e+05			
In percentuale				99.67		98.85		60.45			

CDC	Tipo	Sigla Id	Note
12	Edk	CDC=Ed (dinamico SLO) alfa=90.00 (ecc. -)	
			categoria suolo: D
			fattore di sito S = 1.800
			ordinata spettro (tratto Tb-Tc) = 0.288 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 1.286 sec.
			numero di modi considerati: 9
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	rapp. r/Ls	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
1054.00	2.824e+04	1875.00	1194.00	-187.50	0.0	0.0	0.0	0.0	0.0	0.0
1043.50	7.960e+04	1875.00	1194.00	-187.50	0.0	0.0	0.0	0.0	0.0	0.0
1033.00	6.885e+04	1875.00	1194.00	-187.50	0.0	1875.00	1194.00	1.169	0.0	0.0
1022.50	7.168e+04	1875.00	1194.00	-187.50	0.0	0.0	0.0	0.0	0.0	0.0
1012.00	7.007e+04	1875.00	1194.00	-187.50	0.0	0.0	0.0	0.0	0.0	0.0
1001.50	7.384e+04	1875.00	1194.00	-187.50	0.0	1875.00	1194.00	1.099	0.0	0.0
991.00	6.851e+04	1875.00	1194.00	-187.50	0.0	0.0	0.0	0.0	0.0	0.0
980.50	7.960e+04	1875.00	1194.00	-187.50	0.0	0.0	0.0	0.0	0.0	0.0
970.00	3.289e+04	1875.00	1194.02	-187.50	0.0	1875.00	1194.00	0.998	0.0	0.0
945.00	9519.86	1875.00	1193.95	-187.50	0.0	1875.00	1194.00	0.653	0.0	0.0
920.00	2636.35	1875.00	1194.00	-112.50	0.0	1875.00	1194.00	0.885	0.0	0.0
895.00	2636.35	1875.00	1194.00	-112.50	0.0	1875.00	1194.00	0.885	0.0	0.0
870.00	3.689e+04	1875.00	1194.00	-187.50	0.0	1875.00	1194.00	1.342	0.0	0.0
Risulta	6.250e+05									

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	0.389	2.572	0.052	6.117e+05	97.9	2.27e-03	0.0	5.16e-04	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
2	0.741	1.349	0.139	0.29	4.63e-05	1.186e+05	19.0	2.68e-03	0.0	0.0	0.0
3	0.778	1.286	0.145	0.14	2.30e-05	4.773e+05	76.4	1.60e-03	0.0	0.0	0.0
4	1.134	0.882	0.212	1.128e+04	1.8	0.08	1.35e-05	1.36	2.18e-04	0.0	0.0
5	1.271	0.787	0.238	2.20e-03	0.0	2.264e+04	3.6	0.02	2.63e-06	0.0	0.0
6	1.456	0.687	0.272	0.01	1.79e-06	0.0	0.0	2.757e+05	44.1	0.0	0.0
7	1.457	0.686	0.272	0.01	1.70e-06	0.0	0.0	6.246e+04	10.0	0.0	0.0
8	1.457	0.686	0.272	5.51e-04	0.0	5.44e-06	0.0	3.820e+04	6.1	0.0	0.0
9	1.458	0.686	0.272	0.02	2.43e-06	1.16e-05	0.0	1451.08	0.2	0.0	0.0
Risulta				6.229e+05		6.186e+05		3.778e+05			
In percentuale				99.67		98.97		60.45			

## 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**

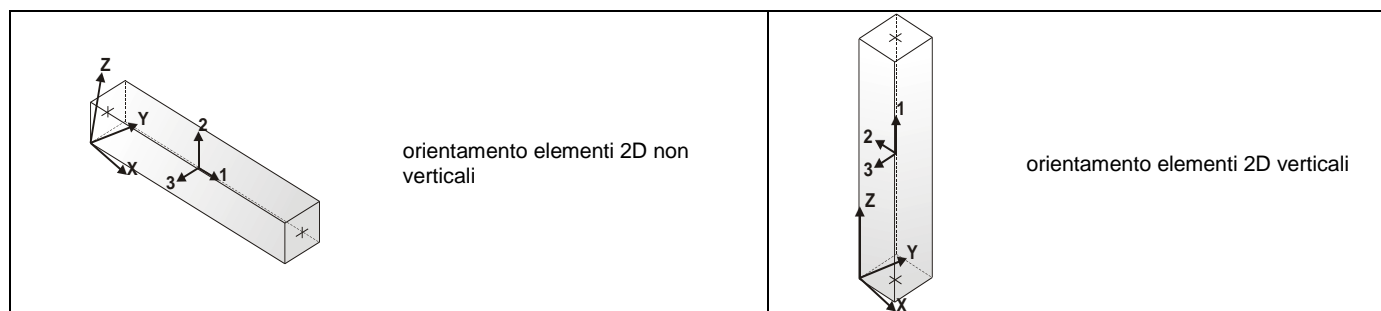
Per ogni elemento e per ogni combinazione (o caso di carico) vengono riportati i risultati più significativi.

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
	daN cm	daN cm	cm	daN	cm	daN	daN	daN	daN cm	daN cm	daN cm
29	1 -4.407e+05	-1.656e+05	-7.21	0.0	0.0	-1.116e+04	2201.97	337.07	7.223e+04	-4.658e+05	-2.358e+06
	-2.358e+06	-4.658e+05	-1.54	0.0	870.0	-7387.32	2201.97	337.07	7.223e+04	-1.656e+05	-4.407e+05
29	2 -5.258e+05	9.348e+05	-9.23	0.0	0.0	-1.114e+04	2899.06	-1594.11	5.627e+04	9.348e+05	-3.041e+06
	-3.041e+06	-4.451e+05	1.98	0.0	870.0	-7365.37	2899.06	-1594.11	5.627e+04	-4.451e+05	-5.258e+05
29	3 3.048e+06	-1.885e+05	9.22	0.0	0.0	-1.098e+04	-2931.55	524.78	-5.980e+04	-6.381e+05	3.048e+06
	5.047e+05	-6.381e+05	-2.04	0.0	870.0	-7208.14	-2931.55	524.78	-5.980e+04	-1.885e+05	5.047e+05
29	4 2.366e+06	7.625e+05	7.20	0.0	0.0	-1.096e+04	-2234.46	-1406.41	-7.576e+04	7.625e+05	2.366e+06
	4.196e+05	-4.680e+05	1.49	0.0	870.0	-7186.19	-2234.46	-1406.41	-7.576e+04	-4.680e+05	4.196e+05
29	5 -4.490e+05	-1.603e+05	-8.63	0.0	0.0	-1.119e+04	2688.62	342.30	5.793e+04	-4.650e+05	-2.836e+06
	-2.836e+06	-4.650e+05	-1.53	0.0	870.0	-7413.30	2688.62	342.30	5.793e+04	-1.603e+05	-4.490e+05
29	6 -5.176e+05	9.341e+05	-7.81	0.0	0.0	-1.112e+04	2412.41	-1599.34	7.057e+04	9.341e+05	-2.563e+06
	-2.563e+06	-4.505e+05	1.97	0.0	870.0	-7339.38	2412.41	-1599.34	7.057e+04	-4.505e+05	-5.176e+05
29	7 2.570e+06	-1.832e+05	7.80	0.0	0.0	-1.101e+04	-2444.90	530.01	-7.410e+04	-6.374e+05	2.570e+06
	4.965e+05	-6.374e+05	-2.03	0.0	870.0	-7234.13	-2444.90	530.01	-7.410e+04	-1.832e+05	4.965e+05
29	8 2.844e+06	7.617e+05	8.62	0.0	0.0	-1.094e+04	-2721.11	-1411.64	-6.146e+04	7.617e+05	2.844e+06
	4.278e+05	-4.733e+05	1.48	0.0	870.0	-7160.20	-2721.11	-1411.64	-6.146e+04	-4.733e+05	4.278e+05
29	9 -4.628e+05	-1.356e+05	-7.66	0.0	0.0	-1.115e+04	2349.18	593.78	7.897e+04	-6.526e+05	-2.508e+06
	-2.508e+06	-6.526e+05	-2.01	0.0	870.0	-7372.52	2349.18	593.78	7.897e+04	-1.356e+05	-4.628e+05
29	10 -5.479e+05	7.480e+05	-9.68	0.0	0.0	-1.113e+04	3046.27	-1337.41	6.301e+04	7.480e+05	-3.191e+06
	-3.191e+06	-4.152e+05	1.51	0.0	870.0	-7350.57	3046.27	-1337.41	6.301e+04	-4.152e+05	-5.479e+05
29	11 3.198e+06	-2.185e+05	9.67	0.0	0.0	-1.100e+04	-3078.76	268.08	-6.654e+04	-4.513e+05	3.198e+06
	5.267e+05	-4.513e+05	-1.57	0.0	870.0	-7222.94	-3078.76	268.08	-6.654e+04	-2.185e+05	5.267e+05
29	12 2.516e+06	9.492e+05	7.65	0.0	0.0	-1.098e+04	-2381.67	-1663.11	-8.250e+04	9.492e+05	2.516e+06
	4.416e+05	-4.980e+05	1.96	0.0	870.0	-7200.98	-2381.67	-1663.11	-8.250e+04	-4.980e+05	4.416e+05
29	13 -4.710e+05	-1.303e+05	-9.08	0.0	0.0	-1.117e+04	2835.83	599.00	6.467e+04	-6.518e+05	-2.986e+06
	-2.986e+06	-6.518e+05	-2.01	0.0	870.0	-7398.51	2835.83	599.00	6.467e+04	-1.303e+05	-4.710e+05
29	14 -5.397e+05	7.473e+05	-8.26	0.0	0.0	-1.110e+04	2559.61	-1342.64	7.731e+04	7.473e+05	-2.713e+06
	-2.713e+06	-4.205e+05	1.50	0.0	870.0	-7324.58	2559.61	-1342.64	7.731e+04	-4.205e+05	-5.397e+05
29	15 2.720e+06	-2.132e+05	8.25	0.0	0.0	-1.102e+04	-2592.11	273.30	-8.084e+04	-4.506e+05	2.720e+06
	5.185e+05	-4.506e+05	-1.56	0.0	870.0	-7248.92	-2592.11	273.30	-8.084e+04	-2.132e+05	5.185e+05
29	16 2.994e+06	9.485e+05	9.07	0.0	0.0	-1.095e+04	-2868.32	-1668.34	-6.820e+04	9.485e+05	2.994e+06
	4.499e+05	-5.033e+05	1.95	0.0	870.0	-7175.00	-2868.32	-1668.34	-6.820e+04	-5.033e+05	4.499e+05
29	17 3.305e+05	1.525e+05	0.89	0.0	0.0	-1.113e+04	-408.03	2655.82	4.465e+04	-2.160e+06	3.305e+05
	-1.056e+06	-2.160e+06	-5.83	0.0	870.0	-7350.22	-408.03	2655.82	4.465e+04	1.525e+05	-1.056e+06
29	18 -2.942e+05	2.509e+06	-5.83	0.0	0.0	-1.105e+04	1915.60	-3781.47	-8566.42	2.509e+06	-1.945e+06
	-1.945e+06	-7.793e+05	5.92	0.0	870.0	-7277.04	1915.60	-3781.47	-8566.42	-7.793e+05	-2.942e+05
29	19 1.953e+06	1.457e+05	5.82	0.0	0.0	-1.107e+04	-1948.09	2712.14	5039.21	-2.212e+06	1.953e+06
	2.731e+05	-2.212e+06	-5.98	0.0	870.0	-7296.46	-1948.09	2712.14	5039.21	1.457e+05	2.731e+05
29	20 -1.057e+04	2.457e+06	-0.90	0.0	0.0	-1.100e+04	375.54	-3725.16	-4.818e+04	2.457e+06	-3.234e+05
	-3.234e+05	-7.862e+05	5.77	0.0	870.0	-7223.29	375.54	-3725.16	-4.818e+04	-7.862e+05	-1.057e+04
29	21 2.855e+05	1.615e+05	0.76	0.0	0.0	-1.112e+04	-363.87	2732.83	4.667e+04	-2.216e+06	2.855e+05
	-1.716e+06	-2.216e+06	-5.97	0.0	870.0	-7345.78	-363.87	2732.83	4.667e+04	1.615e+05	-1.716e+06
29	22 -3.008e+05	2.452e+06	-5.97	0.0	0.0	-1.105e+04	1959.76	-3704.46	-6544.54	2.452e+06	-1.990e+06
	-1.990e+06	-7.703e+05	5.78	0.0	870.0	-7272.60	1959.76	-3704.46	-6544.54	-7.703e+05	-3.008e+05
29	23 1.998e+06	1.367e+05	5.96	0.0	0.0	-1.108e+04	-1992.25	2635.12	3017.33	-2.156e+06	1.998e+06
	2.797e+05	-2.156e+06	-5.84	0.0	870.0	-7300.90	-1992.25	2635.12	3017.33	1.367e+05	2.797e+05
29	24 -3964.11	2.513e+06	-0.77	0.0	0.0	-1.100e+04	331.38	-3802.17	-5.020e+04	2.513e+06	-2.784e+05
	-2.784e+05	-7.952e+05	5.91	0.0	870.0	-7227.73	331.38	-3802.17	-5.020e+04	-7.952e+05	-3964.11
29	25 -3.792e+04	1.702e+05	-3.84	0.0	0.0	-1.121e+04	1214.14	2673.25	-3026.32	-2.158e+06	-1.263e+06
	-1.263e+06	-2.158e+06	-5.80	0.0	870.0	-7436.83	1214.14	2673.25	-3026.32	1.702e+05	-3.792e+04
29	26 -2.668e+05	2.506e+06	-1.10	0.0	0.0	-1.097e+04	293.43	-3798.89	3.911e+04	2.506e+06	-3.518e+05
	-3.518e+05	-7.970e+05	5.89	0.0	870.0	-7190.43	293.43	-3798.89	3.911e+04	-7.970e+05	-2.668e+05
29	27 3.590e+05	1.634e+05	1.09	0.0	0.0	-1.116e+04	-325.92	2729.56	-4.264e+04	-2.209e+06	3.590e+05
	2.457e+05	-2.209e+06	-5.95	0.0	870.0	-7383.08	-325.92	2729.56	-4.264e+04	1.634e+05	2.457e+05
29	28 1.270e+06	2.454e+06	3.83	0.0	0.0	-1.091e+04	-1246.63	-3742.58	-500.89	2.454e+06	1.270e+06
	1.679e+04	-8.039e+05	5.74	0.0	870.0	-7136.67	-1246.63	-3742.58	-500.89	-8.039e+05	1.679e+04
29	29 -4.452e+04	1.792e+05	-3.98	0.0	0.0	-1.121e+04	1258.30	2750.26	-1004.44	-2.214e+06	-1.308e+06
	-1.308e+06	-2.214e+06	-5.94	0.0	870.0	-7432.39	1258.30	2750.26	-1004.44	1.792e+05	-4.452e+04
29	30 -2.735e+05	2.450e+06	-1.23	0.0	0.0	-1.096e+04	337.59	-3721.88	4.113e+04	2.450e+06	-3.968e+05
	-3.968e+05	-7.880e+05	5.75	0.0	870.0	-7185.99	337.59	-3721.88	4.113e+04	-7.880e+05	-2.735e+05
29	31 4.040e+05	1.544e+05	1.22	0.0	0.0	-1.116e+04	-370.08	2652.55	-4.466e+04	-2.153e+06	4.040e+05
	2.523e+05	-2.153e+06	-5.80	0.0	870.0	-7387.52	-370.08	2652.55	-4.466e+04	1.544e+05	2.523e+05
29	32 1.315e+06	2.510e+06	3.97	0.0	0.0	-1.092e+04	-1290.79	-3819.59	-2522.76	2.510e+06	1.315e+06
	2.340e+04	-8.129e+05	5.88	0.0	870.0	-7141.11	-1290.79	-3819.59	-2522.76	8.129e+05	2.340e+04
29	33 -2.973e+05	-1.855e+05	-4.76	0.0	0.0	-1.113e+04	1444.72	241.94	5.055e+04	-4.032e+05	-1.555e+06
	-1.555e+06	-4.032e+05	-1.40	0.0	870.0	-7357.79	1444.72	241.94	5.055e+04	-1.855e+05	-2.973e+05
29	34 -3.719e+05	8.244e+05	-6.53	0.0	0.0	-1.111e+04	2055.84	-1450.76	3.656e+04	8.244e+05	-2.154e+06
	-2.154e+06	-4.306e+05	1.69	0.0	870.0	-7338.55	2055.84	-1450.76	3.656e+04	-4.306e+05	-3.719e+05
29	35 2.161e+06	-2.031e+05	6.52	0.0	0.0	-1.101e+04	-2088.33	381.43	-4.009e+04	-5.277e+05	2.161e+06
	3.507e+05	-5.277e+05	-1.75	0.0	870.0	-7234.96	-2088.33	381.43	-4.009e+04	-2.031e+05	3.507e+05
29	36 1.562e+06	6.999e+05	4.76	0.0	0.0	-1.099e+04	-1477.22	-1311.27	-5.408e+04	6.999e+05	1.562e+06
	2.761e+05	-4.481e+05	1.34	0.0	870.0	-7215.71	-1477.22	-1311.27	-5.408e+04	-4.481e+05	2.761e+05
29	37 -3.045e+05	-1.809e+05	-6.01	0.0	0.0	-1.116e+04	1871.32	246.42	3.802e+04	-4.025e+05	-1.974e+06

	-1.974e+06-4.025e+05	-1.39	0.0	870.0	-7380.57	1871.32	246.42	3.802e+04-1.809e+05-3.045e+05
29	38-3.647e+05 8.237e+05	-5.29	0.0	0.0	-1.109e+04	1629.24	-1455.25	4.910e+04 8.237e+05-1.735e+06
	-1.735e+06-4.352e+05	1.69	0.0	870.0	-7315.78	1629.24	-1455.25	4.910e+04-4.352e+05-3.647e+05
29	39 1.742e+06-1.984e+05	5.28	0.0	0.0	-1.103e+04	-1661.73	385.92	-5.262e+04-5.270e+05 1.742e+06
	3.435e+05-5.270e+05	-1.74	0.0	870.0	-7257.73	-1661.73	385.92	-5.262e+04-1.984e+05 3.435e+05
29	40 1.981e+06 6.992e+05	6.00	0.0	0.0	-1.097e+04	-1903.82	-1315.76	-4.154e+04 6.992e+05 1.981e+06
	2.834e+05-4.527e+05	1.33	0.0	870.0	-7192.94	-1903.82	-1315.76	-4.154e+04-4.527e+05 2.834e+05
29	41-3.123e+05-1.656e+05	-5.07	0.0	0.0	-1.112e+04	1544.32	426.31	5.514e+04-5.368e+05-1.657e+06
	-1.657e+06-5.368e+05	-1.73	0.0	870.0	-7347.82	1544.32	426.31	5.514e+04-1.656e+05-3.123e+05
29	42-3.869e+05 6.908e+05	-6.84	0.0	0.0	-1.110e+04	2155.44	-1266.39	4.115e+04 6.908e+05-2.255e+06
	-2.255e+06-4.106e+05	1.36	0.0	870.0	-7328.58	2155.44	-1266.39	4.115e+04-4.106e+05-3.869e+05
29	43 2.263e+06-2.230e+05	6.83	0.0	0.0	-1.102e+04	-2187.93	197.06	-4.467e+04-3.941e+05 2.263e+06
	3.658e+05-3.941e+05	-1.41	0.0	870.0	-7244.93	-2187.93	197.06	-4.467e+04-2.230e+05 3.658e+05
29	44 1.664e+06 8.335e+05	5.06	0.0	0.0	-1.100e+04	-1576.81	-1495.64	-5.867e+04 8.335e+05 1.664e+06
	2.912e+05-4.681e+05	1.68	0.0	870.0	-7225.69	-1576.81	-1495.64	-5.867e+04-4.681e+05 2.912e+05
29	45-3.195e+05-1.609e+05	-6.32	0.0	0.0	-1.115e+04	1970.92	430.79	4.260e+04-5.361e+05-2.076e+06
	-2.076e+06-5.361e+05	-1.72	0.0	870.0	-7370.59	1970.92	430.79	4.260e+04-1.609e+05-3.195e+05
29	46-3.797e+05 6.900e+05	-5.59	0.0	0.0	-1.108e+04	1728.84	-1270.88	5.368e+04 6.900e+05-1.836e+06
	-1.836e+06-4.152e+05	1.35	0.0	870.0	-7305.81	1728.84	-1270.88	5.368e+04-4.152e+05-3.797e+05
29	47 1.844e+06-2.184e+05	5.58	0.0	0.0	-1.104e+04	-1761.33	201.55	-5.721e+04-3.934e+05 1.844e+06
	3.586e+05-3.934e+05	-1.40	0.0	870.0	-7267.70	-1761.33	201.55	-5.721e+04-2.184e+05 3.586e+05
29	48 2.083e+06 8.328e+05	6.31	0.0	0.0	-1.098e+04	-2003.41	-1500.13	-4.613e+04 8.328e+05 2.083e+06
	2.984e+05-4.727e+05	1.67	0.0	870.0	-7202.91	-2003.41	-1500.13	-4.613e+04-4.727e+05 2.984e+05
29	49 4.438e+05 9.420e+04	1.25	0.0	0.0	-1.111e+04	-504.81	2265.58	3.515e+04-1.879e+06 4.438e+05
	1.658e+04-1.879e+06	-5.12	0.0	870.0	-7337.25	-504.81	2265.58	3.515e+04 9.420e+04 1.658e+04
29	50-2.321e+05 2.213e+06	-4.65	0.0	0.0	-1.105e+04	1532.24	-3376.76	-1.149e+04 2.213e+06-1.551e+06
	-1.551e+06-7.226e+05	5.17	0.0	870.0	-7273.11	1532.24	-3376.76	-1.149e+04-7.226e+05-2.321e+05
29	51 1.559e+06 8.894e+04	4.64	0.0	0.0	-1.108e+04	-1564.73	2307.43	7963.26-1.916e+06 1.559e+06
	2.110e+05-1.916e+06	-5.23	0.0	870.0	-7300.40	-1564.73	2307.43	7963.26 8.894e+04 2.110e+05
29	52-3.771e+04 2.176e+06	-1.26	0.0	0.0	-1.101e+04	472.32	-3334.91	-3.868e+04 2.176e+06-4.366e+05
	-4.366e+05-7.278e+05	5.07	0.0	870.0	-7236.26	472.32	-3334.91	-3.868e+04-7.278e+05-3.771e+04
29	53 4.133e+05 1.002e+05	1.16	0.0	0.0	-1.111e+04	-474.94	2320.89	3.653e+04-1.919e+06 4.133e+05
	1.206e+04-1.919e+06	-5.23	0.0	870.0	-7334.26	-474.94	2320.89	3.653e+04 1.002e+05 1.206e+04
29	54-2.366e+05 2.173e+06	-4.74	0.0	0.0	-1.105e+04	1562.12	-3321.45	-1.011e+04 2.173e+06-1.582e+06
	-1.582e+06-7.166e+05	5.07	0.0	870.0	-7270.12	1562.12	-3321.45	-1.011e+04-7.166e+05-2.366e+05
29	55 1.589e+06 8.296e+04	4.73	0.0	0.0	-1.108e+04	-1594.61	2252.11	6586.61-1.876e+06 1.589e+06
	2.155e+05-1.876e+06	-5.13	0.0	870.0	-7303.39	-1594.61	2252.11	6586.61 8.296e+04 2.155e+05
29	56-3.319e+04 2.216e+06	-1.17	0.0	0.0	-1.102e+04	442.44	-3390.22	-4.006e+04 2.216e+06-4.061e+05
	-4.061e+05-7.338e+05	5.17	0.0	870.0	-7239.25	442.44	-3390.22	-4.006e+04-7.338e+05-3.319e+04
29	57 -7454.30 1.097e+05	-2.90	0.0	0.0	-1.119e+04	917.18	2280.53	-6633.81-1.877e+06-9.532e+05
	-9.532e+05-1.877e+06	-5.10	0.0	870.0	-7413.16	917.18	2280.53	-6633.81 1.097e+05 -7454.30
29	58-1.546e+05 2.211e+06	-0.50	0.0	0.0	-1.097e+04	110.24	-3391.71	3.030e+04 2.211e+06-1.546e+05
	-2.081e+05-7.380e+05	5.15	0.0	870.0	-7197.20	110.24	-3391.71	3.030e+04-7.380e+05-2.081e+05
29	59 1.870e+05 1.044e+05	0.49	0.0	0.0	-1.115e+04	-142.73	2322.38	-3.383e+04-1.914e+06 1.870e+05
	1.617e+05-1.914e+06	-5.20	0.0	870.0	-7376.31	-142.73	2322.38	-3.383e+04 1.044e+05 1.617e+05
29	60 9.603e+05 2.173e+06	2.89	0.0	0.0	-1.094e+04	-949.68	-3349.87	3106.61 2.173e+06 9.603e+05
	-1.367e+04-7.433e+05	5.04	0.0	870.0	-7160.35	-949.68	-3349.87	3106.61-7.433e+05-1.367e+04
29	61-1.198e+04 1.156e+05	-2.99	0.0	0.0	-1.119e+04	947.06	2335.84	-5257.16-1.917e+06-9.837e+05
	-9.837e+05-1.917e+06	-5.20	0.0	870.0	-7410.16	947.06	2335.84	-5257.16 1.156e+05-1.198e+04
29	62-1.851e+05 2.171e+06	-0.59	0.0	0.0	-1.097e+04	140.12	-3336.40	3.167e+04 2.171e+06-1.851e+05
	-2.126e+05-7.320e+05	5.04	0.0	870.0	-7194.21	140.12	-3336.40	3.167e+04-7.320e+05-2.126e+05
29	63 1.922e+05 9.841e+04	0.58	0.0	0.0	-1.116e+04	-172.61	2267.07	-3.520e+04-1.874e+06 1.922e+05
	1.915e+05-1.874e+06	-5.10	0.0	870.0	-7379.30	-172.61	2267.07	-3.520e+04 9.841e+04 1.915e+05
29	64 9.908e+05 2.213e+06	2.98	0.0	0.0	-1.094e+04	-979.56	-3405.18	1729.95 2.213e+06 9.908e+05
	-9151.99-7.493e+05	5.14	0.0	870.0	-7163.34	-979.56	-3405.18	1729.95-7.493e+05-9151.99
29	65 3239.66 1.344e+05	-4.33e-03	0.0	0.0	-1.045e+04	-14.73	-484.32	-1599.23 1.344e+05 3239.66
	-9577.94-2.870e+05	0.08	0.0	870.0	-6678.19	-14.73	-484.32	-1599.23-2.870e+05-9577.94
29	66 3570.39 1.483e+05	-4.78e-03	0.0	0.0	-1.106e+04	-16.25	-534.67	-1763.60 1.483e+05 3570.39
	-1.056e+04-3.168e+05	0.08	0.0	870.0	-7286.75	-16.25	-534.67	-1763.60-3.168e+05-1.056e+04
39	1 6.084e+06-1.744e+05	4.39	0.0	0.0	-6.371e+04-1.827e+04	2291.17	-3.928e+04-2.167e+06 6.084e+06	
	-9.807e+06-2.167e+06	-7.18	0.0	870.0	-5.993e+04-1.827e+04	2291.17	-3.928e+04-1.744e+05-9.807e+06	
39	2 3.727e+06-2.519e+05	1.86	0.0	0.0	-6.185e+04-1.345e+04	2893.56	-1.109e+05-2.767e+06 3.727e+06	
	-7.974e+06-2.767e+06	-9.21	0.0	870.0	-5.808e+04-1.345e+04	2893.56	-1.109e+05-2.519e+05-7.974e+06	
39	3 6.298e+06 2.765e+06	4.64	0.0	0.0	-6.388e+04-1.870e+04	-2888.47	1.056e+05 2.765e+06 6.298e+06	
	-9.973e+06 2.543e+05	9.20	0.0	870.0	-6.010e+04-1.870e+04	-2888.47	1.056e+05 2.543e+05-9.973e+06	
39	4 3.941e+06 2.165e+06	2.06	0.0	0.0	-6.202e+04-1.389e+04	-2286.08	3.402e+04 2.165e+06 3.941e+06	
	-8.140e+06 1.768e+05	7.17	0.0	870.0	-5.825e+04-1.389e+04	-2286.08	3.402e+04 1.768e+05-8.140e+06	
39	5 6.246e+06-1.955e+05	4.58	0.0	0.0	-6.388e+04-1.860e+04	2715.66	-5.491e+04-2.589e+06 6.246e+06	
	-9.934e+06-2.589e+06	-8.60	0.0	870.0	-6.011e+04-1.860e+04	2715.66	-5.491e+04-1.955e+05-9.934e+06	
39	6 3.565e+06-2.307e+05	1.71	0.0	0.0	-6.168e+04-1.312e+04	2469.06	-9.525e+04-2.345e+06 3.565e+06	
	-7.847e+06-2.345e+06	-7.78	0.0	870.0	-5.790e+04-1.312e+04	2469.06	-9.525e+04-2.307e+05-7.847e+06	
39	7 6.460e+06 2.343e+06	4.82	0.0	0.0	-6.405e+04-1.903e+04	-2463.97	8.999e+04 2.343e+06 6.460e+06	
	-1.010e+07 2.331e+05	7.78	0.0	870.0	-6.028e+04-1.903e+04	-2463.97	8.999e+04 2.331e+05-1.010e+07	
39	8 3.779e+06 2.587e+06	1.91	0.0	0.0	-6.185e+04-1.355e+04	-2710.57	4.964e+04 2.587e+06 3.779e+06	
	-8.013e+06 1.980e+05	8.60	0.0	870.0	-5.807e+04-1.355e+04	-2710.57	4.964e+04 1.980e+05-8.013e+06	
39	9 6.292e+06-1.981e+05	4.63	0.0	0.0	-6.387e+04-1.869e+04	2414.32	-6.257e+04-2.298e+06 6.292e+06	
	-9.970e+06-2.298e+06	-7.63	0.0	870.0	-6.010e+04-1.869e+04	2414.32	-6.257e+04-1.981e+05-9.970e+06	

39	10	3.934e+06-2.756e+05	2.05	0.0	0.0-6.202e+04-1.387e+04	3016.71-1.342e+05-2.898e+06	3.934e+06
		-8.136e+06-2.898e+06	-9.66	0.0	870.0-5.824e+04-1.387e+04	3016.71-1.342e+05-2.756e+05-8.136e+06	
39	11	6.090e+06 2.896e+06	4.40	0.0	0.0-6.371e+04-1.828e+04	-3011.62 1.289e+05 2.896e+06 6.090e+06	
		-9.811e+06 2.780e+05	9.66	0.0	870.0-5.994e+04-1.828e+04	-3011.62 1.289e+05 2.780e+05-9.811e+06	
39	12	3.733e+06 2.296e+06	1.87	0.0	0.0-6.186e+04-1.346e+04	-2409.23 5.730e+04 2.296e+06 3.733e+06	
		-7.977e+06 2.005e+05	7.63	0.0	870.0-5.808e+04-1.346e+04	-2409.23 5.730e+04 2.005e+05-7.977e+06	
39	13	6.454e+06-2.192e+05	4.81	0.0	0.0-6.405e+04-1.902e+04	2838.81-7.820e+04-2.720e+06 6.454e+06	
		-1.010e+07-2.720e+06	-9.06	0.0	870.0-6.027e+04-1.902e+04	2838.81-7.820e+04-2.192e+05-1.010e+07	
39	14	3.773e+06-2.544e+05	1.90	0.0	0.0-6.184e+04-1.354e+04	2592.21-1.185e+05-2.476e+06 3.773e+06	
		-8.009e+06-2.476e+06	-8.23	0.0	870.0-5.807e+04-1.354e+04	2592.21-1.185e+05-2.544e+05-8.009e+06	
39	15	6.252e+06 2.474e+06	4.58	0.0	0.0-6.389e+04-1.861e+04	-2587.12 1.133e+05 2.474e+06 6.252e+06	
		-9.938e+06 2.568e+05	8.23	0.0	870.0-6.011e+04-1.861e+04	-2587.12 1.133e+05 2.568e+05-9.938e+06	
39	16	3.571e+06 2.718e+06	1.72	0.0	0.0-6.168e+04-1.313e+04	-2833.72 7.293e+04 2.718e+06 3.571e+06	
		-7.850e+06 2.217e+05	9.05	0.0	870.0-5.790e+04-1.313e+04	-2833.72 7.293e+04 2.217e+05-7.850e+06	
39	17	8.910e+06 2.592e+05	7.95	0.0	0.0-6.593e+04-2.404e+04	-224.49 9.496e+04 2.592e+05 8.910e+06	
		-1.200e+07 6.610e+04	0.93	0.0	870.0-6.215e+04-2.404e+04	-224.49 9.496e+04 6.610e+04-1.200e+07	
39	18	1.051e+06-1.923e+05	-4.67	0.0	0.0-5.975e+04 -7981.57	1783.47-1.437e+05-1.741e+06 1.051e+06	
		-5.893e+06-1.741e+06	-5.84	0.0	870.0-5.597e+04 -7981.57	1783.47-1.437e+05-1.923e+05-5.893e+06	
39	19	8.974e+06 1.739e+06	8.04	0.0	0.0-6.598e+04-2.417e+04	-1778.38 1.384e+05 1.739e+06 8.974e+06	
		-1.205e+07 1.947e+05	5.84	0.0	870.0-6.220e+04-2.417e+04	-1778.38 1.384e+05 1.947e+05-1.205e+07	
39	20	1.115e+06-6.368e+04	-4.57	0.0	0.0-5.980e+04 -8112.60	229.58-1.002e+05-2.612e+05 1.115e+06	
		-5.943e+06-2.612e+05	-0.93	0.0	870.0-5.602e+04 -8112.60	229.58-1.002e+05-6.368e+04-5.943e+06	
39	21	8.972e+06 2.200e+05	8.03	0.0	0.0-6.598e+04-2.417e+04	-187.55 8.797e+04 2.200e+05 8.972e+06	
		-1.205e+07 5.899e+04	0.79	0.0	870.0-6.220e+04-2.417e+04	-187.55 8.797e+04 5.899e+04-1.205e+07	
39	22	1.113e+06-1.994e+05	-4.58	0.0	0.0-5.980e+04 -8109.29	1820.42-1.507e+05-1.780e+06 1.113e+06	
		-5.942e+06-1.780e+06	-5.98	0.0	870.0-5.602e+04 -8109.29	1820.42-1.507e+05-1.994e+05-5.942e+06	
39	23	8.912e+06 1.778e+06	7.95	0.0	0.0-6.593e+04-2.404e+04	-1815.33 1.454e+05 1.778e+06 8.912e+06	
		-1.201e+07 2.018e+05	5.98	0.0	870.0-6.215e+04-2.404e+04	-1815.33 1.454e+05 2.018e+05-1.201e+07	
39	24	1.053e+06-5.657e+04	-4.67	0.0	0.0-5.975e+04 -7984.88	192.64-9.324e+04-2.220e+05 1.053e+06	
		-5.894e+06-2.220e+05	-0.79	0.0	870.0-5.598e+04 -7984.88	192.64-9.324e+04-5.657e+04-5.894e+06	
39	25	9.449e+06 -4471.10	8.68	0.0	0.0-6.652e+04-2.515e+04	1190.49 4.287e+04-1.147e+06 9.449e+06	
		-1.243e+07-1.147e+06	-3.83	0.0	870.0-6.274e+04-2.515e+04	1190.49 4.287e+04 -4471.10-1.243e+07	
39	26	5.111e+05-1.217e+05	-5.48	0.0	0.0-5.916e+04 -6874.44	368.49-9.161e+04-3.347e+05 5.111e+05	
		-5.470e+06-3.347e+05	-1.08	0.0	870.0-5.538e+04 -6874.44	368.49-9.161e+04-1.217e+05-5.470e+06	
39	27	9.514e+06 3.327e+05	8.77	0.0	0.0-6.657e+04-2.528e+04	-363.40 8.634e+04 3.327e+05 9.514e+06	
		-1.248e+07 1.241e+05	1.08	0.0	870.0-6.279e+04-2.528e+04	-363.40 8.634e+04 1.241e+05-1.248e+07	
39	28	5.735e+05 1.145e+06	-5.38	0.0	0.0-5.921e+04 -7005.46	-1185.40-4.814e+04 1.145e+06 5.735e+05	
		-5.519e+06 6896.47	3.83	0.0	870.0-5.543e+04 -7005.46	-1185.40-4.814e+04 6896.47-5.519e+06	
39	29	9.512e+06-1.158e+04	8.77	0.0	0.0-6.657e+04-2.527e+04	1227.43 3.589e+04-1.186e+06 9.512e+06	
		-1.248e+07-1.186e+06	-3.97	0.0	870.0-6.279e+04-2.527e+04	1227.43 3.589e+04-1.158e+04-1.248e+07	
39	30	5.735e+05-1.288e+05	-5.38	0.0	0.0-5.921e+04 -7002.15	405.44-9.859e+04-3.739e+05 5.735e+05	
		-5.518e+06-3.739e+05	-1.22	0.0	870.0-5.543e+04 -7002.15	405.44-9.859e+04-1.288e+05-5.518e+06	
39	31	9.451e+06 3.719e+05	8.68	0.0	0.0-6.652e+04-2.515e+04	-400.35 9.333e+04 3.719e+05 9.451e+06	
		-1.243e+07 1.312e+05	1.22	0.0	870.0-6.274e+04-2.515e+04	-400.35 9.333e+04 1.312e+05-1.243e+07	
39	32	5.130e+05 1.184e+06	-5.47	0.0	0.0-5.916e+04 -6877.75	-1222.34-4.115e+04 1.184e+06 5.130e+05	
		-5.471e+06 1.401e+04	3.97	0.0	870.0-5.539e+04 -6877.75	-1222.34-4.115e+04 1.401e+04-5.471e+06	
39	33	5.969e+06-1.117e+05	4.26	0.0	0.0-6.362e+04-1.803e+04	1519.35-2.126e+04-1.433e+06 5.969e+06	
		-9.718e+06-1.433e+06	-4.74	0.0	870.0-5.984e+04-1.803e+04	1519.35-2.126e+04-1.117e+05-9.718e+06	
39	34	3.903e+06-1.797e+05	2.02	0.0	0.0-6.199e+04-1.381e+04	2047.47-8.403e+04-1.959e+06 3.903e+06	
		-8.111e+06-1.959e+06	-6.52	0.0	870.0-5.822e+04-1.381e+04	2047.47-8.403e+04-1.797e+05-8.111e+06	
39	35	6.122e+06 1.957e+06	4.43	0.0	0.0-6.374e+04-1.834e+04	-2042.38 7.876e+04 1.957e+06 6.122e+06	
		-9.836e+06 1.821e+05	6.52	0.0	870.0-5.996e+04-1.834e+04	-2042.38 7.876e+04 1.821e+05-9.836e+06	
39	36	4.056e+06 1.431e+06	2.16	0.0	0.0-6.211e+04-1.412e+04	-1514.26 1.600e+04 1.431e+06 4.056e+06	
		-8.229e+06 1.142e+05	4.74	0.0	870.0-5.834e+04-1.412e+04	-1514.26 1.600e+04 1.142e+05-8.229e+06	
39	37	6.111e+06-1.303e+05	4.42	0.0	0.0-6.377e+04-1.832e+04	1891.47-3.497e+04-1.803e+06 6.111e+06	
		-9.829e+06-1.803e+06	-5.99	0.0	870.0-6.000e+04-1.832e+04	1891.47-3.497e+04-1.303e+05-9.829e+06	
39	38	3.761e+06-1.611e+05	1.89	0.0	0.0-6.184e+04-1.352e+04	1675.35-7.033e+04-1.589e+06 3.761e+06	
		-8.000e+06-1.589e+06	-5.27	0.0	870.0-5.806e+04-1.352e+04	1675.35-7.033e+04-1.611e+05-8.000e+06	
39	39	6.264e+06 1.587e+06	4.60	0.0	0.0-6.389e+04-1.863e+04	-1670.26 6.506e+04 1.587e+06 6.264e+06	
		-9.947e+06 1.635e+05	5.26	0.0	870.0-6.012e+04-1.863e+04	-1670.26 6.506e+04 1.635e+05-9.947e+06	
39	40	3.914e+06 1.801e+06	2.03	0.0	0.0-6.196e+04-1.383e+04	-1886.38 2.970e+04 1.801e+06 3.914e+06	
		-8.118e+06 1.327e+05	5.99	0.0	870.0-5.818e+04-1.383e+04	-1886.38 2.970e+04 1.327e+05-8.118e+06	
39	41	6.118e+06-1.280e+05	4.43	0.0	0.0-6.374e+04-1.833e+04	1602.61-3.723e+04-1.521e+06 6.118e+06	
		-9.834e+06-1.521e+06	-5.05	0.0	870.0-5.996e+04-1.833e+04	1602.61-3.723e+04-1.280e+05-9.834e+06	
39	42	4.051e+06-1.959e+05	2.16	0.0	0.0-6.211e+04-1.411e+04	2130.73-1.000e+05-2.047e+06 4.051e+06	
		-8.227e+06-2.047e+06	-6.83	0.0	870.0-5.833e+04-1.411e+04	2130.73-1.000e+05-1.959e+05-8.227e+06	
39	43	5.974e+06 2.045e+06	4.26	0.0	0.0-6.362e+04-1.804e+04	-2125.64 9.473e+04 2.045e+06 5.974e+06	
		-9.720e+06 1.983e+05	6.82	0.0	870.0-5.984e+04-1.804e+04	-2125.64 9.473e+04 1.983e+05-9.720e+06	
39	44	3.907e+06 1.519e+06	2.03	0.0	0.0-6.199e+04-1.382e+04	-1597.52 3.197e+04 1.519e+06 3.907e+06	
		-8.113e+06 1.304e+05	5.04	0.0	870.0-5.822e+04-1.382e+04	-1597.52 3.197e+04 1.304e+05-8.113e+06	
39	45	6.259e+06-1.465e+05	4.59	0.0	0.0-6.389e+04-1.863e+04	1974.73-5.094e+04-1.465e+05-6.259e+06	
		-9.945e+06-1.891e+06	-6.30	0.0	870.0-6.011e+04-1.863e+04	1974.73-5.094e+04-1.891e+06-9.945e+06	
39	46	3.909e+06-1.774e+05	2.03	0.0	0.0-6.196e+04-1.382e+04	1758.61-8.629e+04-1.678e+06 3.909e+06	
		-8.116e+06-1.678e+06	-5.57	0.0	870.0-5.818e+04-1.382e+04	1758.61-8.629e+04-1.774e+05-8.116e+06	
39	47	6.115e+06 1.676e+06	4.42	0.0	0.0-6.377e+04-1.833e+04	-1753.52 8.103e+04 1.676e+06 6.115e+06	
		-9.831e+06 1.798e+05	5.57	0.0	870.0-6.000e+04-1.833e+04	-1753.52 8.103e+04 1.798e+05-9.831e+06	
39	48	3.765e+06 1.889e+06	1.90	0.0	0.0-6.184e+04-1.353e+04	-1969.64 4.567e+04 1.889e+06 3.765e+06	

		-8.002e+06	1.490e+05	6.29	0.0	870.0	-5.806e+04	-1.353e+04	-1969.64	4.567e+04	1.490e+05	-8.002e+06
39	49	8.434e+06	3.673e+05	7.30	0.0	0.0	-6.556e+04	-2.307e+04	-343.38	8.698e+04	3.673e+05	8.434e+06
		-1.163e+07	7.039e+04	1.28	0.0	870.0	-6.178e+04	-2.307e+04	-343.38	8.698e+04	7.039e+04	-1.163e+07
39	50	1.545e+06	-1.561e+05	-3.93	0.0	0.0	-6.014e+04	-8991.70	1416.99	-1.223e+05	-1.386e+06	1.545e+06
		-6.278e+06	-1.386e+06	-4.66	0.0	870.0	-5.636e+04	-8991.70	1416.99	-1.223e+05	-1.561e+05	-6.278e+06
39	51	8.480e+06	1.384e+06	7.36	0.0	0.0	-6.559e+04	-2.316e+04	-1411.90	1.170e+05	1.384e+06	8.480e+06
		-1.167e+07	1.585e+05	4.65	0.0	870.0	-6.182e+04	-2.316e+04	-1411.90	1.170e+05	1.585e+05	-1.167e+07
39	52	1.591e+06	-6.796e+04	-3.86	0.0	0.0	-6.017e+04	-9085.30	348.47	-9.224e+04	-3.693e+05	1.591e+06
		-6.313e+06	-3.693e+05	-1.28	0.0	870.0	-5.640e+04	-9085.30	348.47	-9.224e+04	-6.796e+04	-6.313e+06
39	53	8.478e+06	3.407e+05	7.36	0.0	0.0	-6.559e+04	-2.316e+04	-318.40	8.219e+04	3.407e+05	8.478e+06
		-1.167e+07	6.552e+04	1.19	0.0	870.0	-6.182e+04	-2.316e+04	-318.40	8.219e+04	6.552e+04	-1.167e+07
39	54	1.590e+06	-1.610e+05	-3.86	0.0	0.0	-6.017e+04	-9082.91	1441.97	-1.270e+05	-1.413e+06	1.590e+06
		-6.312e+06	-1.413e+06	-4.75	0.0	870.0	-5.640e+04	-9082.91	1441.97	-1.270e+05	-1.610e+05	-6.312e+06
39	55	8.435e+06	1.411e+06	7.30	0.0	0.0	-6.556e+04	-2.307e+04	-1436.88	1.218e+05	1.411e+06	8.435e+06
		-1.163e+07	1.634e+05	4.75	0.0	870.0	-6.178e+04	-2.307e+04	-1436.88	1.218e+05	1.634e+05	-1.163e+07
39	56	1.547e+06	-6.310e+04	-3.92	0.0	0.0	-6.014e+04	-8994.09	323.49	-8.745e+04	-3.427e+05	1.547e+06
		-6.278e+06	-3.427e+05	-1.19	0.0	870.0	-5.636e+04	-8994.09	323.49	-8.745e+04	-6.310e+04	-6.278e+06
39	57	8.906e+06	8507.90	7.94	0.0	0.0	-6.607e+04	-2.404e+04	897.01	4.129e+04	-8.655e+05	8.906e+06
		-1.200e+07	-8.655e+05	-2.89	0.0	870.0	-6.230e+04	-2.404e+04	897.01	4.129e+04	8507.90	-1.200e+07
39	58	1.073e+06	-9.424e+04	-4.63	0.0	0.0	-5.962e+04	-8022.37	176.60	-7.656e+04	-1.535e+05	1.073e+06
		-5.907e+06	-1.535e+05	-0.49	0.0	870.0	-5.585e+04	-8022.37	176.60	-7.656e+04	-9.424e+04	-5.907e+06
39	59	8.952e+06	1.515e+05	8.01	0.0	0.0	-6.611e+04	-2.413e+04	-171.51	7.130e+04	1.515e+05	8.952e+06
		-1.204e+07	9.666e+04	0.48	0.0	870.0	-6.233e+04	-2.413e+04	-171.51	7.130e+04	9.666e+04	-1.204e+07
39	60	1.119e+06	8.634e+05	-4.56	0.0	0.0	-5.966e+04	-8115.97	-891.92	-4.656e+04	8.634e+05	1.119e+06
		-5.942e+06	-6082.52	2.89	0.0	870.0	-5.588e+04	-8115.97	-891.92	-4.656e+04	-6082.52	-5.942e+06
39	61	8.951e+06	3639.89	8.00	0.0	0.0	-6.611e+04	-2.413e+04	921.99	3.650e+04	-8.920e+05	8.951e+06
		-1.204e+07	-8.920e+05	-2.99	0.0	870.0	-6.233e+04	-2.413e+04	921.99	3.650e+04	3639.89	-1.204e+07
39	62	1.117e+06	-9.911e+04	-4.57	0.0	0.0	-5.966e+04	-8113.58	201.58	-8.135e+04	-1.801e+05	1.117e+06
		-5.942e+06	-1.801e+05	-0.58	0.0	870.0	-5.588e+04	-8113.58	201.58	-8.135e+04	-9.911e+04	-5.942e+06
39	63	8.908e+06	1.781e+05	7.94	0.0	0.0	-6.607e+04	-2.404e+04	-196.49	7.609e+04	1.781e+05	8.908e+06
		-1.201e+07	1.015e+05	0.58	0.0	870.0	-6.230e+04	-2.404e+04	-196.49	7.609e+04	1.015e+05	-1.201e+07
39	64	1.074e+06	8.900e+05	-4.63	0.0	0.0	-5.962e+04	-8024.76	-916.90	-4.177e+04	8.900e+05	1.074e+06
		-5.908e+06	-1214.51	2.98	0.0	870.0	-5.585e+04	-8024.76	-916.90	-4.177e+04	-1214.51	-5.908e+06
39	65	4.553e+06	1100.18	2.86	0.0	0.0	-5.748e+04	-1.460e+04	2.31	-2387.01	-905.94	4.553e+06
		-8.152e+06	-905.94	-1.17e-03	0.0	870.0	-5.370e+04	-1.460e+04	2.31	-2387.01	1100.18	-8.152e+06
39	66	5.012e+06	1212.69	3.15	0.0	0.0	-6.287e+04	-1.608e+04	2.54	-2633.03	-1001.36	5.012e+06
		-8.973e+06	-1001.36	-1.30e-03	0.0	870.0	-5.909e+04	-1.608e+04	2.54	-2633.03	1212.69	-8.973e+06
48	1	6.081e+06	-1.994e+05	4.39	0.0	0.0	-6.372e+04	-1.825e+04	2240.68	-3.406e+04	-2.147e+06	6.081e+06
		-9.795e+06	-2.147e+06	-7.15	0.0	870.0	-5.995e+04	-1.825e+04	2240.68	-3.406e+04	-1.994e+05	-9.795e+06
48	2	3.976e+06	-2.826e+05	2.09	0.0	0.0	-6.205e+04	-1.395e+04	2841.06	-6.392e+04	-2.751e+06	3.976e+06
		-1.163e+06	-2.751e+06	-9.20	0.0	870.0	-5.827e+04	-1.395e+04	2841.06	-6.392e+04	-2.826e+05	-1.163e+06
48	3	6.031e+06	2.748e+06	4.33	0.0	0.0	-6.368e+04	-1.814e+04	-2828.04	6.209e+04	2.748e+06	6.031e+06
		-9.754e+06	2.910e+05	9.21	0.0	870.0	-5.991e+04	-1.814e+04	-2828.04	6.209e+04	2.910e+05	-9.754e+06
48	4	3.926e+06	2.144e+06	2.04	0.0	0.0	-6.201e+04	-1.385e+04	-2227.66	3.223e+04	2.144e+06	3.926e+06
		-8.122e+06	2.078e+05	7.15	0.0	870.0	-5.823e+04	-1.385e+04	-2227.66	3.223e+04	2.078e+05	-8.122e+06
48	5	6.372e+06	-2.569e+05	4.72	0.0	0.0	-6.397e+04	-1.885e+04	2666.16	-4.203e+04	-2.572e+06	6.372e+06
		-1.002e+07	-2.572e+06	-8.59	0.0	870.0	-6.020e+04	-1.885e+04	2666.16	-4.203e+04	-2.569e+05	-1.002e+07
48	6	3.685e+06	-2.251e+05	1.83	0.0	0.0	-6.179e+04	-1.336e+04	2415.59	-5.595e+04	-2.326e+06	3.685e+06
		-7.934e+06	-2.326e+06	-7.76	0.0	870.0	-5.802e+04	-1.336e+04	2415.59	-5.595e+04	-2.251e+05	-7.934e+06
48	7	6.322e+06	2.323e+06	4.67	0.0	0.0	-6.394e+04	-1.874e+04	-2402.56	5.412e+04	2.323e+06	6.322e+06
		-9.983e+06	2.335e+05	7.77	0.0	870.0	-6.016e+04	-1.874e+04	-2402.56	5.412e+04	2.335e+05	-9.983e+06
48	8	3.635e+06	2.569e+06	1.78	0.0	0.0	-6.176e+04	-1.325e+04	-2653.14	4.020e+04	2.569e+06	3.635e+06
		-7.893e+06	2.653e+05	8.59	0.0	870.0	-5.798e+04	-1.325e+04	-2653.14	4.020e+04	2.653e+05	-7.893e+06
48	9	6.034e+06	-2.197e+05	4.34	0.0	0.0	-6.368e+04	-1.815e+04	2372.86	-4.434e+04	-2.282e+06	6.034e+06
		-9.757e+06	-2.282e+06	-7.61	0.0	870.0	-5.990e+04	-1.815e+04	2372.86	-4.434e+04	-2.197e+05	-9.757e+06
48	10	3.929e+06	-3.029e+05	2.05	0.0	0.0	-6.200e+04	-1.385e+04	2973.24	-7.420e+04	-2.886e+06	3.929e+06
		-8.125e+06	-2.886e+06	-9.66	0.0	870.0	-5.823e+04	-1.385e+04	2973.24	-7.420e+04	-3.029e+05	-8.125e+06
48	11	6.078e+06	2.883e+06	4.39	0.0	0.0	-6.373e+04	-1.824e+04	-2960.22	7.237e+04	2.883e+06	6.078e+06
		-9.793e+06	3.113e+05	9.67	0.0	870.0	-5.995e+04	-1.824e+04	-2960.22	7.237e+04	3.113e+05	-9.793e+06
48	12	3.973e+06	2.279e+06	2.09	0.0	0.0	-6.205e+04	-1.395e+04	-2359.84	4.251e+04	2.279e+06	3.973e+06
		-8.160e+06	2.281e+05	7.61	0.0	870.0	-5.827e+04	-1.395e+04	-2359.84	4.251e+04	2.281e+05	-8.160e+06
48	13	6.325e+06	-2.772e+05	4.67	0.0	0.0	-6.393e+04	-1.875e+04	2798.34	-5.231e+04	-2.707e+06	6.325e+06
		-9.986e+06	-2.707e+06	-9.05	0.0	870.0	-6.016e+04	-1.875e+04	2798.34	-5.231e+04	-2.772e+05	-9.986e+06
48	14	3.638e+06	-2.454e+05	1.78	0.0	0.0	-6.175e+04	-1.326e+04	2547.76	-6.623e+04	-2.461e+06	3.638e+06
		-7.896e+06	-2.461e+06	-8.22	0.0	870.0	-5.798e+04	-1.326e+04	2547.76	-6.623e+04	-2.454e+05	-7.896e+06
48	15	6.369e+06	2.458e+06	4.72	0.0	0.0	-6.398e+04	-1.884e+04	-2534.74	6.440e+04	2.458e+06	6.369e+06
		-1.002e+07	2.538e+05	8.23	0.0	870.0	-6.020e+04	-1.884e+04	-2534.74	6.440e+04	2.538e+05	-1.002e+07
48	16	3.682e+06	2.704e+06	1.82	0.0	0.0	-6.180e+04	-1.335e+04	-2785.31	5.048e+04	2.704e+06	3.682e+06
		-7.931e+06	2.856e+05	9.05	0.0	870.0	-5.802e+04	-1.335e+04	-2785.31	5.048e+04	2.856e+05	-7.931e+06
48	17	8.519e+06	2.708e+05	7.43	0.0	0.0	-6.566e+04	-2.322e+04	-233.82	3.442e+04	2.708e+05	8.519e+06
		-1.168e+07	6.934e+04	0.97	0.0	870.0	-6.189e+04	-2.322e+04	-233.82	3.442e+04	6.934e+04	-1.168e+07
48	18	1.503e+06	-2.081e+05	-3.99	0.0	0.0	-6.008e+04	-8905.35	1767.46	-6.510e+04	-1.742e+06	1.503e+06
		-6.245e+06	-1.742e+06	-5.87	0.0	870.0	-5.630e+04	-8905.35	1767.46	-6.510e+04	-2.081e+05	-6.245e+06
48	19	8.504e+06	1.739e+06	7.41	0.0	0.0	-6.565e+04	-2.319e+04	-1754.43	6.327e+04	1.739e+06	8.504e+06
		-1.167e+07	2.165e+05	5.88	0.0	870.0	-6.188e+04	-2.319e+04	-1754.43	6.327e+04	2.165e+05	-1.167e+07
48	20	1.488e+06	-6.096e+04	-4.01	0.0	0.0	-6.007e+04	-8873.81	246.84	-3.625e+04	-2.737e+05	1.488e+06
		-6.232e+06	-2.737e+05	-0.97	0.0	870.0	-5.629e+04	-8873.81	246.84	-3.625e+04	-6.096e+04	-6.232e+06

48	21	8.505e+06	2.304e+05	7.41	0.0	0.0	-6.565e+04	-2.319e+04	-194.16	3.134e+04	2.304e+05	8.505e+06
		-1.167e+07	6.325e+04	0.83	0.0	870.0	-6.188e+04	-2.319e+04	-194.16	3.134e+04	6.325e+04	-1.167e+07
48	22	1.489e+06	-2.142e+05	-4.01	0.0	0.0	-6.006e+04	-8875.78	1807.11	-6.818e+04	-1.783e+06	1.489e+06
		-6.233e+06	-1.783e+06	-6.01	0.0	870.0	-5.629e+04	-8875.78	1807.11	-6.818e+04	-2.142e+05	-6.233e+06
48	23	8.518e+06	1.780e+06	7.43	0.0	0.0	-6.567e+04	-2.322e+04	-1794.09	6.635e+04	1.780e+06	8.518e+06
		-1.168e+07	2.226e+05	6.01	0.0	870.0	-6.189e+04	-2.322e+04	-1794.09	6.635e+04	2.226e+05	-1.168e+07
48	24	1.502e+06	-5.487e+04	-3.99	0.0	0.0	-6.008e+04	-8903.38	207.19	-3.317e+04	-2.333e+05	1.502e+06
		-6.244e+06	-2.333e+05	-0.83	0.0	870.0	-5.630e+04	-8903.38	207.19	-3.317e+04	-5.487e+04	-6.244e+06
48	25	9.489e+06	-1.225e+05	8.74	0.0	0.0	-6.650e+04	-2.522e+04	1184.44	7866.87	-1.145e+06	9.489e+06
		-1.245e+07	-1.145e+06	-3.83	0.0	870.0	-6.273e+04	-2.522e+04	1184.44	7866.87	-1.225e+05	-1.245e+07
48	26	5.331e+05	-1.626e+04	-5.44	0.0	0.0	-5.924e+04	-6912.93	349.20	-3.854e+04	-3.260e+05	5.331e+05
		-5.481e+06	-3.260e+05	-1.07	0.0	870.0	-5.546e+04	-6912.93	349.20	-3.854e+04	-1.626e+04	-5.481e+06
48	27	9.474e+06	3.231e+05	8.72	0.0	0.0	-6.649e+04	-2.518e+04	-336.17	3.671e+04	3.231e+05	9.474e+06
		-1.244e+07	2.465e+04	1.08	0.0	870.0	-6.272e+04	-2.518e+04	-336.17	3.671e+04	2.465e+04	-1.244e+07
48	28	5.180e+05	1.143e+06	-5.46	0.0	0.0	-5.923e+04	-6881.39	-1171.42	-9697.20	1.143e+06	5.180e+05
		-5.469e+06	1.309e+05	3.84	0.0	870.0	-5.545e+04	-6881.39	-1171.42	-9697.20	1.309e+05	-5.469e+06
48	29	9.475e+06	-1.286e+05	8.73	0.0	0.0	-6.649e+04	-2.519e+04	1224.10	4782.36	-1.186e+06	9.475e+06
		-1.244e+07	-1.186e+06	-3.97	0.0	870.0	-6.272e+04	-2.519e+04	1224.10	4782.36	-1.286e+05	-1.244e+07
48	30	5.189e+05	-2.235e+04	-5.46	0.0	0.0	-5.923e+04	-6883.36	388.85	-4.163e+04	-3.664e+05	5.189e+05
		-5.470e+06	-3.664e+05	-1.21	0.0	870.0	-5.545e+04	-6883.36	388.85	-4.163e+04	-2.235e+04	-5.470e+06
48	31	9.488e+06	3.635e+05	8.74	0.0	0.0	-6.650e+04	-2.521e+04	-375.83	3.980e+04	3.635e+05	9.488e+06
		-1.245e+07	3.073e+04	1.21	0.0	870.0	-6.273e+04	-2.521e+04	-375.83	3.980e+04	3.073e+04	-1.245e+07
48	32	5.322e+05	1.183e+06	-5.44	0.0	0.0	-5.924e+04	-6910.96	-1211.07	-6612.68	1.183e+06	5.322e+05
		-5.480e+06	1.370e+05	3.97	0.0	870.0	-5.546e+04	-6910.96	-1211.07	-6612.68	1.370e+05	-5.480e+06
48	33	5.947e+06	-1.275e+05	4.24	0.0	0.0	-6.362e+04	-1.797e+04	1486.99	-2.523e+04	-1.419e+06	5.947e+06
		-9.691e+06	-1.419e+06	-4.72	0.0	870.0	-5.984e+04	-1.797e+04	1486.99	-2.523e+04	-1.275e+05	-9.691e+06
48	34	4.102e+06	-2.005e+05	2.20	0.0	0.0	-6.215e+04	-1.421e+04	2013.34	-5.141e+04	-1.949e+06	4.102e+06
		-8.260e+06	-1.949e+06	-6.52	0.0	870.0	-5.837e+04	-1.421e+04	2013.34	-5.141e+04	-2.005e+05	-8.260e+06
48	35	5.905e+06	1.946e+06	4.19	0.0	0.0	-6.358e+04	-1.789e+04	-2000.32	4.958e+04	1.946e+06	5.905e+06
		-9.657e+06	2.088e+05	6.52	0.0	870.0	-5.981e+04	-1.789e+04	-2000.32	4.958e+04	2.088e+05	-9.657e+06
48	36	4.060e+06	1.416e+06	2.17	0.0	0.0	-6.211e+04	-1.412e+04	-1473.96	2.340e+04	1.416e+06	4.060e+06
		-8.226e+06	1.359e+05	4.72	0.0	870.0	-5.834e+04	-1.412e+04	-1473.96	2.340e+04	1.359e+05	-8.226e+06
48	37	6.202e+06	-1.779e+05	4.53	0.0	0.0	-6.384e+04	-1.850e+04	1859.97	-3.222e+04	-1.792e+06	6.202e+06
		-9.891e+06	-1.792e+06	-5.98	0.0	870.0	-6.006e+04	-1.850e+04	1859.97	-3.222e+04	-1.779e+05	-9.891e+06
48	38	3.847e+06	-1.500e+05	1.97	0.0	0.0	-6.193e+04	-1.369e+04	1640.36	-4.442e+04	-1.576e+06	3.847e+06
		-8.059e+06	-1.576e+06	-5.25	0.0	870.0	-5.815e+04	-1.369e+04	1640.36	-4.442e+04	-1.500e+05	-8.059e+06
48	39	6.160e+06	1.573e+06	4.48	0.0	0.0	-6.380e+04	-1.841e+04	-1627.34	4.259e+04	1.573e+06	6.160e+06
		-9.858e+06	1.584e+05	5.26	0.0	870.0	-6.003e+04	-1.841e+04	-1627.34	4.259e+04	1.584e+05	-9.858e+06
48	40	3.805e+06	1.789e+06	1.94	0.0	0.0	-6.189e+04	-1.360e+04	-1846.94	3.039e+04	1.789e+06	3.805e+06
		-8.026e+06	1.863e+05	5.98	0.0	870.0	-5.812e+04	-1.360e+04	-1846.94	3.039e+04	1.863e+05	-8.026e+06
48	41	5.907e+06	-1.415e+05	4.19	0.0	0.0	-6.358e+04	-1.789e+04	1576.60	-3.249e+04	-1.510e+06	5.907e+06
		-9.658e+06	-1.510e+06	-5.03	0.0	870.0	-5.980e+04	-1.789e+04	1576.60	-3.249e+04	-1.415e+05	-9.658e+06
48	42	4.062e+06	-2.145e+05	2.17	0.0	0.0	-6.211e+04	-1.413e+04	2102.95	-5.866e+04	-2.040e+06	4.062e+06
		-8.228e+06	-2.040e+06	-6.83	0.0	870.0	-5.834e+04	-1.413e+04	2102.95	-5.866e+04	-2.145e+05	-8.228e+06
48	43	5.945e+06	2.037e+06	4.23	0.0	0.0	-6.362e+04	-1.797e+04	-2089.93	5.683e+04	2.037e+06	5.945e+06
		-9.689e+06	2.278e+05	6.83	0.0	870.0	-5.984e+04	-1.797e+04	-2089.93	5.683e+04	2.278e+05	-9.689e+06
48	44	4.100e+06	1.507e+06	2.20	0.0	0.0	-6.215e+04	-1.421e+04	-1563.58	3.065e+04	1.507e+06	4.100e+06
		-8.259e+06	1.499e+05	5.03	0.0	870.0	-5.837e+04	-1.421e+04	-1563.58	3.065e+04	1.499e+05	-8.259e+06
48	45	6.162e+06	-1.919e+05	4.48	0.0	0.0	-6.380e+04	-1.841e+04	1949.58	-3.947e+04	-1.883e+06	6.162e+06
		-9.859e+06	-1.883e+06	-6.29	0.0	870.0	-6.002e+04	-1.841e+04	1949.58	-3.947e+04	-1.919e+05	-9.859e+06
48	46	3.807e+06	-1.640e+05	1.94	0.0	0.0	-6.189e+04	-1.360e+04	1729.98	-5.167e+04	-1.667e+06	3.807e+06
		-8.027e+06	-1.667e+06	-5.57	0.0	870.0	-5.811e+04	-1.360e+04	1729.98	-5.167e+04	-1.640e+05	-8.027e+06
48	47	6.200e+06	1.664e+06	4.53	0.0	0.0	-6.384e+04	-1.849e+04	-1716.95	4.984e+04	1.664e+06	6.200e+06
		-9.890e+06	1.724e+05	5.57	0.0	870.0	-6.006e+04	-1.849e+04	-1716.95	4.984e+04	1.724e+05	-9.890e+06
48	48	3.845e+06	1.880e+06	1.97	0.0	0.0	-6.193e+04	-1.368e+04	-1936.56	3.764e+04	1.880e+06	3.845e+06
		-8.058e+06	2.003e+05	6.30	0.0	870.0	-5.815e+04	-1.368e+04	-1936.56	3.764e+04	2.003e+05	-8.058e+06
48	49	8.085e+06	3.762e+05	6.84	0.0	0.0	-6.532e+04	-2.234e+04	-347.65	3.149e+04	3.762e+05	8.085e+06
		-1.135e+07	7.534e+04	1.32	0.0	870.0	-6.154e+04	-2.234e+04	-347.65	3.149e+04	7.534e+04	-1.135e+07
48	50	1.935e+06	-1.679e+05	-3.34	0.0	0.0	-6.042e+04	-9785.93	1406.86	-5.576e+04	-1.389e+06	1.935e+06
		-6.579e+06	-1.389e+06	-4.68	0.0	870.0	-5.665e+04	-9785.93	1406.86	-5.576e+04	-1.679e+05	-6.579e+06
48	51	8.072e+06	1.386e+06	6.82	0.0	0.0	-6.531e+04	-2.231e+04	-1393.84	5.393e+04	1.386e+06	8.072e+06
		-1.134e+07	1.762e+05	4.69	0.0	870.0	-6.153e+04	-2.231e+04	-1393.84	5.393e+04	1.762e+05	-1.134e+07
48	52	1.922e+06	-6.696e+04	-3.36	0.0	0.0	-6.041e+04	-9760.08	360.67	-3.332e+04	-3.792e+05	1.922e+06
		-6.569e+06	-3.792e+05	-1.31	0.0	870.0	-5.664e+04	-9760.08	360.67	-3.332e+04	-6.696e+04	-6.569e+06
48	53	8.073e+06	3.488e+05	6.82	0.0	0.0	-6.531e+04	-2.231e+04	-320.76	2.931e+04	3.488e+05	8.073e+06
		-1.134e+07	7.114e+04	1.22	0.0	870.0	-6.153e+04	-2.231e+04	-320.76	2.931e+04	7.114e+04	-1.134e+07
48	54	1.923e+06	-1.721e+05	-3.36	0.0	0.0	-6.041e+04	-9761.10	1433.74	-5.794e+04	-1.416e+06	1.923e+06
		-6.569e+06	-1.416e+06	-4.78	0.0	870.0	-5.663e+04	-9761.10	1433.74	-5.794e+04	-1.721e+05	-6.569e+06
48	55	8.084e+06	1.413e+06	6.84	0.0	0.0	-6.532e+04	-2.234e+04	-1420.72	5.611e+04	1.413e+06	8.084e+06
		-1.135e+07	1.804e+05	4.78	0.0	870.0	-6.154e+04	-2.234e+04	-1420.72	5.611e+04	1.804e+05	-1.135e+07
48	56	1.934e+06	-6.275e+04	-3.34	0.0	0.0	-6.042e+04	-9784.91	333.78	-3.114e+04	-6.275e+04	1.934e+06
		-6.579e+06	-3.518e+05	-1.22	0.0	870.0	-5.665e+04	-9784.91	333.78	-3.114e+04	-6.275e+04	-6.579e+06
48	57	8.934e+06	-9.280e+04	7.99	0.0	0.0	-6.605e+04	-2.408e+04	895.61	8199.16	-8.653e+05	8.934e+06
		-1.202e+07	-8.653e+05	-2.89	0.0	870.0	-6.228e+04	-2.408e+04	895.61	8199.16	-9.280e+04	-1.202e+07
48	58	1.085e+06	291.83	-4.61	0.0	0.0	-5.969e+04	-8041.37	163.60	-3.247e+04	-1.471e+05	1.085e+06
		-5.911e+06	-1.471e+05	-0.47	0.0	870.0	-5.591e+04	-8041.37	163.60	-3.247e+04	291.83	-5.911e+06
48	59	8.922e+06	1.441e+05	7.97	0.0	0.0	-6.604e+04	-2.406e+04	-150.58	3.064e+04	1.441e+05	8.922e+06

		-1.201e+07	8095.90	0.48	0.0	870.0-6.227e+04-2.406e+04	-150.58	3.064e+04	8095.90-1.201e+07
48	60	1.073e+06	8.623e+05	-4.63	0.0	0.0-5.968e+04 -8015.51	-882.59	-1.003e+04	8.623e+05 1.073e+06
		-5.901e+06	1.012e+05	2.90	0.0	870.0-5.590e+04 -8015.51	-882.59	-1.003e+04	1.012e+05 -5.901e+06
48	61	8.922e+06	-9.701e+04	7.97	0.0	0.0-6.604e+04-2.406e+04	922.50	6023.29	-8.926e+05 8.922e+06
		-1.201e+07	-8.926e+05	-2.99	0.0	870.0-6.227e+04-2.406e+04	922.50	6023.29	-9.701e+04 -1.201e+07
48	62	1.073e+06	-3910.90	-4.62	0.0	0.0-5.968e+04 -8016.54	190.49	-3.465e+04	-1.745e+05 1.073e+06
		-5.901e+06	-1.745e+05	-0.57	0.0	870.0-5.590e+04 -8016.54	190.49	-3.465e+04	-3910.90 -5.901e+06
48	63	8.934e+06	1.715e+05	7.99	0.0	0.0-6.605e+04-2.408e+04	-177.46	3.282e+04	1.715e+05 8.934e+06
		-1.202e+07	1.230e+04	0.57	0.0	870.0-6.228e+04-2.408e+04	-177.46	3.282e+04	1.230e+04 -1.202e+07
48	64	1.085e+06	8.897e+05	-4.61	0.0	0.0-5.969e+04 -8040.35	-909.47	-7853.62	8.897e+05 1.085e+06
		-5.910e+06	1.054e+05	2.99	0.0	870.0-5.591e+04 -8040.35	-909.47	-7853.62	1.054e+05 -5.910e+06
48	65	4.544e+06	3802.80	2.86	0.0	0.0-5.748e+04-1.458e+04	5.90	-828.34	-1331.70 -4.544e+06
		-8.136e+06	-1331.70	1.81e-03	0.0	870.0-5.370e+04-1.458e+04	5.90	-828.34	3802.80 -8.136e+06
48	66	5.004e+06	4193.86	3.15	0.0	0.0-6.287e+04-1.605e+04	6.51	-915.16	-1471.20 5.004e+06
		-8.959e+06	-1471.20	1.99e-03	0.0	870.0-5.909e+04-1.605e+04	6.51	-915.16	4193.86 -8.959e+06
49	1	6.580e+06	-2.654e+05	4.97	0.0	0.0-6.416e+04-1.927e+04	2244.78	-3.161e+04	-2.143e+05 -6.580e+06
		-1.018e+07	-2.143e+05	-7.13	0.0	870.0-6.038e+04-1.927e+04	2244.78	-3.161e+04	-2.654e+05 -1.018e+07
49	2	3.817e+06	-1.909e+05	1.95	0.0	0.0-6.189e+04-1.362e+04	2875.77	-6.226e+04	-2.762e+05 3.817e+06
		-8.031e+06	-2.762e+05	-9.21	0.0	870.0-5.811e+04-1.362e+04	2875.77	-6.226e+04	-1.909e+05 -8.031e+06
49	3	6.183e+06	-2.763e+06	4.51	0.0	0.0-6.384e+04-1.846e+04	-2873.54	6.334e+04	-2.763e+06 6.183e+06
		-9.873e+06	1.933e+05	9.21	0.0	870.0-6.006e+04-1.846e+04	-2873.54	6.334e+04	1.933e+05 -9.873e+06
49	4	3.421e+06	2.144e+06	1.59	0.0	0.0-6.158e+04-1.281e+04	-2242.55	3.269e+04	2.144e+06 3.421e+06
		-7.721e+06	2.678e+05	7.13	0.0	870.0-5.780e+04-1.281e+04	-2242.55	3.269e+04	2.678e+05 -7.721e+06
49	5	6.576e+06	-2.427e+05	4.96	0.0	0.0-6.411e+04-1.926e+04	2689.44	-5.326e+04	-2.578e+05 -6.576e+06
		-1.018e+07	-2.578e+05	-8.59	0.0	870.0-6.033e+04-1.926e+04	2689.44	-5.326e+04	-2.427e+05 -1.018e+07
49	6	3.821e+06	-2.136e+05	1.95	0.0	0.0-6.194e+04-1.363e+04	2431.12	-4.062e+04	-2.328e+05 3.821e+06
		-8.035e+06	-2.328e+05	-7.75	0.0	870.0-5.816e+04-1.363e+04	2431.12	-4.062e+04	-2.136e+05 -8.035e+06
49	7	6.180e+06	2.328e+06	4.51	0.0	0.0-6.379e+04-1.845e+04	-2428.89	4.170e+04	2.328e+06 6.180e+06
		-9.869e+06	2.161e+05	7.75	0.0	870.0-6.002e+04-1.845e+04	-2428.89	4.170e+04	2.161e+05 -9.869e+06
49	8	3.424e+06	2.578e+06	1.59	0.0	0.0-6.162e+04-1.281e+04	-2687.21	5.434e+04	2.578e+06 3.424e+06
		-7.724e+06	2.451e+05	8.59	0.0	870.0-5.785e+04-1.281e+04	-2687.21	5.434e+04	2.451e+05 -7.724e+06
49	9	6.204e+06	-2.916e+05	4.53	0.0	0.0-6.386e+04-1.850e+04	2372.17	-4.131e+04	-2.280e+05 -6.204e+06
		-9.890e+06	-2.280e+05	-7.60	0.0	870.0-6.008e+04-1.850e+04	2372.17	-4.131e+04	-2.916e+05 -9.890e+06
49	10	3.442e+06	-2.170e+05	1.61	0.0	0.0-6.159e+04-1.285e+04	3003.17	-7.195e+04	-2.899e+05 3.442e+06
		-7.737e+06	-2.899e+05	-9.69	0.0	870.0-5.782e+04-1.285e+04	3003.17	-7.195e+04	-2.170e+05 -7.737e+06
49	11	6.559e+06	2.900e+06	4.94	0.0	0.0-6.414e+04-1.923e+04	-3000.93	7.304e+04	2.900e+06 6.559e+06
		-1.017e+07	2.195e+05	9.69	0.0	870.0-6.036e+04-1.923e+04	-3000.93	7.304e+04	2.195e+05 -1.017e+07
49	12	3.797e+06	2.281e+06	1.93	0.0	0.0-6.187e+04-1.358e+04	-2369.94	4.239e+04	2.281e+06 3.797e+06
		-8.015e+06	2.940e+05	7.61	0.0	870.0-5.810e+04-1.358e+04	-2369.94	4.239e+04	2.940e+05 -8.015e+06
49	13	6.201e+06	-2.688e+05	4.53	0.0	0.0-6.381e+04-1.849e+04	2816.83	-6.295e+04	-2.715e+05 -6.201e+06
		-9.886e+06	-2.715e+05	-9.06	0.0	870.0-6.003e+04-1.849e+04	2816.83	-6.295e+04	-2.688e+05 -9.886e+06
49	14	3.445e+06	-2.398e+05	1.61	0.0	0.0-6.164e+04-1.286e+04	2558.51	-5.031e+04	-2.465e+05 3.445e+06
		-7.741e+06	-2.465e+05	-8.23	0.0	870.0-5.786e+04-1.286e+04	2558.51	-5.031e+04	-2.398e+05 -7.741e+06
49	15	6.556e+06	2.465e+06	4.94	0.0	0.0-6.409e+04-1.922e+04	-2556.28	5.139e+04	2.465e+06 6.556e+06
		-1.016e+07	2.422e+05	8.23	0.0	870.0-6.031e+04-1.922e+04	-2556.28	5.139e+04	2.422e+05 -1.016e+07
49	16	3.800e+06	2.715e+06	1.93	0.0	0.0-6.192e+04-1.358e+04	-2814.60	6.403e+04	2.715e+06 3.800e+06
		-8.019e+06	2.712e+05	9.07	0.0	870.0-5.815e+04-1.358e+04	-2814.60	6.403e+04	2.712e+05 -8.019e+06
49	17	9.664e+06	2.955e+05	8.98	0.0	0.0-6.669e+04-2.557e+04	-282.79	3.738e+04	2.955e+05 9.664e+06
		-1.259e+07	-1.918e+05	1.02	0.0	870.0-6.291e+04-2.557e+04	-282.79	3.738e+04	-1.918e+05 -1.259e+07
49	18	4.558e+06	5.656e+04	-5.54	0.0	0.0-5.914e+04 -6744.34	1820.51	-6.478e+04	-1.767e+05 4.558e+06
		-5.412e+06	-1.767e+05	-5.92	0.0	870.0-5.536e+04 -6744.34	1820.51	-6.478e+04	-5.412e+06 -1.767e+05
49	19	9.545e+06	1.767e+06	8.82	0.0	0.0-6.659e+04-2.533e+04	-1818.28	6.586e+04	1.767e+06 9.545e+06
		-1.249e+07	-5.415e+04	5.92	0.0	870.0-6.282e+04-2.533e+04	-1818.28	6.586e+04	-5.415e+04 -1.249e+07
49	20	3.370e+05	1.942e+05	-5.72	0.0	0.0-5.904e+04 -6500.60	285.02	-3.630e+04	-2.950e+05 3.370e+05
		-5.319e+06	-2.950e+05	-1.02	0.0	870.0-5.527e+04 -6500.60	285.02	-3.630e+04	-2.950e+05 -5.319e+06
49	21	9.551e+06	2.544e+05	8.83	0.0	0.0-6.660e+04-2.534e+04	-244.57	3.447e+04	2.544e+05 9.551e+06
		-1.250e+07	-1.996e+05	0.88	0.0	870.0-6.282e+04-2.534e+04	-244.57	3.447e+04	-1.996e+05 -1.250e+07
49	22	3.432e+05	4.872e+04	-5.71	0.0	0.0-5.905e+04 -6513.43	1858.73	-6.769e+04	-1.808e+05 3.432e+05
		-5.324e+06	-1.808e+05	-6.06	0.0	870.0-5.527e+04 -6513.43	1858.73	-6.769e+04	-5.324e+06 -1.808e+05
49	23	9.658e+06	1.808e+06	8.97	0.0	0.0-6.668e+04-2.556e+04	-1856.50	6.877e+04	1.808e+06 9.658e+06
		-1.258e+07	-4.632e+04	6.07	0.0	870.0-6.291e+04-2.556e+04	-1856.50	6.877e+04	-4.632e+04 -1.258e+07
49	24	4.496e+05	2.020e+05	-5.55	0.0	0.0-5.913e+04 -6731.51	246.80	-3.339e+04	-2.540e+05 4.496e+05
		-5.407e+06	-2.540e+05	-0.87	0.0	870.0-5.536e+04 -6731.51	246.80	-3.339e+04	-2.540e+05 -5.407e+06
49	25	9.653e+06	-1.161e+05	8.97	0.0	0.0-6.653e+04-2.555e+04	1199.40	-3.477e+04	-1.152e+05 9.653e+06
		-1.257e+07	-1.152e+05	-3.84	0.0	870.0-6.275e+04-2.555e+04	1199.40	-3.477e+04	-1.161e+05 -1.257e+07
49	26	4.667e+05	-1.915e+04	-5.53	0.0	0.0-5.930e+04 -6771.05	338.32	7361.92	-3.189e+05 4.667e+05
		-5.424e+06	-3.189e+05	-1.05	0.0	870.0-5.552e+04 -6771.05	338.32	7361.92	-3.189e+05 -5.424e+06
49	27	9.534e+06	3.194e+05	8.81	0.0	0.0-6.643e+04-2.530e+04	-336.09	-6281.02	3.194e+05 9.534e+06
		-1.248e+07	2.156e+04	1.06	0.0	870.0-6.265e+04-2.530e+04	-336.09	-6281.02	2.156e+04 -1.248e+07
49	28	3.478e+05	1.153e+06	-5.71	0.0	0.0-5.921e+04 -6527.31	-1197.17	3.585e+04	1.153e+06 3.478e+05
		-5.331e+06	1.185e+05	3.85	0.0	870.0-5.543e+04 -6527.31	-1197.17	3.585e+04	1.185e+05 -5.331e+06
49	29	9.540e+06	-1.239e+05	8.82	0.0	0.0-6.644e+04-2.532e+04	1237.62	-3.768e+04	-1.194e+05 9.540e+06
		-1.249e+07	-1.194e+05	-3.99	0.0	870.0-6.266e+04-2.532e+04	1237.62	-3.768e+04	-1.239e+05 -1.249e+07
49	30	3.541e+05	-2.698e+04	-5.70	0.0	0.0-5.921e+04 -6540.14	376.54	4453.59	-3.600e+05 3.541e+05
		-5.336e+06	-3.600e+05	-1.20	0.0	870.0-5.543e+04 -6540.14	376.54	4453.59	-3.600e+05 -5.336e+06
49	31	9.647e+06	3.605e+05	8.96	0.0	0.0-6.652e+04-2.553e+04	-374.31	-3372.70	3.605e+05 9.647e+06
		-1.257e+07	2.939e+04	1.20	0.0	870.0-6.274e+04-2.553e+04	-374.31	-3372.70	2.939e+04 -1.257e+07

# ZUPELLI DESIGN ARCHITETTURA

49	32	4.605e+05	1.194e+06	-5.54	0.0	0.0	-5.929e+04	-6758.22	-1235.39	3.876e+04	1.194e+06	4.605e+05
		-5.419e+06	1.263e+05	3.99	0.0	870.0	-5.552e+04	-6758.22	-1235.39	3.876e+04	1.263e+05	-5.419e+06
49	33	6.355e+06	-1.888e+05	4.71	0.0	0.0	-6.397e+04	-1.881e+04	1485.30	-2.302e+04	-1.415e+06	6.355e+06
		-1.001e+07	-1.415e+06	-4.70	0.0	870.0	-6.020e+04	-1.881e+04	1485.30	-2.302e+04	-1.888e+05	-1.001e+07
49	34	3.933e+06	-1.235e+05	2.05	0.0	0.0	-6.199e+04	-1.385e+04	2038.49	-4.989e+04	-1.957e+06	3.933e+06
		-8.121e+06	-1.957e+06	-6.52	0.0	870.0	-5.821e+04	-1.385e+04	2038.49	-4.989e+04	-1.235e+05	-8.121e+06
49	35	6.068e+06	1.958e+06	4.38	0.0	0.0	-6.374e+04	-1.822e+04	-2036.26	5.097e+04	1.958e+06	6.068e+06
		-9.783e+06	1.259e+05	6.53	0.0	870.0	-5.997e+04	-1.822e+04	-2036.26	5.097e+04	1.259e+05	-9.783e+06
49	36	3.646e+06	1.415e+06	1.79	0.0	0.0	-6.176e+04	-1.327e+04	-1483.07	2.410e+04	1.415e+06	3.646e+06
		-7.896e+06	1.912e+05	4.70	0.0	870.0	-5.798e+04	-1.327e+04	-1483.07	2.410e+04	1.912e+05	-7.896e+06
49	37	6.351e+06	-1.689e+05	4.70	0.0	0.0	-6.393e+04	-1.880e+04	1875.09	-4.199e+04	-1.795e+06	6.351e+06
		-1.000e+07	-1.458e+06	-5.98	0.0	870.0	-6.015e+04	-1.880e+04	1875.09	-4.199e+04	-1.689e+05	-1.000e+07
49	38	3.936e+06	-1.434e+05	2.05	0.0	0.0	-6.203e+04	-1.386e+04	1648.70	-3.092e+04	-1.576e+06	3.936e+06
		-8.125e+06	-1.576e+06	-5.24	0.0	870.0	-5.825e+04	-1.386e+04	1648.70	-3.092e+04	-1.434e+05	-8.125e+06
49	39	6.065e+06	1.577e+06	4.37	0.0	0.0	-6.370e+04	-1.821e+04	-1646.47	3.200e+04	1.577e+06	6.065e+06
		-9.780e+06	1.458e+05	5.25	0.0	870.0	-5.992e+04	-1.821e+04	-1646.47	3.200e+04	1.458e+05	-9.780e+06
49	40	3.650e+06	1.796e+06	1.79	0.0	0.0	-6.180e+04	-1.328e+04	-1872.86	4.307e+04	1.796e+06	3.650e+06
		-7.900e+06	1.713e+05	5.98	0.0	870.0	-5.802e+04	-1.328e+04	-1872.86	4.307e+04	1.713e+05	-7.900e+06
49	41	6.083e+06	-2.067e+05	4.39	0.0	0.0	-6.376e+04	-1.825e+04	1571.38	-3.004e+04	-1.507e+06	6.083e+06
		-9.796e+06	-1.579e+06	-5.02	0.0	870.0	-5.998e+04	-1.825e+04	1571.38	-3.004e+04	-2.067e+05	-9.796e+06
49	42	3.661e+06	-1.414e+05	1.81	0.0	0.0	-6.177e+04	-1.330e+04	2124.57	-5.690e+04	-2.050e+06	3.661e+06
		-7.909e+06	-2.050e+06	-6.85	0.0	870.0	-5.799e+04	-1.330e+04	2124.57	-5.690e+04	-1.414e+05	-7.909e+06
49	43	6.339e+06	2.050e+06	4.69	0.0	0.0	-6.396e+04	-1.878e+04	-2122.34	5.799e+04	2.050e+06	6.339e+06
		-9.996e+06	1.438e+05	6.85	0.0	870.0	-6.018e+04	-1.878e+04	-2122.34	5.799e+04	1.438e+05	-9.996e+06
49	44	3.918e+06	1.508e+06	2.04	0.0	0.0	-6.197e+04	-1.382e+04	-1569.15	3.112e+04	1.508e+06	3.918e+06
		-8.109e+06	2.092e+05	5.03	0.0	870.0	-5.820e+04	-1.382e+04	-1569.15	3.112e+04	2.092e+05	-8.109e+06
49	45	6.080e+06	-1.868e+05	4.39	0.0	0.0	-6.371e+04	-1.824e+04	1961.17	-4.901e+04	-1.888e+06	6.080e+06
		-9.792e+06	-1.888e+06	-6.30	0.0	870.0	-5.994e+04	-1.824e+04	1961.17	-4.901e+04	-1.868e+05	-9.792e+06
49	46	3.665e+06	-1.613e+05	1.81	0.0	0.0	-6.181e+04	-1.331e+04	1734.78	-3.793e+04	-1.669e+06	3.665e+06
		-7.912e+06	-1.669e+06	-5.57	0.0	870.0	-5.804e+04	-1.331e+04	1734.78	-3.793e+04	-1.613e+05	-7.912e+06
49	47	6.336e+06	1.670e+06	4.69	0.0	0.0	-6.392e+04	-1.877e+04	-1732.55	3.901e+04	1.670e+06	6.336e+06
		-9.992e+06	1.638e+05	5.57	0.0	870.0	-6.014e+04	-1.877e+04	-1732.55	3.901e+04	1.638e+05	-9.992e+06
49	48	3.921e+06	1.889e+06	2.04	0.0	0.0	-6.202e+04	-1.383e+04	-1958.94	5.009e+04	1.889e+06	3.921e+06
		-8.113e+06	1.892e+05	6.31	0.0	870.0	-5.824e+04	-1.383e+04	-1958.94	5.009e+04	1.892e+05	-8.113e+06
49	49	9.080e+06	3.984e+05	8.19	0.0	0.0	-6.621e+04	-2.438e+04	-392.63	3.422e+04	3.984e+05	9.080e+06
		-1.213e+07	-1.549e+05	1.36	0.0	870.0	-6.243e+04	-2.438e+04	-392.63	3.422e+04	-1.549e+05	-1.213e+07
49	50	1.007e+06	6.284e+04	-4.71	0.0	0.0	-5.959e+04	-7870.83	1451.33	-5.534e+04	-1.410e+06	1.007e+06
		-5.841e+06	-1.410e+06	-4.72	0.0	870.0	-5.581e+04	-7870.83	1451.33	-5.534e+04	6.284e+04	-5.841e+06
49	51	8.994e+06	1.410e+06	8.07	0.0	0.0	-6.614e+04	-2.420e+04	-1449.10	5.642e+04	1.410e+06	8.994e+06
		-1.206e+07	-6.043e+04	4.73	0.0	870.0	-6.236e+04	-2.420e+04	-1449.10	5.642e+04	-6.043e+04	-1.206e+07
49	52	9.208e+05	1.573e+05	-4.84	0.0	0.0	-5.952e+04	-7694.55	394.86	-3.314e+04	-3.980e+05	9.208e+05
		-5.773e+06	-3.980e+05	-1.36	0.0	870.0	-5.575e+04	-7694.55	394.86	-3.314e+04	1.573e+05	-5.773e+06
49	53	8.999e+06	3.706e+05	8.08	0.0	0.0	-6.614e+04	-2.421e+04	-366.81	3.212e+04	3.706e+05	8.999e+06
		-1.207e+07	-1.602e+05	1.26	0.0	870.0	-6.237e+04	-2.421e+04	-366.81	3.212e+04	-1.602e+05	-1.207e+07
49	54	9.253e+05	5.746e+04	-4.84	0.0	0.0	-5.953e+04	-7703.97	1477.15	-5.744e+04	-1.437e+06	9.253e+05
		-5.777e+06	-1.437e+06	-4.82	0.0	870.0	-5.575e+04	-7703.97	1477.15	-5.744e+04	5.746e+04	-5.777e+06
49	55	9.075e+06	1.438e+06	8.18	0.0	0.0	-6.620e+04	-2.437e+04	-1474.92	5.852e+04	1.438e+06	9.075e+06
		-1.213e+07	-5.506e+04	4.83	0.0	870.0	-6.243e+04	-2.437e+04	-1474.92	5.852e+04	-5.506e+04	-1.213e+07
49	56	1.002e+06	1.626e+05	-4.72	0.0	0.0	-5.959e+04	-7861.41	369.04	-3.104e+04	-3.701e+05	1.002e+06
		-5.837e+06	-3.701e+05	-1.26	0.0	870.0	-5.581e+04	-7861.41	369.04	-3.104e+04	1.626e+05	-5.837e+06
49	57	9.069e+06	-8.849e+04	8.17	0.0	0.0	-6.607e+04	-2.435e+04	906.68	-2.902e+04	-8.708e+05	9.069e+06
		-1.212e+07	-8.708e+05	-2.90	0.0	870.0	-6.229e+04	-2.435e+04	906.68	-2.902e+04	-8.849e+04	-1.212e+07
49	58	1.018e+06	-3535.98	-4.70	0.0	0.0	-5.973e+04	-7898.13	152.02	7902.97	-1.403e+05	1.018e+06
		-5.853e+06	-1.403e+05	-0.46	0.0	870.0	-5.596e+04	-7898.13	152.02	7902.97	-3535.98	-5.853e+06
49	59	8.983e+06	1.408e+05	8.06	0.0	0.0	-6.600e+04	-2.418e+04	-149.79	-6822.08	1.408e+05	8.983e+06
		-1.205e+07	5943.86	0.46	0.0	870.0	-6.222e+04	-2.418e+04	-149.79	-6822.08	5943.86	-1.205e+07
49	60	9.322e+05	8.713e+05	-4.83	0.0	0.0	-5.966e+04	-7721.84	-904.45	3.010e+04	8.713e+05	9.322e+05
		-5.786e+06	9.090e+04	2.91	0.0	870.0	-5.589e+04	-7721.84	-904.45	3.010e+04	9.090e+04	-5.786e+06
49	61	8.987e+06	-9.386e+04	8.06	0.0	0.0	-6.600e+04	-2.419e+04	932.50	-3.112e+04	-8.987e+05	8.987e+06
		-1.205e+07	-8.987e+05	-3.00	0.0	870.0	-6.222e+04	-2.419e+04	932.50	-3.112e+04	-9.386e+04	-1.205e+07
49	62	9.367e+05	-8908.11	-4.82	0.0	0.0	-5.967e+04	-7731.26	177.85	5798.34	-1.682e+05	9.367e+05
		-5.789e+06	-1.682e+05	-0.56	0.0	870.0	-5.589e+04	-7731.26	177.85	5798.34	-8908.11	-5.789e+06
49	63	9.064e+06	1.686e+05	8.17	0.0	0.0	-6.606e+04	-2.434e+04	-175.61	-4717.45	1.686e+05	9.064e+06
		-1.211e+07	1.132e+04	0.56	0.0	870.0	-6.229e+04	-2.434e+04	-175.61	-4717.45	1.132e+04	-1.211e+07
49	64	1.014e+06	8.991e+05	-4.71	0.0	0.0	-5.973e+04	-7888.71	-930.27	3.220e+04	8.991e+05	1.014e+06
		-5.850e+06	9.627e+04	3.01	0.0	870.0	-5.595e+04	-7888.71	-930.27	3.220e+04	9.627e+04	-5.850e+06
49	65	4.541e+06	1092.84	2.85	0.0	0.0	-5.748e+04	-1.457e+04	1.01	490.94	213.94	4.541e+06
		-8.131e+06	213.94	2.42e-03	0.0	870.0	-5.370e+04	-1.457e+04	1.01	490.94	1092.84	-8.131e+06
49	66	5.000e+06	1203.94	3.14	0.0	0.0	-6.287e+04	-1.604e+04	1.12	540.45	233.46	5.000e+06
		-8.952e+06	233.46	2.66e-03	0.0	870.0	-5.909e+04	-1.604e+04	1.12	540.45	1203.94	-8.952e+06
50	1	3.623e+05	-3.599e+05	1.32	0.0	0.0	-1.099e+04	-167.60	2310.40	-3.057e+04	-2.368e+06	3.623e+05
		2.271e+05	-2.368e+06	-7.12	0.0	870.0	-7212.45	-167.60	2310.40	-3.057e+04	-3.599e+05	2.271e+05
50	2	4.386e+05	-4.752e+05	-1.10	0.0	0.0	-1.088e+04	1191.15	2974.43	5.120e+04	-3.059e+06	-4.386e+05
		-6.084e+05	-3.059e+06	-9.21	0.0	870.0	-7105.11	1191.15	2974.43	5.120e+04	-4.752e+05	-6.084e+05
50	3	3.024e+05	3.057e+06	1.16	0.0	0.0	-1.106e+04	-87.80	-2964.30	-5.443e+04	3.057e+06	3.024e+05
		2.154e+05	4.825e+05	9.22	0.0	870.0	-7288.82	-87.80	-2964.30	-5.443e+04	4.825e+05	2.154e+05
50	4	4.269e+05	2.367e+06	-1.26	0.0	0.0	-1.096e+04	1270.95	-2300.26	2.735e+04	2.367e+06	-4.269e+05

		-6.682e+05	3.672e+05	7.13	0.0	870.0	-7181.49	1270.95	-2300.26	2.735e+04	3.672e+05	4.269e+05
50	5	2.560e+05	-4.404e+05	1.05	0.0	0.0	-1.099e+04	-19.11	2778.16	-3.743e+04	-2.853e+06	2.560e+05
		2.500e+05	-2.853e+06	-8.59	0.0	870.0	-7210.74	-19.11	2778.16	-3.743e+04	-4.404e+05	2.500e+05
50	6	4.156e+05	-3.947e+05	-0.84	0.0	0.0	-1.088e+04	1042.66	2506.68	5.806e+04	-2.574e+06	-5.021e+05
		-5.021e+05	-2.574e+06	-7.75	0.0	870.0	-7106.82	1042.66	2506.68	5.806e+04	-3.947e+05	4.156e+05
50	7	2.383e+05	2.573e+06	0.90	0.0	0.0	-1.106e+04	60.69	-2496.54	-6.129e+04	2.573e+06	1.961e+05
		1.961e+05	4.020e+05	7.75	0.0	870.0	-7287.12	60.69	-2496.54	-6.129e+04	4.020e+05	2.383e+05
50	8	4.039e+05	2.852e+06	-0.99	0.0	0.0	-1.096e+04	1122.46	-2768.02	3.420e+04	2.852e+06	-5.620e+05
		-5.620e+05	4.477e+05	8.59	0.0	870.0	-7183.19	1122.46	-2768.02	3.420e+04	4.477e+05	4.039e+05
50	9	2.984e+05	-3.940e+05	1.16	0.0	0.0	-1.099e+04	-77.33	2449.19	-2.490e+04	-2.523e+06	2.984e+05
		2.314e+05	-2.523e+06	-7.60	0.0	870.0	-7216.13	-77.33	2449.19	-2.490e+04	-3.940e+05	2.314e+05
50	10	4.429e+05	-5.092e+05	-1.26	0.0	0.0	-1.088e+04	1281.41	3113.23	5.688e+04	-3.214e+06	-6.723e+05
		-6.723e+05	-3.214e+06	-9.69	0.0	870.0	-7108.80	1281.41	3113.23	5.688e+04	-5.092e+05	4.429e+05
50	11	3.663e+05	3.212e+06	1.32	0.0	0.0	-1.106e+04	-178.06	-3103.09	-6.010e+04	3.212e+06	3.663e+05
		2.110e+05	5.166e+05	9.70	0.0	870.0	-7285.14	-178.06	-3103.09	-6.010e+04	5.166e+05	2.110e+05
50	12	4.226e+05	2.522e+06	-1.10	0.0	0.0	-1.095e+04	1180.69	-2439.06	2.168e+04	2.522e+06	-6.043e+05
		-6.043e+05	4.013e+05	7.61	0.0	870.0	-7177.80	1180.69	-2439.06	2.168e+04	4.013e+05	4.226e+05
50	13	2.543e+05	-4.745e+05	0.89	0.0	0.0	-1.099e+04	71.15	2916.95	-3.176e+04	-3.008e+06	1.921e+05
		1.921e+05	-3.008e+06	-9.07	0.0	870.0	-7214.43	71.15	2916.95	-3.176e+04	-4.745e+05	2.543e+05
50	14	4.200e+05	-4.287e+05	-1.00	0.0	0.0	-1.089e+04	1132.92	2645.47	6.373e+04	-3.214e+06	-6.723e+05
		-5.660e+05	-2.729e+06	-8.23	0.0	870.0	-7110.50	1132.92	2645.47	6.373e+04	-4.287e+05	4.200e+05
50	15	2.600e+05	2.727e+06	1.05	0.0	0.0	-1.106e+04	-29.57	-2635.33	-6.696e+04	2.727e+06	2.600e+05
		2.340e+05	4.361e+05	8.23	0.0	870.0	-7283.43	-29.57	-2635.33	-6.696e+04	4.361e+05	2.340e+05
50	16	3.996e+05	3.006e+06	-0.83	0.0	0.0	-1.096e+04	1032.20	-2906.81	2.853e+04	3.006e+06	-4.981e+05
		-4.981e+05	4.818e+05	9.07	0.0	870.0	-7179.51	1032.20	-2906.81	2.853e+04	4.818e+05	3.996e+05
50	17	1.474e+06	3.363e+05	4.08	0.0	0.0	-1.114e+04	-1724.87	-310.45	-1.343e+05	3.363e+05	1.474e+06
		-2.380e+04	6.939e+04	1.03	0.0	870.0	-7364.40	-1724.87	-310.45	-1.343e+05	6.939e+04	-2.380e+04
50	18	6.812e+05	-3.148e+05	-3.98	0.0	0.0	-1.078e+04	2804.28	1903.00	1.383e+05	-1.966e+06	-1.762e+05
		-1.762e+06	-1.966e+06	-5.93	0.0	870.0	-7006.62	2804.28	1903.00	1.383e+05	-3.148e+05	6.812e+05
50	19	1.456e+06	1.964e+06	4.04	0.0	0.0	-1.116e+04	-1700.93	-1892.86	-1.415e+05	1.964e+06	1.456e+06
		-2.731e+04	3.221e+05	5.94	0.0	870.0	-7387.31	-1700.93	-1892.86	-1.415e+05	3.221e+05	-2.731e+04
50	20	6.777e+05	-6.207e+04	-4.02	0.0	0.0	-1.081e+04	2828.22	320.59	1.311e+05	-3.378e+05	-1.780e+06
		-1.780e+06	-3.378e+05	-1.03	0.0	870.0	-7029.53	2828.22	320.59	1.311e+05	-6.207e+04	6.777e+05
50	21	1.455e+06	2.899e+05	4.03	0.0	0.0	-1.114e+04	-1697.79	-268.81	-1.326e+05	2.899e+05	1.455e+06
		-2.251e+04	5.916e+04	0.89	0.0	870.0	-7365.51	-1697.79	-268.81	-1.326e+05	5.916e+04	-2.251e+04
50	22	6.825e+05	-3.250e+05	-4.02	0.0	0.0	-1.078e+04	2831.36	1944.64	1.400e+05	-2.012e+06	-1.781e+06
		-1.781e+06	-2.012e+06	-6.07	0.0	870.0	-7007.73	2831.36	1944.64	1.400e+05	-3.250e+05	6.825e+05
50	23	1.475e+06	2.010e+06	4.08	0.0	0.0	-1.116e+04	-1728.01	-1934.50	-1.432e+05	2.010e+06	1.475e+06
		-2.860e+04	3.323e+05	6.08	0.0	870.0	-7386.21	-1728.01	-1934.50	-1.432e+05	3.323e+05	-2.860e+04
50	24	6.764e+05	-5.185e+04	-3.98	0.0	0.0	-1.080e+04	2801.14	278.95	1.294e+05	-2.914e+05	-1.760e+06
		-1.760e+06	-2.914e+05	-0.88	0.0	870.0	-7028.43	2801.14	278.95	1.294e+05	-5.185e+04	6.764e+05
50	25	1.120e+06	-1.989e+05	3.20	0.0	0.0	-1.113e+04	-1229.91	1248.74	-1.572e+05	-1.280e+06	1.120e+06
		5.264e+04	-1.280e+06	-3.85	0.0	870.0	-7358.72	-1229.91	1248.74	-1.572e+05	-1.989e+05	5.264e+04
50	26	6.048e+05	-4.647e+04	-3.09	0.0	0.0	-1.079e+04	2309.32	343.81	1.611e+05	-3.497e+05	-1.408e+06
		-1.408e+06	-3.497e+05	-1.05	0.0	870.0	-7012.30	2309.32	343.81	1.611e+05	-4.647e+04	6.048e+05
50	27	1.102e+06	3.482e+05	3.15	0.0	0.0	-1.116e+04	-1205.97	-333.67	-1.643e+05	3.482e+05	1.102e+06
		4.914e+04	5.379e+04	1.05	0.0	870.0	-7381.63	-1205.97	-333.67	-1.643e+05	5.379e+04	4.914e+04
50	28	6.013e+05	1.278e+06	-3.14	0.0	0.0	-1.081e+04	2333.26	-1238.60	1.540e+05	1.278e+06	-1.426e+06
		-1.426e+06	2.062e+05	3.86	0.0	870.0	-7035.22	2333.26	-1238.60	1.540e+05	2.062e+05	6.013e+05
50	29	1.100e+06	-2.091e+05	3.15	0.0	0.0	-1.114e+04	-1202.83	1290.37	-1.555e+05	-2.091e+05	1.100e+06
		5.394e+04	-1.326e+06	-3.99	0.0	870.0	-7359.82	-1202.83	1290.37	-1.555e+05	-2.091e+05	5.394e+04
50	30	6.061e+05	-5.670e+04	-3.14	0.0	0.0	-1.079e+04	2336.40	385.45	1.628e+05	-3.961e+05	-1.427e+06
		-1.427e+06	-3.961e+05	-1.19	0.0	870.0	-7013.41	2336.40	385.45	1.628e+05	-5.670e+04	6.061e+05
50	31	1.121e+06	3.946e+05	3.20	0.0	0.0	-1.116e+04	-1233.05	-375.31	-1.660e+05	3.946e+05	1.121e+06
		4.784e+04	6.401e+04	1.20	0.0	870.0	-7380.52	-1233.05	-375.31	-1.660e+05	6.401e+04	4.784e+04
50	32	6.000e+05	1.325e+06	-3.09	0.0	0.0	-1.081e+04	2306.18	-1280.24	1.523e+05	1.325e+06	-1.406e+06
		-1.406e+06	2.165e+05	4.00	0.0	870.0	-7034.11	2306.18	-1280.24	1.523e+05	2.165e+05	6.000e+05
50	33	2.971e+05	-2.345e+05	1.15	0.0	0.0	-1.099e+04	-77.37	1529.14	-2.701e+04	-1.563e+06	2.971e+05
		2.394e+05	-1.563e+06	-4.69	0.0	870.0	-7217.22	-77.37	1529.14	-2.701e+04	-2.345e+05	2.394e+05
50	34	4.248e+05	-3.356e+05	-0.97	0.0	0.0	-1.090e+04	1113.86	2111.29	4.468e+04	-2.168e+06	-5.539e+05
		-5.539e+05	-2.168e+06	-6.53	0.0	870.0	-7123.13	1113.86	2111.29	4.468e+04	-3.356e+05	4.248e+05
50	35	2.479e+05	2.167e+06	1.03	0.0	0.0	-1.105e+04	-10.50	-2101.16	-4.790e+04	2.167e+06	2.479e+05
		2.291e+05	3.429e+05	6.53	0.0	870.0	-7270.80	-10.50	-2101.16	-4.790e+04	3.429e+05	2.291e+05
50	36	4.146e+05	1.561e+06	-1.09	0.0	0.0	-1.095e+04	1180.72	-1519.00	2.379e+04	1.561e+06	-6.031e+05
		-6.031e+05	2.418e+05	4.70	0.0	870.0	-7176.71	1180.72	-1519.00	2.379e+04	2.418e+05	4.146e+05
50	37	2.595e+05	-3.051e+05	0.92	0.0	0.0	-1.099e+04	52.94	1939.18	-3.301e+04	-1.988e+06	2.038e+05
		2.038e+05	-1.988e+06	-5.98	0.0	870.0	-7215.72	52.94	1939.18	-3.301e+04	-3.051e+05	2.595e+05
50	38	4.047e+05	-2.650e+05	-0.74	0.0	0.0	-1.090e+04	983.54	1701.25	5.068e+04	-1.743e+06	-4.606e+05
		-4.606e+05	-1.743e+06	-5.24	0.0	870.0	-7124.63	983.54	1701.25	5.068e+04	-2.650e+05	4.047e+05
50	39	2.493e+05	1.742e+06	0.79	0.0	0.0	-1.105e+04	119.81	-1691.12	-5.390e+04	1.742e+06	1.546e+05
		1.546e+05	2.723e+05	5.25	0.0	870.0	-7269.30	119.81	-1691.12	-5.390e+04	2.723e+05	1.546e+05
50	40	3.944e+05	1.986e+06	-0.86	0.0	0.0	-1.095e+04	1050.41	-1929.04	2.979e+04	1.986e+06	-5.098e+05
		-5.098e+05	3.124e+05	5.98	0.0	870.0	-7178.21	1050.41	-1929.04	2.979e+04	3.124e+05	3.944e+05
50	41	2.457e+05	-2.579e+05	1.02	0.0	0.0	-1.100e+04	-4.82	1622.98	-2.432e+04	-1.668e+06	2.457e+05
		2.418e+05	-1.668e+06	-5.02	0.0	870.0	-7220.11	-4.82	1622.98	-2.432e+04	-2.579e+05	2.418e+05
50	42	4.272e+05	-3.589e+05	-1.10	0.0	0.0	-1.090e+04	1186.41	2205.13	4.738e+04	-2.273e+06	-6.052e+05
		-6.052e+05	-2.273e+06	-6.85	0.0	870.0	-7126.01	1186.41	2205.13	4.738e+04	-3.589e+05	4.272e+05

50	43	2.993e+05	2.272e+06	1.15	0.0	0.0	-1.104e+04	-83.06	-2195.00	-5.060e+04	2.272e+06	2.993e+05
		2.267e+05	3.662e+05	6.86	0.0	870.0	-7267.92	-83.06	-2195.00	-5.060e+04	3.662e+05	2.267e+05
50	44	4.122e+05	1.666e+06	-0.97	0.0	0.0	-1.095e+04	1108.17	-1612.84	2.109e+04	1.666e+06	-5.517e+05
		-5.517e+05	2.652e+05	5.03	0.0	870.0	-7173.83	1108.17	-1612.84	2.109e+04	2.652e+05	4.122e+05
50	45	2.619e+05	-3.284e+05	0.79	0.0	0.0	-1.099e+04	125.50	2033.02	-3.031e+04	-2.093e+06	1.525e+05
		1.525e+05	-2.093e+06	-6.30	0.0	870.0	-7218.61	125.50	2033.02	-3.031e+04	-3.284e+05	2.619e+05
50	46	4.071e+05	-2.883e+05	-0.86	0.0	0.0	-1.090e+04	1056.10	1795.09	5.338e+04	-1.848e+06	-5.120e+05
		-5.120e+05	-1.848e+06	-5.57	0.0	870.0	-7127.51	1056.10	1795.09	5.338e+04	-2.883e+05	4.071e+05
50	47	2.469e+05	1.847e+06	0.92	0.0	0.0	-1.104e+04	47.26	-1784.96	-5.660e+04	1.847e+06	2.060e+05
		2.060e+05	2.957e+05	5.57	0.0	870.0	-7266.42	47.26	-1784.96	-5.660e+04	2.957e+05	2.469e+05
50	48	3.921e+05	2.091e+06	-0.73	0.0	0.0	-1.095e+04	977.85	-2022.88	2.709e+04	2.091e+06	-4.584e+05
		-4.584e+05	3.357e+05	6.31	0.0	870.0	-7175.33	977.85	-2022.88	2.709e+04	3.357e+05	3.921e+05
50	49	1.273e+06	4.488e+05	3.58	0.0	0.0	-1.112e+04	-1443.73	-420.65	-1.180e+05	4.488e+05	1.273e+06
		1.944e+04	8.544e+04	1.37	0.0	870.0	-7345.75	-1443.73	-420.65	-1.180e+05	8.544e+04	1.944e+04
50	50	6.376e+05	-2.513e+05	-3.48	0.0	0.0	-1.081e+04	2527.02	1519.87	1.210e+05	-1.569e+06	-1.564e+05
		-1.564e+06	-1.569e+06	-4.73	0.0	870.0	-7032.11	2527.02	1519.87	1.210e+05	-2.513e+05	6.376e+05
50	51	1.258e+06	1.568e+06	3.54	0.0	0.0	-1.114e+04	-1423.67	-1509.74	-1.242e+05	1.568e+06	1.258e+06
		1.637e+04	2.587e+05	4.74	0.0	870.0	-7361.83	-1423.67	-1509.74	-1.242e+05	2.587e+05	1.637e+04
50	52	6.345e+05	-7.812e+04	-3.52	0.0	0.0	-1.082e+04	2547.08	430.78	1.147e+05	-4.503e+05	-1.579e+06
		-1.579e+06	-4.503e+05	-1.37	0.0	870.0	-7048.18	2547.08	430.78	1.147e+05	-7.812e+04	6.345e+05
50	53	1.257e+06	4.174e+05	3.54	0.0	0.0	-1.112e+04	-1421.97	-392.50	-1.172e+05	4.174e+05	1.257e+06
		2.016e+04	7.843e+04	1.27	0.0	870.0	-7346.62	-1421.97	-392.50	-1.172e+05	7.843e+04	2.016e+04
50	54	6.383e+05	-2.583e+05	-3.52	0.0	0.0	-1.081e+04	2548.79	1548.02	1.218e+05	-1.601e+06	-1.579e+06
		-1.579e+06	-1.601e+06	-4.83	0.0	870.0	-7032.97	2548.79	1548.02	1.218e+05	-2.583e+05	6.383e+05
50	55	1.273e+06	1.599e+06	3.58	0.0	0.0	-1.114e+04	-1445.44	-1537.89	-1.250e+05	1.599e+06	1.273e+06
		1.565e+04	2.657e+05	4.84	0.0	870.0	-7360.96	-1445.44	-1537.89	-1.250e+05	2.657e+05	1.565e+04
50	56	6.338e+05	-7.112e+04	-3.48	0.0	0.0	-1.082e+04	2525.32	402.63	1.139e+05	-4.189e+05	-1.563e+06
		-1.563e+06	-4.189e+05	-1.27	0.0	870.0	-7047.32	2525.32	402.63	1.139e+05	-7.112e+04	6.338e+05
50	57	9.618e+05	-1.498e+05	2.81	0.0	0.0	-1.112e+04	-1009.35	946.15	-1.380e+05	-9.677e+05	9.618e+05
		8.653e+04	-9.677e+05	-2.91	0.0	870.0	-7340.75	-1009.35	946.15	-1.380e+05	-1.498e+05	8.653e+04
50	58	5.705e+05	-1.615e+04	-2.71	0.0	0.0	-1.081e+04	2092.64	153.07	1.410e+05	-1.527e+05	-1.253e+06
		-1.253e+06	-1.527e+05	-0.45	0.0	870.0	-7037.11	2092.64	153.07	1.410e+05	-1.615e+04	5.705e+05
50	59	9.471e+05	1.512e+05	2.77	0.0	0.0	-1.113e+04	-989.29	-142.93	-1.442e+05	1.512e+05	9.471e+05
		8.346e+04	2.346e+04	0.46	0.0	870.0	-7356.83	-989.29	-142.93	-1.442e+05	2.346e+04	8.346e+04
50	60	5.674e+05	9.662e+05	-2.75	0.0	0.0	-1.083e+04	2112.70	-936.02	1.347e+05	9.662e+05	-1.268e+06
		-1.268e+06	1.571e+05	2.91	0.0	870.0	-7053.18	2112.70	-936.02	1.347e+05	1.571e+05	5.674e+05
50	61	9.464e+05	-1.568e+05	2.77	0.0	0.0	-1.112e+04	-987.58	974.31	-1.371e+05	-9.992e+05	9.464e+05
		8.725e+04	-9.992e+05	-3.01	0.0	870.0	-7341.62	-987.58	974.31	-1.371e+05	-1.568e+05	8.725e+04
50	62	5.712e+05	-2.315e+04	-2.75	0.0	0.0	-1.081e+04	2114.41	181.22	1.418e+05	-1.842e+05	-1.268e+06
		-1.268e+06	-1.842e+05	-0.55	0.0	870.0	-7037.97	2114.41	181.22	1.418e+05	-2.315e+04	5.712e+05
50	63	9.625e+05	1.827e+05	2.81	0.0	0.0	-1.113e+04	-1011.06	-171.09	-1.450e+05	1.827e+05	9.625e+05
		8.274e+04	3.047e+04	0.56	0.0	870.0	-7355.96	-1011.06	-171.09	-1.450e+05	3.047e+04	8.274e+04
50	64	5.667e+05	9.977e+05	-2.71	0.0	0.0	-1.083e+04	2090.93	-964.17	1.339e+05	9.977e+05	-1.252e+06
		-1.252e+06	1.641e+05	3.01	0.0	870.0	-7052.32	2090.93	-964.17	1.339e+05	1.641e+05	5.667e+05
50	65	2.966e+05	3318.26	-0.08	0.0	0.0	-1.037e+04	500.42	4.59	-1462.44	-678.92	-1.388e+05
		-1.388e+05	-678.92	2.74e-03	0.0	870.0	-6589.87	500.42	4.59	-1462.44	3318.26	2.966e+05
50	66	3.270e+05	3657.89	-0.09	0.0	0.0	-1.097e+04	551.68	5.07	-1611.70	-751.56	-1.530e+05
		-1.530e+05	-751.56	3.01e-03	0.0	870.0	-7196.97	551.68	5.07	-1611.70	3657.89	3.270e+05
51	1	6.262e+06	-1.930e+05	4.59	0.0	0.0	-6.387e+04	-1.863e+04	2243.39	-3.351e+04	-2.144e+06	6.262e+06
		-9.950e+06	-2.144e+06	-7.13	0.0	870.0	-6.010e+04	-1.863e+04	2243.39	-3.351e+04	-1.930e+05	-9.950e+06
51	2	3.920e+06	-2.720e+05	2.03	0.0	0.0	-6.198e+04	-1.385e+04	2854.15	-1.083e+05	-2.753e+06	3.920e+06
		-8.128e+06	-2.753e+06	-9.19	0.0	870.0	-5.820e+04	-1.385e+04	2854.15	-1.083e+05	-2.720e+05	-8.128e+06
51	3	6.111e+06	2.753e+06	4.42	0.0	0.0	-6.375e+04	-1.832e+04	-2850.73	1.082e+05	2.753e+06	6.111e+06
		-9.831e+06	2.750e+05	9.20	0.0	870.0	-5.998e+04	-1.832e+04	-2850.73	1.082e+05	2.750e+05	-9.831e+06
51	4	3.769e+06	2.144e+06	1.90	0.0	0.0	-6.186e+04	-1.354e+04	-2239.98	3.344e+04	2.144e+06	3.769e+06
		-8.009e+06	1.960e+05	7.13	0.0	870.0	-5.808e+04	-1.354e+04	-2239.98	3.344e+04	1.960e+05	-8.009e+06
51	5	6.416e+06	-2.496e+05	4.77	0.0	0.0	-6.398e+04	-1.895e+04	2672.88	-5.405e+04	-2.571e+06	6.416e+06
		-1.007e+07	-2.571e+06	-8.58	0.0	870.0	-6.021e+04	-1.895e+04	2672.88	-5.405e+04	-2.496e+05	-1.007e+07
51	6	3.765e+06	-2.155e+05	1.89	0.0	0.0	-6.187e+04	-1.353e+04	2424.66	-8.772e+04	-2.325e+06	3.765e+06
		-8.009e+06	-2.325e+06	-7.75	0.0	870.0	-5.809e+04	-1.353e+04	2424.66	-8.772e+04	-2.155e+05	-8.009e+06
51	7	6.265e+06	2.325e+06	4.60	0.0	0.0	-6.386e+04	-1.864e+04	-2421.25	8.765e+04	2.325e+06	6.265e+06
		-9.950e+06	2.185e+05	7.75	0.0	870.0	-6.008e+04	-1.864e+04	-2421.25	8.765e+04	2.185e+05	-9.950e+06
51	8	3.615e+06	2.571e+06	1.76	0.0	0.0	-6.175e+04	-1.322e+04	-2669.46	5.398e+04	2.571e+06	3.615e+06
		-7.890e+06	2.526e+05	8.58	0.0	870.0	-5.797e+04	-1.322e+04	-2669.46	5.398e+04	2.526e+05	-7.890e+06
51	9	6.117e+06	-2.161e+05	4.42	0.0	0.0	-6.376e+04	-1.834e+04	2372.81	-5.339e+04	-2.279e+06	6.117e+06
		-9.838e+06	-2.279e+06	-7.60	0.0	870.0	-5.998e+04	-1.834e+04	2372.81	-5.339e+04	-2.161e+05	-9.838e+06
51	10	3.775e+06	-2.951e+05	1.90	0.0	0.0	-6.186e+04	-1.355e+04	2983.57	-1.281e+05	-2.951e+05	3.775e+06
		-8.016e+06	-2.888e+06	-9.66	0.0	870.0	-5.809e+04	-1.355e+04	2983.57	-1.281e+05	-2.951e+05	-8.016e+06
51	11	6.256e+06	2.888e+06	4.59	0.0	0.0	-6.387e+04	-1.862e+04	-2980.16	1.281e+05	2.888e+06	6.256e+06
		-9.943e+06	2.981e+05	9.67	0.0	870.0	-6.009e+04	-1.862e+04	-2980.16	1.281e+05	2.981e+05	-9.943e+06
51	12	3.914e+06	2.279e+06	2.03	0.0	0.0	-6.197e+04	-1.383e+04	-2369.40	5.332e+04	2.279e+06	3.914e+06
		-8.121e+06	2.191e+05	7.60	0.0	870.0	-5.819e+04	-1.383e+04	-2369.40	5.332e+04	2.191e+05	-8.121e+06
51	13	6.271e+06	-2.727e+05	4.60	0.0	0.0	-6.387e+04	-1.865e+04	2802.30	-7.393e+04	-2.707e+06	6.271e+06
		-9.957e+06	-2.707e+06	-9.04	0.0	870.0	-6.009e+04	-1.865e+04	2802.30	-7.393e+04	-2.727e+05	-9.957e+06
51	14	3.620e+06	-2.385e+05	1.76	0.0	0.0	-6.176e+04	-1.324e+04	2554.08	-1.076e+05	-2.385e+05	3.620e+06
		-7.897e+06	-2.461e+06	-8.21	0.0	870.0	-5.798e+04	-1.324e+04	2554.08	-1.076e+05	-2.461e+06	-7.897e+06
51	15	6.410e+06	2.461e+06	4.76	0.0	0.0	-6.397e+04	-1.893e+04	-2550.67	1.075e+05	2.461e+06	6.410e+06

		-1.006e+07	2.415e+05	8.22	0.0	870.0-6.020e+04	-1.893e+04	-2550.67	1.075e+05	2.415e+05	-1.006e+07
51	16	3.759e+06	2.707e+06	1.89	0.0	0.0-6.186e+04	-1.352e+04	-2798.88	7.386e+04	2.707e+06	3.759e+06
		-8.002e+06	2.757e+05	9.05	0.0	870.0-5.809e+04	-1.352e+04	-2798.88	7.386e+04	2.757e+05	-8.002e+06
51	17	8.942e+06	2.809e+05	7.99	0.0	0.0-6.604e+04	-2.411e+04	-252.10	1.033e+05	2.809e+05	8.942e+06
		-1.203e+07	6.294e+04	0.99	0.0	870.0-6.227e+04	-2.411e+04	-252.10	1.033e+05	6.294e+04	-1.203e+07
51	18	1.134e+06	-2.004e+05	-4.55	0.0	0.0-5.972e+04	-8154.64	1783.75	-1.459e+05	-1.750e+06	1.134e+06
		-5.960e+06	-1.750e+06	-5.89	0.0	870.0-5.595e+04	-8154.64	1783.75	-1.459e+05	-2.004e+05	-5.960e+06
51	19	8.896e+06	1.750e+06	7.93	0.0	0.0-6.601e+04	-2.402e+04	-1780.34	1.458e+05	1.750e+06	8.896e+06
		-1.200e+07	2.034e+05	5.89	0.0	870.0-6.223e+04	-2.402e+04	-1780.34	1.458e+05	2.034e+05	-1.200e+07
51	20	1.089e+06	-5.994e+04	-4.62	0.0	0.0-5.969e+04	-8061.66	255.51	-1.034e+05	-2.808e+05	1.089e+06
		-5.925e+06	-2.808e+05	-0.99	0.0	870.0-5.591e+04	-8061.66	255.51	-1.034e+05	-5.994e+04	-5.925e+06
51	21	8.898e+06	2.402e+05	7.93	0.0	0.0-6.601e+04	-2.402e+04	-213.27	9.732e+04	2.402e+05	8.898e+06
		-1.200e+07	5.601e+04	0.85	0.0	870.0-6.223e+04	-2.402e+04	-213.27	9.732e+04	5.601e+04	-1.200e+07
51	22	1.091e+06	-2.073e+05	-4.61	0.0	0.0-5.969e+04	-8066.09	1822.58	-1.518e+05	-1.791e+06	1.091e+06
		-5.927e+06	-1.791e+06	-6.03	0.0	870.0-5.591e+04	-8066.09	1822.58	-1.518e+05	-2.073e+05	-5.927e+06
51	23	8.940e+06	1.791e+06	7.99	0.0	0.0-6.604e+04	-2.411e+04	-1819.16	1.518e+05	1.791e+06	8.940e+06
		-1.203e+07	2.103e+05	6.03	0.0	870.0-6.227e+04	-2.411e+04	-1819.16	1.518e+05	2.103e+05	-1.203e+07
51	24	1.132e+06	-5.301e+04	-4.55	0.0	0.0-5.972e+04	-8150.21	216.69	-9.740e+04	-2.402e+05	1.132e+06
		-5.958e+06	-2.402e+05	-0.85	0.0	870.0-5.595e+04	-8150.21	216.69	-9.740e+04	-5.301e+04	-5.958e+06
51	25	9.456e+06	1.257e+05	8.69	0.0	0.0-6.640e+04	-2.516e+04	1179.51	3.482e+04	1.257e+05	9.456e+06
		-1.243e+07	-1.144e+06	-3.83	0.0	870.0-6.263e+04	-2.516e+04	1179.51	3.482e+04	-1.257e+05	-1.243e+07
51	26	6.200e+05	-1.177e+04	-5.33	0.0	0.0-5.936e+04	-7108.11	352.14	-7.740e+04	-3.249e+05	6.200e+05
		-5.564e+06	-3.249e+05	-1.06	0.0	870.0-5.559e+04	-7108.11	352.14	-7.740e+04	-1.177e+04	-5.564e+06
51	27	9.411e+06	3.250e+05	8.63	0.0	0.0-6.637e+04	-2.506e+04	-348.72	7.733e+04	3.250e+05	9.411e+06
		-1.239e+07	1.477e+04	1.07	0.0	870.0-6.259e+04	-2.506e+04	-348.72	7.733e+04	1.477e+04	-1.239e+07
51	28	5.748e+05	1.144e+06	-5.39	0.0	0.0-5.933e+04	-7015.13	-1176.10	-3.489e+04	1.144e+06	5.748e+05
		-5.528e+06	1.287e+05	3.84	0.0	870.0-5.555e+04	-7015.13	-1176.10	-3.489e+04	1.287e+05	-5.528e+06
51	29	9.412e+06	-1.326e+05	8.63	0.0	0.0-6.637e+04	-2.507e+04	1218.34	2.886e+04	-1.185e+06	9.412e+06
		-1.240e+07	-1.185e+06	-3.97	0.0	870.0-6.259e+04	-2.507e+04	1218.34	2.886e+04	-1.326e+05	-1.240e+07
51	30	5.765e+05	-1.870e+04	-5.39	0.0	0.0-5.933e+04	-7019.56	390.96	-8.336e+04	-3.656e+05	5.765e+05
		-5.530e+06	-3.656e+05	-1.20	0.0	870.0-5.555e+04	-7019.56	390.96	-8.336e+04	-1.870e+04	-5.530e+06
51	31	9.454e+06	3.656e+05	8.69	0.0	0.0-6.640e+04	-2.515e+04	-387.55	8.329e+04	3.656e+05	9.454e+06
		-1.243e+07	2.166e+04	1.21	0.0	870.0-6.263e+04	-2.515e+04	-387.55	8.329e+04	2.166e+04	-1.243e+07
51	32	6.182e+05	1.185e+06	-5.33	0.0	0.0-5.936e+04	-7103.68	-1214.93	-2.893e+04	1.185e+06	6.182e+05
		-5.562e+06	1.356e+05	3.98	0.0	870.0-5.558e+04	-7103.68	-1214.93	-2.893e+04	1.356e+05	-5.562e+06
51	33	6.100e+06	-1.243e+05	4.40	0.0	0.0-6.374e+04	-1.830e+04	1485.86	-1.612e+04	-1.416e+06	6.100e+06
		-9.824e+06	-1.416e+06	-4.70	0.0	870.0-5.997e+04	-1.830e+04	1485.86	-1.612e+04	-1.243e+05	-9.824e+06
51	34	4.046e+06	-1.936e+05	2.15	0.0	0.0-6.208e+04	-1.411e+04	2021.30	-8.165e+04	-1.950e+06	4.046e+06
		-8.226e+06	-1.950e+06	-6.51	0.0	870.0-5.831e+04	-1.411e+04	2021.30	-8.165e+04	-1.936e+05	-8.226e+06
51	35	5.984e+06	1.950e+06	4.27	0.0	0.0-6.365e+04	-1.807e+04	-2017.89	8.158e+04	1.950e+06	5.984e+06
		-9.733e+06	1.966e+05	6.52	0.0	870.0-5.987e+04	-1.807e+04	-2017.89	8.158e+04	1.966e+05	-9.733e+06
51	36	3.931e+06	1.416e+06	2.05	0.0	0.0-6.199e+04	-1.387e+04	-1482.44	1.605e+04	1.416e+06	3.931e+06
		-8.135e+06	1.273e+05	4.71	0.0	870.0-5.821e+04	-1.387e+04	-1482.44	1.605e+04	1.273e+05	-8.135e+06
51	37	6.235e+06	-1.739e+05	4.56	0.0	0.0-6.384e+04	-1.858e+04	1862.35	-3.413e+04	-1.790e+06	6.235e+06
		-9.928e+06	-1.790e+06	-5.97	0.0	870.0-6.006e+04	-1.858e+04	1862.35	-3.413e+04	-1.739e+05	-9.928e+06
51	38	3.912e+06	-1.440e+05	2.03	0.0	0.0-6.199e+04	-1.383e+04	1644.81	-6.364e+04	-1.575e+06	3.912e+06
		-8.122e+06	-1.575e+06	-5.24	0.0	870.0-5.821e+04	-1.383e+04	1644.81	-6.364e+04	-1.440e+05	-8.122e+06
51	39	6.119e+06	1.575e+06	4.43	0.0	0.0-6.374e+04	-1.834e+04	-1641.40	6.356e+04	1.575e+06	6.119e+06
		-9.837e+06	1.470e+05	5.25	0.0	870.0-5.997e+04	-1.834e+04	-1641.40	6.356e+04	1.470e+05	-9.837e+06
51	40	3.796e+06	1.790e+06	1.92	0.0	0.0-6.189e+04	-1.359e+04	-1858.93	3.406e+04	1.790e+06	3.796e+06
		-8.031e+06	1.769e+05	5.98	0.0	870.0-5.812e+04	-1.359e+04	-1858.93	3.406e+04	1.769e+05	-8.031e+06
51	41	5.989e+06	-1.402e+05	4.28	0.0	0.0-6.366e+04	-1.808e+04	1573.45	-2.987e+04	-1.508e+06	5.989e+06
		-9.738e+06	-1.508e+06	-5.02	0.0	870.0-5.988e+04	-1.808e+04	1573.45	-2.987e+04	-1.402e+05	-9.738e+06
51	42	3.936e+06	-2.094e+05	2.05	0.0	0.0-6.199e+04	-1.388e+04	2108.89	-9.540e+04	-2.042e+06	3.936e+06
		-8.140e+06	-2.042e+06	-6.83	0.0	870.0-5.822e+04	-1.388e+04	2108.89	-9.540e+04	-2.094e+05	-8.140e+06
51	43	6.095e+06	2.042e+06	4.40	0.0	0.0-6.374e+04	-1.829e+04	-2105.48	9.532e+04	2.042e+06	6.095e+06
		-9.819e+06	2.124e+05	6.83	0.0	870.0-5.996e+04	-1.829e+04	-2105.48	9.532e+04	2.124e+05	-9.819e+06
51	44	4.042e+06	1.508e+06	2.15	0.0	0.0-6.208e+04	-1.409e+04	-1570.03	2.979e+04	1.508e+06	4.042e+06
		-8.221e+06	1.431e+05	5.02	0.0	870.0-5.830e+04	-1.409e+04	-1570.03	2.979e+04	1.431e+05	-8.221e+06
51	45	6.124e+06	-1.897e+05	4.43	0.0	0.0-6.375e+04	-1.835e+04	1949.94	-4.788e+04	-1.882e+06	6.124e+06
		-9.842e+06	-1.882e+06	-6.29	0.0	870.0-5.997e+04	-1.835e+04	1949.94	-4.788e+04	-1.897e+05	-9.842e+06
51	46	3.801e+06	-1.598e+05	1.93	0.0	0.0-6.190e+04	-1.361e+04	1732.40	-7.738e+04	-1.667e+06	3.801e+06
		-8.037e+06	-1.667e+06	-5.56	0.0	870.0-5.812e+04	-1.361e+04	1732.40	-7.738e+04	-1.598e+05	-8.037e+06
51	47	6.230e+06	1.667e+06	4.56	0.0	0.0-6.383e+04	-1.857e+04	-1728.99	7.731e+04	1.667e+06	6.230e+06
		-9.922e+06	1.628e+05	5.56	0.0	870.0-6.006e+04	-1.857e+04	-1728.99	7.731e+04	1.628e+05	-9.922e+06
51	48	3.907e+06	1.882e+06	2.02	0.0	0.0-6.198e+04	-1.382e+04	-1946.52	4.781e+04	1.882e+06	3.907e+06
		-8.117e+06	1.927e+05	6.29	0.0	870.0-5.820e+04	-1.382e+04	-1946.52	4.781e+04	1.927e+05	-8.117e+06
51	49	8.455e+06	3.854e+05	7.33	0.0	0.0-6.565e+04	-2.312e+04	-365.14	9.453e+04	3.854e+05	8.455e+06
		-1.166e+07	6.878e+04	1.33	0.0	870.0-6.187e+04	-2.312e+04	-365.14	9.453e+04	6.878e+04	-1.166e+07
51	50	1.610e+06	-1.620e+05	-3.83	0.0	0.0-6.011e+04	-9127.48	1419.67	-1.239e+05	-1.395e+06	1.610e+06
		-6.331e+06	-1.395e+06	-4.70	0.0	870.0-5.633e+04	-9127.48	1419.67	-1.239e+05	-1.620e+05	-6.331e+06
51	51	8.420e+06	1.395e+06	7.28	0.0	0.0-6.562e+04	-2.304e+04	-1416.26	1.238e+05	1.395e+06	8.420e+06
		-1.163e+07	1.650e+05	4.70	0.0	870.0-6.185e+04	-2.304e+04	-1416.26	1.238e+05	1.650e+05	-1.163e+07
51	52	1.576e+06	-6.578e+04	-3.88	0.0	0.0-6.008e+04	-9056.27	368.55	-9.460e+04	-3.853e+05	1.576e+06
		-6.303e+06	-3.853e+05	-1.33	0.0	870.0-5.630e+04	-9056.27	368.55	-9.460e+04	-6.578e+04	-6.303e+06
51	53	8.422e+06	3.578e+05	7.28	0.0	0.0-6.562e+04	-2.305e+04	-338.86	9.040e+04	3.578e+05	8.422e+06
		-1.163e+07	6.403e+04	1.24	0.0	870.0-6.185e+04	-2.305e+04	-338.86	9.040e+04	6.403e+04	-1.163e+07

51	54	1.577e+06	-1.668e+05	-3.88	0.0	0.0	-6.008e+04	-9059.70	1445.95	-1.280e+05	-1.423e+06	1.577e+06
		-6.305e+06	-1.423e+06	-4.79	0.0	870.0	-5.631e+04	-9059.70	1445.95	-1.280e+05	-1.668e+05	-6.305e+06
51	55	8.454e+06	1.423e+06	7.32	0.0	0.0	-6.565e+04	-2.311e+04	-1442.54	1.280e+05	1.423e+06	8.454e+06
		-1.165e+07	1.698e+05	4.80	0.0	870.0	-6.187e+04	-2.311e+04	-1442.54	1.280e+05	1.698e+05	-1.165e+07
51	56	1.609e+06	-6.103e+04	-3.83	0.0	0.0	-6.011e+04	-9124.05	342.27	-9.047e+04	-3.578e+05	1.609e+06
		-6.329e+06	-3.578e+05	-1.23	0.0	870.0	-5.633e+04	-9124.05	342.27	-9.047e+04	-6.103e+04	-6.329e+06
51	57	8.904e+06	-9.654e+04	7.94	0.0	0.0	-6.596e+04	-2.403e+04	889.83	3.448e+04	-6.637e+05	8.904e+06
		-1.200e+07	-8.637e+05	-2.89	0.0	870.0	-6.219e+04	-2.403e+04	889.83	3.448e+04	-9.654e+04	-1.200e+07
51	58	1.161e+06	3272.56	-4.51	0.0	0.0	-5.979e+04	-8212.93	164.71	-6.386e+04	-1.459e+05	1.161e+06
		-5.984e+06	-1.459e+05	-0.47	0.0	870.0	-5.602e+04	-8212.93	164.71	-6.386e+04	3272.56	-5.984e+06
51	59	8.870e+06	1.459e+05	7.89	0.0	0.0	-6.594e+04	-2.396e+04	-161.29	6.379e+04	1.459e+05	8.870e+06
		-1.197e+07	-275.46	0.47	0.0	870.0	-6.216e+04	-2.396e+04	-161.29	6.379e+04	-275.46	-1.197e+07
51	60	1.126e+06	8.638e+05	-4.56	0.0	0.0	-5.977e+04	-8141.72	-886.42	-3.456e+04	8.638e+05	1.126e+06
		-5.957e+06	9.954e+04	2.90	0.0	870.0	-5.599e+04	-8141.72	-886.42	-3.456e+04	9.954e+04	-5.957e+06
51	61	8.871e+06	-1.013e+05	7.90	0.0	0.0	-6.594e+04	-2.396e+04	916.11	3.036e+04	-8.913e+05	8.871e+06
		-1.198e+07	-8.913e+05	-2.99	0.0	870.0	-6.216e+04	-2.396e+04	916.11	3.036e+04	-1.013e+05	-1.198e+07
51	62	1.128e+06	-1476.09	-4.56	0.0	0.0	-5.977e+04	-8145.14	190.98	-6.799e+04	-1.734e+05	1.128e+06
		-5.959e+06	-1.734e+05	-0.56	0.0	870.0	-5.599e+04	-8145.14	190.98	-6.799e+04	-1476.09	-5.959e+06
51	63	8.903e+06	1.735e+05	7.94	0.0	0.0	-6.596e+04	-2.403e+04	-187.57	6.792e+04	1.735e+05	8.903e+06
		-1.200e+07	4473.19	0.57	0.0	870.0	-6.216e+04	-2.403e+04	-187.57	6.792e+04	4473.19	-1.200e+07
51	64	1.159e+06	8.913e+05	-4.51	0.0	0.0	-5.979e+04	-8209.50	-912.69	-3.043e+04	8.913e+05	1.159e+06
		-5.983e+06	1.043e+05	2.99	0.0	870.0	-5.602e+04	-8209.50	-912.69	-3.043e+04	1.043e+05	-5.983e+06
51	65	4.556e+06	1359.05	2.86	0.0	0.0	-5.748e+04	-1.461e+04	1.54	-32.59	15.13	4.556e+06
		-8.157e+06	15.13	2.21e-03	0.0	870.0	-5.370e+04	-1.461e+04	1.54	-32.59	1359.05	-8.157e+06
51	66	5.015e+06	1498.55	3.15	0.0	0.0	-6.287e+04	-1.609e+04	1.71	-35.35	13.94	5.015e+06
		-8.980e+06	13.94	2.43e-03	0.0	870.0	-5.909e+04	-1.609e+04	1.71	-35.35	1498.55	-8.980e+06
52	1	3.767e+06	2.892e+06	1.90	0.0	0.0	-6.186e+04	-1.354e+04	-2987.01	1.287e+05	2.892e+06	3.767e+06
		-8.010e+06	2.955e+05	9.67	0.0	870.0	-5.808e+04	-1.354e+04	-2987.01	1.287e+05	2.955e+05	-8.010e+06
52	2	6.109e+06	2.284e+06	4.41	0.0	0.0	-6.375e+04	-1.832e+04	-2378.31	5.390e+04	2.284e+06	6.109e+06
		-9.832e+06	2.166e+05	7.61	0.0	870.0	-5.998e+04	-1.832e+04	-2378.31	5.390e+04	2.166e+05	-9.832e+06
52	3	3.922e+06	-2.196e+05	2.04	0.0	0.0	-6.198e+04	-1.385e+04	2374.80	-5.382e+04	-2.284e+06	3.922e+06
		-8.127e+06	-2.284e+06	-7.62	0.0	870.0	-5.820e+04	-1.385e+04	2374.80	-5.382e+04	-2.196e+05	-8.127e+06
52	4	6.264e+06	-2.985e+05	4.60	0.0	0.0	-6.387e+04	-1.864e+04	2983.51	-1.286e+05	-2.985e+05	6.264e+06
		-9.949e+06	-2.892e+06	-9.68	0.0	870.0	-6.010e+04	-1.864e+04	2983.51	-1.286e+05	-2.985e+05	-9.949e+06
52	5	3.613e+06	2.466e+06	1.76	0.0	0.0	-6.175e+04	-1.322e+04	-2558.98	1.081e+05	2.466e+06	3.613e+06
		-7.891e+06	2.390e+05	8.23	0.0	870.0	-5.797e+04	-1.322e+04	-2558.98	1.081e+05	2.390e+05	-7.891e+06
52	6	6.263e+06	2.711e+06	4.59	0.0	0.0	-6.386e+04	-1.864e+04	-2806.34	7.444e+04	2.711e+06	6.263e+06
		-9.951e+06	2.731e+05	9.06	0.0	870.0	-6.009e+04	-1.864e+04	-2806.34	7.444e+04	2.731e+05	-9.951e+06
52	7	3.768e+06	-2.761e+05	1.90	0.0	0.0	-6.187e+04	-1.354e+04	2802.84	-7.436e+04	-2.711e+06	3.768e+06
		-8.008e+06	-2.711e+06	-9.06	0.0	870.0	-5.809e+04	-1.354e+04	2802.84	-7.436e+04	-2.761e+05	-8.008e+06
52	8	6.418e+06	-2.420e+05	4.77	0.0	0.0	-6.398e+04	-1.895e+04	2555.47	-1.080e+05	-2.466e+06	6.418e+06
		-1.007e+07	-2.466e+06	-8.23	0.0	870.0	-6.021e+04	-1.895e+04	2555.47	-1.080e+05	-2.420e+05	-1.007e+07
52	9	3.912e+06	2.757e+06	2.03	0.0	0.0	-6.197e+04	-1.383e+04	-2858.43	1.088e+05	2.757e+06	3.912e+06
		-8.122e+06	2.725e+05	9.21	0.0	870.0	-5.820e+04	-1.383e+04	-2858.43	1.088e+05	2.725e+05	-8.122e+06
52	10	6.254e+06	2.150e+06	4.58	0.0	0.0	-6.387e+04	-1.862e+04	-2249.72	3.403e+04	2.150e+06	6.254e+06
		-9.944e+06	1.936e+05	7.15	0.0	870.0	-6.009e+04	-1.862e+04	-2249.72	3.403e+04	1.936e+05	-9.944e+06
52	11	3.777e+06	-1.966e+05	1.91	0.0	0.0	-6.186e+04	-1.355e+04	2246.22	-3.394e+04	-2.150e+06	3.777e+06
		-8.015e+06	-2.150e+06	-7.15	0.0	870.0	-5.809e+04	-1.355e+04	2246.22	-3.394e+04	-1.966e+05	-8.015e+06
52	12	6.119e+06	-2.755e+05	4.43	0.0	0.0	-6.376e+04	-1.834e+04	2854.92	-1.087e+05	-2.757e+06	6.119e+06
		-9.837e+06	-2.757e+06	-9.21	0.0	870.0	-5.998e+04	-1.834e+04	2854.92	-1.087e+05	-2.755e+05	-9.837e+06
52	13	3.757e+06	2.331e+06	1.89	0.0	0.0	-6.186e+04	-1.352e+04	-2430.39	8.825e+04	2.331e+06	3.757e+06
		-8.003e+06	2.160e+05	7.76	0.0	870.0	-5.809e+04	-1.352e+04	-2430.39	8.825e+04	2.160e+05	-8.003e+06
52	14	6.408e+06	2.576e+06	4.76	0.0	0.0	-6.398e+04	-1.893e+04	-2677.76	5.457e+04	2.576e+06	6.408e+06
		-1.006e+07	2.501e+05	8.59	0.0	870.0	-6.020e+04	-1.893e+04	-2677.76	5.457e+04	2.501e+05	-1.006e+07
52	15	3.623e+06	-2.531e+05	1.77	0.0	0.0	-6.175e+04	-1.324e+04	2674.25	-5.448e+04	-2.576e+06	3.623e+06
		-7.896e+06	-2.576e+06	-8.60	0.0	870.0	-5.798e+04	-1.324e+04	2674.25	-5.448e+04	-2.531e+05	-7.896e+06
52	16	6.273e+06	-2.190e+05	4.61	0.0	0.0	-6.387e+04	-1.865e+04	2426.89	-8.817e+04	-2.331e+06	6.273e+06
		-9.956e+06	-2.331e+06	-7.77	0.0	870.0	-6.009e+04	-1.865e+04	2426.89	-8.817e+04	-2.190e+05	-9.956e+06
52	17	1.088e+06	1.789e+06	-4.62	0.0	0.0	-5.969e+04	-8061.45	-1820.53	1.520e+05	1.789e+06	1.088e+06
		-5.925e+06	2.073e+05	6.02	0.0	870.0	-5.591e+04	-8061.45	-1820.53	1.520e+05	2.073e+05	-5.925e+06
52	18	8.896e+06	-5.580e+04	7.93	0.0	0.0	-6.601e+04	-2.402e+04	208.48	-9.719e+04	-2.358e+05	8.896e+06
		-1.200e+07	-2.358e+05	-0.84	0.0	870.0	-6.223e+04	-2.402e+04	208.48	-9.719e+04	-5.580e+04	-1.200e+07
52	19	1.135e+06	2.359e+05	-4.55	0.0	0.0	-5.972e+04	-8155.39	-211.99	9.728e+04	2.359e+05	1.135e+06
		-5.960e+06	5.281e+04	0.83	0.0	870.0	-5.595e+04	-8155.39	-211.99	9.728e+04	5.281e+04	-5.960e+06
52	20	8.942e+06	-2.103e+05	7.99	0.0	0.0	-6.604e+04	-2.411e+04	1817.03	-1.519e+05	-1.789e+06	8.942e+06
		-1.203e+07	-1.789e+06	-6.03	0.0	870.0	-6.227e+04	-2.411e+04	1817.03	-1.519e+05	-2.103e+05	-1.203e+07
52	21	1.132e+06	1.748e+06	-4.55	0.0	0.0	-5.972e+04	-8150.01	-1781.96	1.461e+05	1.748e+06	1.132e+06
		-5.959e+06	2.004e+05	5.88	0.0	870.0	-5.595e+04	-8150.01	-1781.96	1.461e+05	2.004e+05	-5.959e+06
52	22	8.939e+06	-6.271e+04	7.99	0.0	0.0	-6.604e+04	-2.411e+04	247.06	-1.032e+05	-2.763e+05	8.939e+06
		-1.203e+07	-2.763e+05	-0.98	0.0	870.0	-6.227e+04	-2.411e+04	247.06	-1.032e+05	-6.271e+04	-1.203e+07
52	23	1.092e+06	2.763e+05	-4.61	0.0	0.0	-5.969e+04	-8066.83	-250.56	1.032e+05	2.763e+05	1.092e+06
		-5.927e+06	5.971e+04	0.97	0.0	870.0	-5.591e+04	-8066.83	-250.56	1.032e+05	5.971e+04	-5.927e+06
52	24	8.899e+06	-2.034e+05	7.93	0.0	0.0	-6.601e+04	-2.402e+04	1778.45	-1.460e+05	-1.748e+06	8.899e+06
		-1.200e+07	-1.748e+06	-5.89	0.0	870.0	-6.223e+04	-2.402e+04	1778.45	-1.460e+05	-2.034e+05	-1.200e+07
52	25	5.743e+05	3.682e+05	-5.40	0.0	0.0	-5.933e+04	-7014.92	-393.75	8.355e+04	3.682e+05	5.743e+05
		-5.529e+06	1.885e+04	1.21	0.0	870.0	-5.555e+04	-7014.92	-393.75	8.355e+04	1.885e+04	-5.529e+06
52	26	9.410e+06	1.185e+06	8.63	0.0	0.0	-6.637e+04	-2.506e+04	-1218.30	-2.873e+04	1.185e+06	9.410e+06

		-1.240e+07	1.327e+05	3.97	0.0	870.0	-6.259e+04	-2.506e+04	-1218.30	-2.873e+04	1.327e+05	-1.240e+07
52	27	6.208e+05	-1.357e+05	-5.32	0.0	0.0	-5.936e+04	-7108.86	1214.80	2.881e+04	-1.185e+06	6.208e+05
		-5.564e+06	-1.185e+06	-3.98	0.0	870.0	-5.559e+04	-7108.86	1214.80	2.881e+04	-1.357e+05	-5.564e+06
52	28	9.457e+06	-2.184e+04	8.69	0.0	0.0	-6.640e+04	-2.516e+04	390.24	-8.347e+04	-3.682e+05	9.457e+06
		-1.243e+07	-3.682e+05	-1.22	0.0	870.0	-6.263e+04	-2.516e+04	390.24	-8.347e+04	-2.184e+04	-1.243e+07
52	29	6.177e+05	3.278e+05	-5.33	0.0	0.0	-5.936e+04	-7103.48	-355.17	7.759e+04	3.278e+05	6.177e+05
		-5.562e+06	1.194e+04	1.07	0.0	870.0	-5.558e+04	-7103.48	-355.17	7.759e+04	1.194e+04	-5.562e+06
52	30	9.454e+06	1.144e+06	8.69	0.0	0.0	-6.640e+04	-2.515e+04	-1179.73	-3.469e+04	1.144e+06	9.454e+06
		-1.243e+07	1.258e+05	3.83	0.0	870.0	-6.263e+04	-2.515e+04	-1179.73	-3.469e+04	1.258e+05	-1.243e+07
52	31	5.773e+05	-1.288e+05	-5.39	0.0	0.0	-5.933e+04	-7020.30	1176.22	3.477e+04	-1.144e+06	5.773e+05
		-5.530e+06	-1.144e+06	-3.84	0.0	870.0	-5.555e+04	-7020.30	1176.22	3.477e+04	-1.288e+05	-5.530e+06
52	32	9.983e+06	-1.494e+04	8.63	0.0	0.0	-6.637e+04	-2.507e+04	351.67	-7.751e+04	-3.277e+05	9.983e+06
		-1.240e+07	-3.277e+05	-1.08	0.0	870.0	-6.259e+04	-2.507e+04	351.67	-7.751e+04	-1.494e+04	-1.240e+07
52	33	3.930e+06	2.044e+06	2.04	0.0	0.0	-6.199e+04	-1.387e+04	-2111.08	9.576e+04	2.044e+06	3.930e+06
		-8.136e+06	2.097e+05	6.84	0.0	870.0	-5.821e+04	-1.387e+04	-2111.08	9.576e+04	2.097e+05	-8.136e+06
52	34	5.983e+06	1.511e+06	4.27	0.0	0.0	-6.365e+04	-1.806e+04	-1577.43	3.022e+04	1.511e+06	5.983e+06
		-9.733e+06	1.405e+05	5.03	0.0	870.0	-5.987e+04	-1.806e+04	-1577.43	3.022e+04	1.405e+05	-9.733e+06
52	35	4.048e+06	-1.435e+05	2.15	0.0	0.0	-6.208e+04	-1.411e+04	1573.93	-3.014e+04	-1.511e+06	4.048e+06
		-8.226e+06	-1.511e+06	-5.04	0.0	870.0	-5.830e+04	-1.411e+04	1573.93	-3.014e+04	-1.435e+05	-8.226e+06
52	36	6.101e+06	-2.127e+05	4.41	0.0	0.0	-6.374e+04	-1.830e+04	2107.57	-9.568e+04	-2.127e+05	6.101e+06
		-9.823e+06	-2.044e+06	-6.84	0.0	870.0	-5.997e+04	-1.830e+04	2107.57	-9.568e+04	-2.127e+05	-9.823e+06
52	37	3.795e+06	1.670e+06	1.92	0.0	0.0	-6.189e+04	-1.359e+04	-1735.86	7.775e+04	1.670e+06	3.795e+06
		-8.032e+06	1.601e+05	5.57	0.0	870.0	-5.812e+04	-1.359e+04	-1735.86	7.775e+04	1.601e+05	-8.032e+06
52	38	6.118e+06	1.885e+06	4.43	0.0	0.0	-6.375e+04	-1.834e+04	-1952.65	4.823e+04	1.885e+06	6.118e+06
		-9.837e+06	1.900e+05	6.30	0.0	870.0	-5.997e+04	-1.834e+04	-1952.65	4.823e+04	1.900e+05	-9.837e+06
52	39	3.913e+06	-1.930e+05	2.03	0.0	0.0	-6.199e+04	-1.383e+04	1949.15	-4.815e+04	-1.885e+06	3.913e+06
		-8.122e+06	-1.885e+06	-6.30	0.0	870.0	-5.821e+04	-1.383e+04	1949.15	-4.815e+04	-1.930e+05	-8.122e+06
52	40	6.236e+06	-1.631e+05	4.56	0.0	0.0	-6.384e+04	-1.858e+04	1732.35	-7.767e+04	-1.670e+06	6.236e+06
		-9.927e+06	-1.670e+06	-5.58	0.0	870.0	-6.006e+04	-1.858e+04	1732.35	-7.767e+04	-1.631e+05	-9.927e+06
52	41	4.040e+06	1.952e+06	2.14	0.0	0.0	-6.208e+04	-1.409e+04	-2024.01	8.201e+04	1.952e+06	4.040e+06
		-8.222e+06	1.939e+05	6.52	0.0	870.0	-5.830e+04	-1.409e+04	-2024.01	8.201e+04	1.939e+05	-8.222e+06
52	42	6.094e+06	1.420e+06	4.40	0.0	0.0	-6.374e+04	-1.829e+04	-1490.36	1.647e+04	1.420e+06	6.094e+06
		-9.819e+06	1.247e+05	4.72	0.0	870.0	-5.996e+04	-1.829e+04	-1490.36	1.647e+04	1.247e+05	-9.819e+06
52	43	3.937e+06	-1.277e+05	2.05	0.0	0.0	-6.199e+04	-1.388e+04	1486.86	-1.638e+04	-1.420e+06	3.937e+06
		-8.140e+06	-1.420e+06	-4.72	0.0	870.0	-5.822e+04	-1.388e+04	1486.86	-1.638e+04	-1.277e+05	-8.140e+06
52	44	5.990e+06	-1.969e+05	4.28	0.0	0.0	-6.365e+04	-1.808e+04	2020.50	-8.193e+04	-1.952e+06	5.990e+06
		-9.738e+06	-1.952e+06	-6.52	0.0	870.0	-5.988e+04	-1.808e+04	2020.50	-8.193e+04	-1.969e+05	-9.738e+06
52	45	3.906e+06	1.579e+06	2.02	0.0	0.0	-6.198e+04	-1.382e+04	-1648.79	6.400e+04	1.579e+06	3.906e+06
		-8.118e+06	1.443e+05	5.26	0.0	870.0	-5.821e+04	-1.382e+04	-1648.79	6.400e+04	1.443e+05	-8.118e+06
52	46	6.229e+06	1.794e+06	4.55	0.0	0.0	-6.383e+04	-1.857e+04	-1865.58	3.448e+04	1.794e+06	6.229e+06
		-9.923e+06	1.743e+05	5.98	0.0	870.0	-6.006e+04	-1.857e+04	-1865.58	3.448e+04	1.743e+05	-9.923e+06
52	47	3.802e+06	-1.772e+05	1.93	0.0	0.0	-6.190e+04	-1.361e+04	1862.08	-3.440e+04	-1.793e+06	3.802e+06
		-8.036e+06	-1.793e+06	-5.99	0.0	870.0	-5.812e+04	-1.361e+04	1862.08	-3.440e+04	-1.772e+05	-8.036e+06
52	48	6.125e+06	-1.473e+05	4.43	0.0	0.0	-6.375e+04	-1.835e+04	1645.28	-6.392e+04	-1.579e+06	6.125e+06
		-9.841e+06	-1.579e+06	-5.26	0.0	870.0	-5.997e+04	-1.835e+04	1645.28	-6.392e+04	-1.473e+05	-9.841e+06
52	49	1.575e+06	1.421e+06	-3.88	0.0	0.0	-6.008e+04	-9056.26	-1443.91	1.282e+05	1.421e+06	1.575e+06
		-6.304e+06	1.668e+05	4.78	0.0	870.0	-5.631e+04	-9056.26	-1443.91	1.282e+05	1.668e+05	-6.304e+06
52	50	8.420e+06	-6.387e+04	7.28	0.0	0.0	-6.562e+04	-2.304e+04	334.90	-9.032e+04	-3.542e+05	8.420e+06
		-1.163e+07	-3.542e+05	-1.23	0.0	870.0	-6.185e+04	-2.304e+04	334.90	-9.032e+04	-6.387e+04	-1.163e+07
52	51	1.611e+06	3.542e+05	-3.83	0.0	0.0	-6.011e+04	-9128.03	-338.41	9.040e+04	3.542e+05	1.611e+06
		-6.331e+06	6.088e+04	1.22	0.0	870.0	-5.633e+04	-9128.03	-338.41	9.040e+04	6.088e+04	-6.331e+06
52	52	8.455e+06	-1.698e+05	7.33	0.0	0.0	-6.565e+04	-2.312e+04	1440.41	-1.281e+05	-1.421e+06	8.455e+06
		-1.166e+07	-1.421e+06	-4.79	0.0	870.0	-6.187e+04	-2.312e+04	1440.41	-1.281e+05	-1.698e+05	-1.166e+07
52	53	1.609e+06	1.393e+06	-3.83	0.0	0.0	-6.011e+04	-9124.05	-1417.79	1.240e+05	1.393e+06	1.609e+06
		-6.329e+06	1.621e+05	4.69	0.0	870.0	-5.633e+04	-9124.05	-1417.79	1.240e+05	1.621e+05	-6.329e+06
52	54	8.453e+06	-6.861e+04	7.32	0.0	0.0	-6.565e+04	-2.311e+04	361.03	-9.444e+04	-3.816e+05	8.453e+06
		-1.165e+07	-3.816e+05	-1.32	0.0	870.0	-6.187e+04	-2.311e+04	361.03	-9.444e+04	-6.861e+04	-1.165e+07
52	55	1.578e+06	3.816e+05	-3.88	0.0	0.0	-6.008e+04	-9060.24	-364.53	9.452e+04	3.816e+05	1.578e+06
		-6.305e+06	6.561e+04	1.32	0.0	870.0	-5.631e+04	-9060.24	-364.53	9.452e+04	6.561e+04	-6.305e+06
52	56	8.422e+06	-1.651e+05	7.28	0.0	0.0	-6.562e+04	-2.305e+04	1414.29	-1.240e+05	-1.393e+06	8.422e+06
		-1.163e+07	-1.393e+06	-4.69	0.0	870.0	-6.185e+04	-2.305e+04	1414.29	-1.240e+05	-1.651e+05	-1.163e+07
52	57	1.126e+06	1.755e+05	-4.56	0.0	0.0	-5.977e+04	-8141.71	-193.18	6.813e+04	1.755e+05	1.126e+06
		-5.957e+06	1583.85	0.57	0.0	870.0	-5.599e+04	-8141.71	-193.18	6.813e+04	1583.85	-5.957e+06
52	58	8.869e+06	8.911e+05	7.89	0.0	0.0	-6.594e+04	-2.396e+04	-915.83	-3.027e+04	8.911e+05	8.869e+06
		-1.197e+07	1.014e+05	2.99	0.0	870.0	-6.216e+04	-2.396e+04	-915.83	-3.027e+04	1.014e+05	-1.197e+07
52	59	1.161e+06	-1.044e+05	-4.51	0.0	0.0	-5.979e+04	-8213.48	912.32	3.036e+04	-8.910e+05	1.161e+06
		-5.984e+06	-8.910e+05	-2.99	0.0	870.0	-5.602e+04	-8213.48	912.32	3.036e+04	-1.044e+05	-5.984e+06
52	60	8.905e+06	-4578.93	7.94	0.0	0.0	-6.596e+04	-2.403e+04	189.67	-6.804e+04	-1.754e+05	8.905e+06
		-1.200e+07	-1.754e+05	-0.57	0.0	870.0	-6.219e+04	-2.403e+04	189.67	-6.804e+04	-4578.93	-1.200e+07
52	61	1.159e+06	1.481e+05	-4.51	0.0	0.0	-5.979e+04	-8209.50	-167.06	6.400e+04	1.481e+05	1.159e+06
		-5.983e+06	-3150.66	0.47	0.0	870.0	-5.602e+04	-8209.50	-167.06	6.400e+04	-3150.66	-5.983e+06
52	62	8.903e+06	8.637e+05	7.94	0.0	0.0	-6.596e+04	-2.403e+04	-889.71	-3.440e+04	8.637e+05	8.903e+06
		-1.200e+07	9.663e+04	2.89	0.0	870.0	-6.219e+04	-2.403e+04	-889.71	-3.440e+04	9.663e+04	-1.200e+07
52	63	1.128e+06	-9.962e+04	-4.56	0.0	0.0	-5.977e+04	-8145.69	886.20	3.448e+04	-8.636e+05	1.128e+06
		-5.959e+06	-8.636e+05	-2.90	0.0	870.0	-5.599e+04	-8145.69	886.20	3.448e+04	-9.962e+04	-5.959e+06
52	64	8.872e+06	155.57	7.90	0.0	0.0	-6.594e+04	-2.396e+04	163.55	-6.392e+04	-1.480e+05	8.872e+06
		-1.198e+07	-1.480e+05	-0.48	0.0	870.0	-6.216e+04	-2.396e+04	163.55	-6.392e+04	155.57	-1.198e+07

52	65	4.556e+06	20.84	2.86	0.0	0.0	-5.748e+04	-1.461e+04	-1.59	37.74	20.84	4.556e+06
		-8.157e+06	-1358.15	-2.10e-03	0.0	870.0	-5.370e+04	-1.461e+04	-1.59	37.74	-1358.15	-8.157e+06
52	66	5.015e+06	26.88	3.15	0.0	0.0	-6.287e+04	-1.609e+04	-1.75	41.10	26.88	5.015e+06
		-8.980e+06	-1497.54	-2.30e-03	0.0	870.0	-5.909e+04	-1.609e+04	-1.75	41.10	-1497.54	-8.980e+06
55	1	4.216e+05	3.195e+06	-1.50	0.0	0.0	-1.115e+04	1342.80	-3050.72	-6.439e+04	3.195e+06	-7.463e+05
		-7.463e+05	5.479e+05	9.69	0.0	870.0	-7369.41	1342.80	-3050.72	-6.439e+04	5.479e+05	4.216e+05
55	2	6.565e+05	2.514e+06	2.03	0.0	0.0	-1.113e+04	-595.74	-2355.73	-8.037e+04	2.514e+06	6.565e+05
		1.378e+05	4.630e+05	7.68	0.0	870.0	-7357.41	-595.74	-2355.73	-8.037e+04	4.630e+05	1.378e+05
55	3	5.069e+05	-4.418e+05	-1.97	0.0	0.0	-1.100e+04	1684.44	2388.23	8.390e+04	-2.521e+06	-9.590e+05
		-9.590e+05	-2.521e+06	-7.67	0.0	870.0	-7223.44	1684.44	2388.23	8.390e+04	-4.418e+05	5.069e+05
55	4	4.438e+05	5.267e+05	1.55	0.0	0.0	-1.099e+04	-254.09	3083.22	6.792e+04	-3.202e+06	4.438e+05
		2.231e+05	-3.202e+06	-9.68	0.0	870.0	-7211.43	-254.09	3083.22	6.792e+04	-5.267e+05	2.231e+05
55	5	4.269e+05	2.718e+06	-1.49	0.0	0.0	-1.111e+04	1347.99	-2565.46	-7.871e+04	2.718e+06	-7.455e+05
		-7.455e+05	5.398e+05	8.27	0.0	870.0	-7335.65	1347.99	-2565.46	-7.871e+04	5.398e+05	4.269e+05
55	6	6.557e+05	2.991e+06	2.02	0.0	0.0	-1.117e+04	-600.93	-2840.99	-6.606e+04	2.991e+06	6.557e+05
		1.325e+05	4.711e+05	9.09	0.0	870.0	-7391.17	-600.93	-2840.99	-6.606e+04	4.711e+05	1.325e+05
55	7	5.122e+05	-4.499e+05	-1.96	0.0	0.0	-1.097e+04	1689.63	2873.49	6.959e+04	-2.998e+06	-9.582e+05
		-9.582e+05	-2.998e+06	-9.08	0.0	870.0	-7189.67	1689.63	2873.49	6.959e+04	-4.499e+05	5.122e+05
55	8	4.430e+05	-5.186e+05	1.54	0.0	0.0	-1.102e+04	-259.29	2597.95	8.224e+04	-2.726e+06	4.430e+05
		2.178e+05	-2.726e+06	-8.26	0.0	870.0	-7245.20	-259.29	2597.95	8.224e+04	-5.186e+05	2.178e+05
55	9	4.525e+05	3.046e+06	-1.97	0.0	0.0	-1.116e+04	1600.26	-2904.34	-5.766e+04	3.046e+06	-9.333e+05
		-9.333e+05	5.261e+05	9.24	0.0	870.0	-7386.54	1600.26	-2904.34	-5.766e+04	5.261e+05	4.525e+05
55	10	4.694e+05	2.365e+06	1.56	0.0	0.0	-1.115e+04	-338.27	-2209.34	-7.364e+04	2.365e+06	4.694e+05
		1.688e+05	4.411e+05	7.23	0.0	870.0	-7374.54	-338.27	-2209.34	-7.364e+04	4.411e+05	1.688e+05
55	11	4.759e+05	-4.199e+05	-1.50	0.0	0.0	-1.098e+04	1426.97	2241.84	7.717e+04	-2.372e+06	-7.720e+05
		-7.720e+05	-2.372e+06	-7.22	0.0	870.0	-7206.31	1426.97	2241.84	7.717e+04	-4.199e+05	4.759e+05
55	12	6.308e+05	-5.048e+05	2.02	0.0	0.0	-1.097e+04	-511.56	2936.83	6.119e+04	-3.053e+06	6.308e+05
		1.921e+05	-3.053e+06	-9.23	0.0	870.0	-7194.31	-511.56	2936.83	6.119e+04	-5.048e+05	1.921e+05
55	13	4.578e+05	2.569e+06	-1.96	0.0	0.0	-1.113e+04	1605.46	-2419.07	-7.197e+04	2.569e+06	-9.325e+05
		-9.325e+05	5.179e+05	7.83	0.0	870.0	-7352.78	1605.46	-2419.07	-7.197e+04	5.179e+05	4.578e+05
55	14	4.687e+05	2.842e+06	1.55	0.0	0.0	-1.118e+04	-343.47	-2694.61	-5.932e+04	2.842e+06	4.687e+05
		1.635e+05	4.492e+05	8.65	0.0	870.0	-7408.30	-343.47	-2694.61	-5.932e+04	4.492e+05	1.635e+05
55	15	4.812e+05	-4.280e+05	-1.49	0.0	0.0	-1.095e+04	1432.17	2727.11	6.285e+04	-2.849e+06	-7.712e+05
		-7.712e+05	-2.849e+06	-8.64	0.0	870.0	-7172.55	1432.17	2727.11	6.285e+04	-4.280e+05	4.812e+05
55	16	6.300e+05	-4.967e+05	2.01	0.0	0.0	-1.100e+04	-516.76	2451.57	7.550e+04	-2.576e+06	6.300e+05
		1.868e+05	-2.576e+06	-7.82	0.0	870.0	-7228.07	-516.76	2451.57	7.550e+04	-4.967e+05	1.868e+05
55	17	7.825e+05	1.989e+06	-5.78	0.0	0.0	-1.111e+04	3723.99	-1957.91	6162.04	1.989e+06	-2.457e+06
		-2.457e+06	3.006e+05	5.96	0.0	870.0	-7332.32	3723.99	-1957.91	6162.04	3.006e+05	7.825e+05
55	18	2.219e+06	1.748e+04	5.97	0.0	0.0	-1.107e+04	-2737.78	358.73	-4.712e+04	-2.806e+05	2.219e+06
		-1.634e+05	-2.806e+05	-0.74	0.0	870.0	-7292.32	-2737.78	358.73	-4.712e+04	1.748e+04	-1.634e+05
55	19	8.081e+05	2.736e+05	-5.92	0.0	0.0	-1.106e+04	3826.49	-326.23	5.065e+04	2.736e+05	-2.521e+06
		-2.521e+06	3724.27	0.75	0.0	870.0	-7288.53	3826.49	-326.23	5.065e+04	3724.27	8.081e+05
55	20	2.155e+06	-2.794e+05	5.83	0.0	0.0	-1.102e+04	-2635.29	1990.41	-2631.39	-1.996e+06	2.155e+06
		-1.379e+05	-1.996e+06	-5.95	0.0	870.0	-7248.53	-2635.29	1990.41	-2631.39	-2.794e+05	-1.379e+05
55	21	7.918e+05	1.944e+06	-5.92	0.0	0.0	-1.111e+04	3801.23	-1914.00	8181.37	1.944e+06	-2.513e+05
		-2.513e+06	2.941e+05	5.83	0.0	870.0	-7337.46	3801.23	-1914.00	8181.37	2.941e+05	7.918e+05
55	22	2.162e+06	1.092e+04	5.83	0.0	0.0	-1.107e+04	-2660.54	402.64	-4.510e+04	-3.254e+05	2.162e+06
		-1.542e+05	-3.254e+05	-0.88	0.0	870.0	-7297.46	-2660.54	402.64	-4.510e+04	1.092e+04	-1.542e+05
55	23	7.988e+05	3.183e+05	-5.78	0.0	0.0	-1.106e+04	3749.25	-370.14	4.863e+04	3.183e+05	-2.465e+06
		-2.465e+06	1.028e+04	0.89	0.0	870.0	-7283.39	3749.25	-370.14	4.863e+04	1.028e+04	7.988e+05
55	24	2.211e+06	-2.729e+05	5.97	0.0	0.0	-1.102e+04	-2712.53	1946.49	-4650.72	-1.951e+06	2.211e+06
		-1.472e+05	-1.951e+06	-5.82	0.0	870.0	-7243.39	-2712.53	1946.49	-4650.72	-2.729e+05	-1.472e+05
55	25	8.001e+05	3.997e+05	-5.74	0.0	0.0	-1.100e+04	3741.31	-340.36	-4.156e+04	3.997e+05	-2.455e+06
		-2.455e+06	2.736e+05	1.24	0.0	870.0	-7219.79	3741.31	-340.36	-4.156e+04	2.736e+05	8.001e+05
55	26	2.216e+06	1.308e+06	5.94	0.0	0.0	-1.118e+04	-2755.10	-1258.82	605.62	1.308e+06	2.216e+06
		-1.811e+05	4.454e+04	3.98	0.0	870.0	-7404.86	-2755.10	-1258.82	605.62	4.454e+04	-1.811e+05
55	27	8.257e+05	-2.334e+04	-5.89	0.0	0.0	-1.095e+04	3843.80	1291.32	2925.03	-1.315e+06	-2.519e+05
		-2.519e+06	-1.315e+06	-3.97	0.0	870.0	-7175.99	3843.80	1291.32	2925.03	-2.334e+04	8.257e+05
55	28	2.152e+06	-2.524e+05	5.80	0.0	0.0	-1.114e+04	-2652.61	372.86	4.509e+04	-2.524e+05	-1.555e+05
		-1.555e+05	-4.068e+05	-1.23	0.0	870.0	-7361.06	-2652.61	372.86	4.509e+04	-2.524e+05	-1.555e+05
55	29	8.094e+05	3.550e+05	-5.89	0.0	0.0	-1.100e+04	3818.55	-296.45	-3.954e+04	3.550e+05	-2.511e+06
		-2.511e+06	2.670e+05	1.11	0.0	870.0	-7224.92	3818.55	-296.45	-3.954e+04	2.670e+05	8.094e+05
55	30	2.160e+06	1.263e+06	5.80	0.0	0.0	-1.119e+04	-2677.86	-1214.91	2624.95	1.263e+06	2.160e+06
		-1.718e+05	3.798e+04	3.84	0.0	870.0	-7409.99	-2677.86	-1214.91	2624.95	3.798e+04	-1.718e+05
55	31	8.164e+05	-1.678e+04	-5.75	0.0	0.0	-1.095e+04	3766.56	1247.41	905.70	-1.270e+06	-2.462e+06
		-2.462e+06	-1.270e+06	-3.83	0.0	870.0	-7170.86	3766.56	1247.41	905.70	-1.678e+04	8.164e+05
55	32	2.208e+06	-2.458e+05	5.94	0.0	0.0	-1.113e+04	-2729.85	328.95	4.307e+04	-3.621e+05	2.208e+06
		-1.648e+05	-3.621e+05	-1.10	0.0	870.0	-7355.93	-2729.85	328.95	4.307e+04	-2.458e+05	-1.648e+05
55	33	4.171e+05	2.258e+06	-1.35	0.0	0.0	-1.112e+04	1273.54	-2158.29	-4.209e+04	2.258e+06	-6.905e+05
		-6.905e+05	3.870e+05	6.85	0.0	870.0	-7345.88	1273.54	-2158.29	-4.209e+04	3.870e+05	4.171e+05
55	34	5.390e+05	1.661e+06	1.74	0.0	0.0	-1.111e+04	-425.60	-1549.02	-5.610e+04	1.661e+06	5.390e+05
		1.684e+05	3.125e+05	5.08	0.0	870.0	-7335.36	-425.60	-1549.02	-5.610e+04	3.125e+05	1.684e+05
55	35	4.763e+05	-2.913e+05	-1.69	0.0	0.0	-1.102e+04	1514.30	1581.52	5.963e+04	-1.668e+06	-8.416e+05
		-8.416e+05	-1.668e+06	-5.07	0.0	870.0	-7245.49	1514.30	1581.52	5.963e+04	-2.913e+05	4.763e+05
55	36	3.880e+05	-3.658e+05	1.40	0.0	0.0	-1.101e+04	-184.84	2190.79	4.562e+04	-2.265e+06	3.880e+05
		2.275e+05	-2.265e+06	-6.84	0.0	870.0	-7234.96	-184.84	2190.79	4.562e+04	-3.658e+05	2.275e+05
55	37	4.217e+05	1.840e+06	-1.34	0.0	0.0	-1.109e+04	1278.00	-1732.91	-5.464e+04	1.840e+06	-6.897e+05

		-6.897e+05	3.798e+05	5.60	0.0	870.0	-7316.29	1278.00	-1732.91	-5.464e+04	3.798e+05	4.217e+05
55	38	5.383e+05	2.079e+06	1.73	0.0	0.0	-1.114e+04	-430.06	-1974.40	-4.355e+04	2.079e+06	5.383e+05
		1.637e+05	3.196e+05	6.32	0.0	870.0	-7364.95	-430.06	-1974.40	-4.355e+04	3.196e+05	1.637e+05
55	39	4.809e+05	-2.984e+05	-1.68	0.0	0.0	-1.099e+04	1518.76	2006.90	4.708e+04	-2.086e+06	-8.408e+05
		-8.408e+05	-2.086e+06	-6.31	0.0	870.0	-7215.90	1518.76	2006.90	4.708e+04	-2.984e+05	4.809e+05
55	40	3.872e+05	-3.586e+05	1.39	0.0	0.0	-1.104e+04	-189.29	1765.41	5.817e+04	-1.847e+06	3.872e+05
		2.229e+05	-1.847e+06	-5.59	0.0	870.0	-7264.56	-189.29	1765.41	5.817e+04	-3.586e+05	2.229e+05
55	41	4.379e+05	2.157e+06	-1.68	0.0	0.0	-1.113e+04	1458.39	-2059.20	-3.751e+04	2.157e+06	-8.242e+05
		-8.242e+05	3.720e+05	6.54	0.0	870.0	-7357.46	1458.39	-2059.20	-3.751e+04	3.720e+05	4.379e+05
55	42	4.053e+05	1.560e+06	1.41	0.0	0.0	-1.112e+04	-240.75	-1449.93	-5.152e+04	1.560e+06	4.053e+05
		1.892e+05	2.975e+05	4.78	0.0	870.0	-7346.94	-240.75	-1449.93	-5.152e+04	2.975e+05	1.892e+05
55	43	4.555e+05	-2.763e+05	-1.35	0.0	0.0	-1.101e+04	1329.45	1482.42	5.505e+04	-1.567e+06	-7.078e+05
		-7.078e+05	-1.567e+06	-4.77	0.0	870.0	-7233.91	1329.45	1482.42	5.505e+04	-2.763e+05	4.555e+05
55	44	5.217e+05	-3.508e+05	1.74	0.0	0.0	-1.100e+04	-369.69	2091.70	4.104e+04	-2.164e+06	5.217e+05
		2.068e+05	-2.164e+06	-6.53	0.0	870.0	-7223.39	-369.69	2091.70	4.104e+04	-3.508e+05	2.068e+05
55	45	4.425e+05	1.739e+06	-1.68	0.0	0.0	-1.110e+04	1462.85	-1633.82	-5.006e+04	1.739e+06	-8.235e+05
		-8.235e+05	3.649e+05	5.30	0.0	870.0	-7327.87	1462.85	-1633.82	-5.006e+04	3.649e+05	4.425e+05
55	46	4.046e+05	1.978e+06	1.40	0.0	0.0	-1.115e+04	-245.21	-1875.31	-3.897e+04	1.978e+06	4.046e+05
		1.845e+05	3.047e+05	6.02	0.0	870.0	-7376.53	-245.21	-1875.31	-3.897e+04	3.047e+05	1.845e+05
55	47	4.601e+05	-2.835e+05	-1.34	0.0	0.0	-1.098e+04	1333.91	1907.81	4.250e+04	-2.835e+05	4.601e+05
		-7.071e+05	-1.985e+06	-6.01	0.0	870.0	-7204.32	1333.91	1907.81	4.250e+04	-2.835e+05	4.601e+05
55	48	5.210e+05	-3.437e+05	1.73	0.0	0.0	-1.103e+04	-374.15	1666.32	5.359e+04	-1.746e+06	5.210e+05
		2.021e+05	-1.746e+06	-5.29	0.0	870.0	-7252.98	-374.15	1666.32	5.359e+04	-3.437e+05	2.021e+05
55	49	7.280e+05	1.580e+06	-5.07	0.0	0.0	-1.110e+04	3340.14	-1560.18	9858.17	1.580e+06	-2.178e+06
		-2.178e+06	2.365e+05	4.73	0.0	870.0	-7323.02	3340.14	-1560.18	9858.17	2.365e+05	7.280e+05
55	50	1.921e+06	-1.178e+04	5.23	0.0	0.0	-1.106e+04	-2323.66	470.74	-3.685e+04	-4.093e+05	1.921e+06
		-1.011e+05	-4.093e+05	-1.15	0.0	870.0	-7287.95	-2323.66	470.74	-3.685e+04	-1.178e+04	-1.011e+05
55	51	7.458e+05	4.022e+05	-5.17	0.0	0.0	-1.107e+04	3412.36	-438.24	4.038e+04	4.022e+05	-2.223e+06
		-2.223e+06	3.299e+04	1.16	0.0	870.0	-7292.90	3412.36	-438.24	4.038e+04	3.299e+04	7.458e+05
55	52	1.875e+06	-2.153e+05	5.13	0.0	0.0	-1.103e+04	-2251.43	1592.68	-6327.52	-1.587e+06	1.875e+06
		-8.337e+04	-1.587e+06	-4.72	0.0	870.0	-7257.83	-2251.43	1592.68	-6327.52	-2.153e+05	-8.337e+04
55	53	7.343e+05	1.550e+06	-5.17	0.0	0.0	-1.110e+04	3395.59	-1530.45	1.123e+04	1.550e+06	-2.218e+06
		-2.218e+06	2.320e+05	4.64	0.0	870.0	-7326.49	3395.59	-1530.45	1.123e+04	2.320e+05	7.343e+05
55	54	1.880e+06	-1.627e+04	5.13	0.0	0.0	-1.107e+04	-2268.21	500.46	-3.547e+04	-4.396e+05	1.880e+06
		-9.488e+04	-4.396e+05	-1.24	0.0	870.0	-7291.42	-2268.21	500.46	-3.547e+04	-1.627e+04	-9.488e+04
55	55	7.395e+05	4.325e+05	-5.07	0.0	0.0	-1.107e+04	3356.91	-467.97	3.900e+04	4.325e+05	-2.183e+06
		-2.183e+06	3.748e+04	1.25	0.0	870.0	-7289.43	3356.91	-467.97	3.900e+04	3.748e+04	7.395e+05
55	56	1.915e+06	-2.108e+05	5.23	0.0	0.0	-1.103e+04	-2306.89	1562.95	-7702.64	-1.557e+06	1.915e+06
		-8.961e+04	-1.557e+06	-4.63	0.0	870.0	-7254.36	-2306.89	1562.95	-7702.64	-2.108e+05	-8.961e+04
55	57	7.434e+05	2.127e+05	-5.04	0.0	0.0	-1.100e+04	3354.99	-142.24	-3.197e+04	1.873e+05	-2.175e+06
		-2.175e+06	1.873e+05	0.59	0.0	870.0	-7224.38	3354.99	-142.24	-3.197e+04	2.127e+05	7.434e+05
55	58	1.918e+06	9.835e+05	5.20	0.0	0.0	-1.116e+04	-2338.52	-947.21	4987.12	9.835e+05	1.918e+06
		-1.165e+05	1.199e+04	2.99	0.0	870.0	-7386.58	-2338.52	-947.21	4987.12	1.199e+04	-1.165e+05
55	59	7.612e+05	9214.66	-5.14	0.0	0.0	-1.097e+04	3427.22	979.71	-1456.47	-9.905e+05	-2.221e+06
		-2.221e+06	-9.905e+05	-2.98	0.0	870.0	-7194.27	3427.22	979.71	-1456.47	9214.66	7.612e+05
55	60	1.873e+06	-1.915e+05	5.10	0.0	0.0	-1.113e+04	-2266.29	174.73	3.550e+04	-1.944e+05	-9.877e+04
		-9.877e+04	-1.944e+05	-0.58	0.0	870.0	-7356.46	-2266.29	174.73	3.550e+04	-1.915e+05	-9.877e+04
55	61	7.497e+05	2.082e+05	-5.14	0.0	0.0	-1.100e+04	3410.45	-112.51	-3.060e+04	1.570e+05	-2.215e+06
		-2.215e+06	1.570e+05	0.50	0.0	870.0	-7227.86	3410.45	-112.51	-3.060e+04	2.082e+05	7.497e+05
55	62	1.878e+06	9.531e+05	5.10	0.0	0.0	-1.117e+04	-2283.07	-917.48	6362.24	9.531e+05	1.878e+06
		-1.103e+05	7500.85	2.90	0.0	870.0	-7390.06	-2283.07	-917.48	6362.24	7500.85	-1.103e+05
55	63	7.549e+05	1.370e+04	-5.04	0.0	0.0	-1.097e+04	3371.77	949.98	-2831.59	-9.602e+05	-2.181e+06
		-2.181e+06	-9.602e+05	-2.89	0.0	870.0	-7190.79	3371.77	949.98	-2831.59	1.370e+04	7.549e+05
55	64	1.913e+06	-1.641e+05	5.20	0.0	0.0	-1.113e+04	-2321.75	145.01	3.413e+04	-1.641e+05	-1.050e+05
		-1.050e+05	-1.870e+05	-0.49	0.0	870.0	-7352.99	-2321.75	145.01	3.413e+04	-1.870e+05	-1.050e+05
55	65	2.920e+05	9612.22	-0.08	0.0	0.0	-1.046e+04	493.09	14.74	1600.70	-3207.95	-1.370e+05
		-1.370e+05	-3207.95	4.47e-03	0.0	870.0	-6681.52	493.09	14.74	1600.70	9612.22	2.920e+05
55	66	3.223e+05	1.060e+04	-0.09	0.0	0.0	-1.107e+04	544.35	16.25	1765.32	-3534.32	-1.513e+05
		-1.513e+05	-3534.32	4.94e-03	0.0	870.0	-7290.42	544.35	16.25	1765.32	1.060e+04	3.223e+05
56	1	3.940e+06	2.901e+06	2.05	0.0	0.0	-6.202e+04	-1.389e+04	-3020.02	1.348e+05	2.901e+06	3.940e+06
		-8.140e+06	2.760e+05	9.67	0.0	870.0	-5.825e+04	-1.389e+04	-3020.02	1.348e+05	2.760e+05	-8.140e+06
56	2	6.297e+06	2.303e+06	4.63	0.0	0.0	-6.388e+04	-1.870e+04	-2419.66	6.321e+04	2.303e+06	6.297e+06
		-9.974e+06	1.985e+05	7.65	0.0	870.0	-6.010e+04	-1.870e+04	-2419.66	6.321e+04	1.985e+05	-9.974e+06
56	3	3.728e+06	-2.009e+05	1.86	0.0	0.0	-6.185e+04	-1.345e+04	2414.47	-5.793e+04	-2.301e+06	3.728e+06
		-7.974e+06	-2.301e+06	-7.64	0.0	870.0	-5.808e+04	-1.345e+04	2414.47	-5.793e+04	-2.009e+05	-7.974e+06
56	4	6.086e+06	-2.784e+05	4.39	0.0	0.0	-6.371e+04	-1.827e+04	3014.83	-1.295e+05	-2.899e+06	6.086e+06
		-9.807e+06	-2.899e+06	-9.67	0.0	870.0	-5.993e+04	-1.827e+04	3014.83	-1.295e+05	-2.784e+05	-9.807e+06
56	5	3.778e+06	2.481e+06	1.91	0.0	0.0	-6.185e+04	-1.355e+04	-2596.96	1.192e+05	2.481e+06	3.778e+06
		-8.013e+06	2.548e+05	8.25	0.0	870.0	-5.807e+04	-1.355e+04	-2596.96	1.192e+05	2.548e+05	-8.013e+06
56	6	6.459e+06	2.724e+06	4.82	0.0	0.0	-6.405e+04	-1.903e+04	-2842.72	7.883e+04	2.724e+06	6.459e+06
		-1.010e+07	2.197e+05	9.07	0.0	870.0	-6.028e+04	-1.903e+04	-2842.72	7.883e+04	2.197e+05	-1.010e+07
56	7	3.566e+06	-2.221e+05	1.72	0.0	0.0	-6.168e+04	-1.312e+04	2837.53	-7.354e+04	-2.722e+06	3.566e+06
		-7.847e+06	-2.722e+06	-9.07	0.0	870.0	-5.790e+04	-1.312e+04	2837.53	-7.354e+04	-2.221e+05	-7.847e+06
56	8	6.248e+06	-2.572e+05	4.58	0.0	0.0	-6.388e+04	-1.860e+04	2591.77	-1.139e+05	-2.479e+06	6.248e+06
		-9.934e+06	-2.479e+06	-8.25	0.0	870.0	-6.011e+04	-1.860e+04	2591.77	-1.139e+05	-2.572e+05	-9.934e+06
56	9	3.732e+06	2.771e+06	1.87	0.0	0.0	-6.186e+04	-1.346e+04	-2897.72	1.115e+05	2.771e+06	3.732e+06
		-7.978e+06	2.523e+05	9.22	0.0	870.0	-5.808e+04	-1.346e+04	-2897.72	1.115e+05	2.523e+05	-7.978e+06

56	10	6.089e+06	2.173e+06	4.39	0.0	0.0	-6.371e+04	-1.828e+04	-2297.36	3.994e+04	2.173e+06	6.089e+06
		-9.811e+06	1.749e+05	7.19	0.0	870.0	-5.994e+04	-1.828e+04	-2297.36	3.994e+04	1.749e+05	-9.811e+06
56	11	3.936e+06	-1.773e+05	2.05	0.0	0.0	-6.202e+04	-1.388e+04	2292.17	-3.466e+04	-2.171e+06	3.936e+06
		-8.136e+06	-2.171e+06	-7.19	0.0	870.0	-5.824e+04	-1.388e+04	2292.17	-3.466e+04	-1.773e+05	-8.136e+06
56	12	6.294e+06	-2.548e+05	4.63	0.0	0.0	-6.387e+04	-1.869e+04	2892.53	-1.063e+05	-2.769e+06	6.294e+06
		-9.969e+06	-2.769e+06	-9.22	0.0	870.0	-6.010e+04	-1.869e+04	2892.53	-1.063e+05	-2.548e+05	-9.969e+06
56	13	3.570e+06	2.351e+06	1.72	0.0	0.0	-6.168e+04	-1.313e+04	-2474.66	9.593e+04	2.351e+06	3.570e+06
		-7.851e+06	2.312e+05	7.80	0.0	870.0	-5.791e+04	-1.313e+04	-2474.66	9.593e+04	2.312e+05	-7.851e+06
56	14	6.251e+06	2.594e+06	4.58	0.0	0.0	-6.389e+04	-1.861e+04	-2720.42	5.555e+04	2.594e+06	6.251e+06
		-9.938e+06	1.960e+05	8.62	0.0	870.0	-6.011e+04	-1.861e+04	-2720.42	5.555e+04	1.960e+05	-9.938e+06
56	15	3.774e+06	-1.985e+05	1.90	0.0	0.0	-6.184e+04	-1.354e+04	2715.23	-5.027e+04	-2.592e+06	3.774e+06
		-8.009e+06	-2.592e+06	-8.62	0.0	870.0	-5.807e+04	-1.354e+04	2715.23	-5.027e+04	-1.985e+05	-8.009e+06
56	16	6.455e+06	-2.336e+05	4.82	0.0	0.0	-6.405e+04	-1.903e+04	2469.47	-9.064e+04	-2.349e+06	6.455e+06
		-1.010e+07	-2.349e+06	-7.79	0.0	870.0	-6.027e+04	-1.903e+04	2469.47	-9.064e+04	-2.336e+05	-1.010e+07
56	17	1.115e+06	1.778e+06	-4.57	0.0	0.0	-5.980e+04	-8112.87	-1818.37	1.509e+05	1.778e+06	1.115e+06
		-5.943e+06	1.994e+05	5.97	0.0	870.0	-5.603e+04	-8112.87	-1818.37	1.509e+05	1.994e+05	-5.943e+06
56	18	8.974e+06	-5.877e+04	8.04	0.0	0.0	-6.598e+04	-2.417e+04	182.83	-8.778e+04	-2.157e+05	8.974e+06
		-1.205e+07	-2.157e+05	-0.78	0.0	870.0	-6.220e+04	-2.417e+04	182.83	-8.778e+04	-5.877e+04	-1.205e+07
56	19	1.052e+06	2.177e+05	-4.67	0.0	0.0	-5.975e+04	-7982.37	-188.02	9.306e+04	2.177e+05	1.052e+06
		-5.893e+06	5.634e+04	0.78	0.0	870.0	-5.597e+04	-7982.37	-188.02	9.306e+04	5.634e+04	-5.893e+06
56	20	8.910e+06	-2.018e+05	7.95	0.0	0.0	-6.593e+04	-2.404e+04	1813.18	-1.456e+05	-1.776e+06	8.910e+06
		-1.200e+07	-1.776e+06	-5.97	0.0	870.0	-6.215e+04	-2.404e+04	1813.18	-1.456e+05	-2.018e+05	-1.200e+07
56	21	1.053e+06	1.739e+06	-4.67	0.0	0.0	-5.975e+04	-7985.15	-1781.68	1.439e+05	1.739e+06	1.053e+06
		-5.893e+06	1.923e+05	5.84	0.0	870.0	-5.598e+04	-7985.15	-1781.68	1.439e+05	1.923e+05	-5.893e+06
56	22	8.911e+06	-6.585e+04	7.95	0.0	0.0	-6.593e+04	-2.404e+04	219.52	-9.476e+04	-2.546e+05	8.911e+06
		-1.201e+07	-2.546e+05	-0.91	0.0	870.0	-6.216e+04	-2.404e+04	219.52	-9.476e+04	-6.585e+04	-1.201e+07
56	23	1.114e+06	2.567e+05	-4.57	0.0	0.0	-5.980e+04	-8110.09	-224.71	1.000e+05	2.567e+05	1.114e+06
		-5.942e+06	6.343e+04	0.92	0.0	870.0	-5.602e+04	-8110.09	-224.71	1.000e+05	6.343e+04	-5.942e+06
56	24	8.973e+06	-1.948e+05	8.04	0.0	0.0	-6.598e+04	-2.417e+04	1776.49	-1.386e+05	-1.948e+05	8.973e+06
		-1.205e+07	-1.737e+06	-5.84	0.0	870.0	-6.220e+04	-2.417e+04	1776.49	-1.386e+05	-1.948e+05	-1.205e+07
56	25	5.752e+05	3.765e+05	-5.38	0.0	0.0	-5.921e+04	-7005.71	-408.17	9.884e+04	3.765e+05	5.752e+05
		-5.520e+06	1.289e+05	1.23	0.0	870.0	-5.544e+04	-7005.71	-408.17	9.884e+04	1.289e+05	-5.520e+06
56	26	9.514e+06	1.186e+06	8.77	0.0	0.0	-6.652e+04	-2.528e+04	-1227.37	-3.573e+04	1.186e+06	9.514e+06
		-1.248e+07	1.174e+04	3.97	0.0	870.0	-6.279e+04	-2.528e+04	-1227.37	-3.573e+04	1.174e+04	-1.248e+07
56	27	5.117e+05	-1.416e+04	-5.48	0.0	0.0	-5.916e+04	-6875.21	1222.18	4.102e+04	-1.184e+06	5.117e+05
		-5.470e+06	-1.184e+06	-3.96	0.0	870.0	-5.538e+04	-6875.21	1222.18	4.102e+04	-1.416e+04	-5.470e+06
56	28	9.450e+06	-1.313e+05	8.68	0.0	0.0	-6.652e+04	-2.515e+04	402.98	-9.356e+04	-3.744e+05	9.450e+06
		-1.243e+07	-3.744e+05	-1.23	0.0	870.0	-6.274e+04	-2.515e+04	402.98	-9.356e+04	-1.313e+05	-1.243e+07
56	29	5.129e+05	3.375e+05	-5.48	0.0	0.0	-5.916e+04	-6877.99	-371.48	9.186e+04	3.375e+05	5.129e+05
		-5.471e+06	1.218e+05	1.09	0.0	870.0	-5.539e+04	-6877.99	-371.48	9.186e+04	1.218e+05	-5.471e+06
56	30	9.451e+06	1.147e+06	8.68	0.0	0.0	-6.652e+04	-2.515e+04	-1190.68	-4.272e+04	1.147e+06	9.451e+06
		-1.243e+07	4648.26	3.83	0.0	870.0	-6.275e+04	-2.515e+04	-1190.68	-4.272e+04	4648.26	-1.243e+07
56	31	5.741e+05	-7072.04	-5.38	0.0	0.0	-5.921e+04	-7002.93	1185.49	4.800e+04	-1.145e+06	5.741e+05
		-5.518e+06	-1.145e+06	-3.83	0.0	870.0	-5.543e+04	-7002.93	1185.49	4.800e+04	-7072.04	-5.518e+06
56	32	9.512e+06	-1.242e+05	8.77	0.0	0.0	-6.657e+04	-2.527e+04	366.29	-8.658e+04	-3.354e+05	9.512e+06
		-1.248e+07	-3.354e+05	-1.09	0.0	870.0	-6.279e+04	-2.527e+04	366.29	-8.658e+04	-1.242e+05	-1.248e+07
56	33	4.055e+06	2.050e+06	2.16	0.0	0.0	-6.211e+04	-1.412e+04	-2132.83	1.004e+05	2.050e+06	4.055e+06
		-8.230e+06	1.962e+05	6.83	0.0	870.0	-5.834e+04	-1.412e+04	-2132.83	1.004e+05	1.962e+05	-8.230e+06
56	34	6.122e+06	1.525e+06	4.43	0.0	0.0	-6.374e+04	-1.834e+04	-1606.50	3.768e+04	1.525e+06	6.122e+06
		-9.837e+06	1.283e+05	5.06	0.0	870.0	-5.996e+04	-1.834e+04	-1606.50	3.768e+04	1.283e+05	-9.837e+06
56	35	3.904e+06	-1.307e+05	2.02	0.0	0.0	-6.199e+04	-1.381e+04	1601.31	-3.240e+04	-1.523e+06	3.904e+06
		-8.111e+06	-1.523e+06	-5.05	0.0	870.0	-5.822e+04	-1.381e+04	1601.31	-3.240e+04	-1.307e+05	-8.111e+06
56	36	5.970e+06	-1.986e+05	4.26	0.0	0.0	-6.362e+04	-1.803e+04	2127.64	-9.517e+04	-2.047e+06	5.970e+06
		-9.718e+06	-2.047e+06	-6.83	0.0	870.0	-5.984e+04	-1.803e+04	2127.64	-9.517e+04	-1.986e+05	-9.718e+06
56	37	3.913e+06	1.681e+06	2.03	0.0	0.0	-6.196e+04	-1.383e+04	-1761.97	8.675e+04	1.681e+06	3.913e+06
		-8.119e+06	1.776e+05	5.59	0.0	870.0	-5.818e+04	-1.383e+04	-1761.97	8.675e+04	1.776e+05	-8.119e+06
56	38	6.263e+06	1.894e+06	4.59	0.0	0.0	-6.389e+04	-1.863e+04	-1977.36	5.137e+04	1.894e+06	6.263e+06
		-9.948e+06	1.468e+05	6.31	0.0	870.0	-6.012e+04	-1.863e+04	-1977.36	5.137e+04	1.468e+05	-9.948e+06
56	39	3.762e+06	-1.492e+05	1.89	0.0	0.0	-6.184e+04	-1.352e+04	1972.17	-4.609e+04	-1.892e+06	3.762e+06
		-7.999e+06	-1.892e+06	-6.30	0.0	870.0	-5.806e+04	-1.352e+04	1972.17	-4.609e+04	-1.492e+05	-7.999e+06
56	40	6.112e+06	-1.801e+05	4.42	0.0	0.0	-6.377e+04	-1.832e+04	1756.78	-8.147e+04	-1.679e+06	6.112e+06
		-9.829e+06	1.679e+06	-5.58	0.0	870.0	-6.000e+04	-1.832e+04	1756.78	-8.147e+04	-1.801e+05	-9.829e+06
56	41	3.906e+06	1.962e+06	2.02	0.0	0.0	-6.200e+04	-1.382e+04	-2050.10	8.448e+04	1.962e+06	3.906e+06
		-8.114e+06	1.800e+05	6.53	0.0	870.0	-5.822e+04	-1.382e+04	-2050.10	8.448e+04	1.800e+05	-8.114e+06
56	42	5.973e+06	1.437e+06	4.26	0.0	0.0	-6.362e+04	-1.804e+04	-1523.77	2.171e+04	1.437e+06	5.973e+06
		-9.721e+06	1.121e+05	4.75	0.0	870.0	-5.984e+04	-1.804e+04	-1523.77	2.171e+04	1.121e+05	-9.721e+06
56	43	4.052e+06	-1.145e+05	2.16	0.0	0.0	-6.211e+04	-1.411e+04	1518.58	-1.643e+04	-1.435e+06	4.052e+06
		-8.227e+06	-1.435e+06	-4.75	0.0	870.0	-5.833e+04	-1.411e+04	1518.58	-1.643e+04	-1.145e+05	-8.227e+06
56	44	6.119e+06	-1.824e+05	4.43	0.0	0.0	-6.374e+04	-1.834e+04	2044.91	-7.920e+04	-1.959e+06	6.119e+06
		-9.834e+06	-1.959e+06	-6.52	0.0	870.0	-5.996e+04	-1.834e+04	2044.91	-7.920e+04	-1.824e+05	-9.834e+06
56	45	3.765e+06	1.593e+06	1.90	0.0	0.0	-6.184e+04	-1.353e+04	-1679.24	7.078e+04	1.593e+06	3.765e+06
		-8.003e+06	1.614e+05	5.28	0.0	870.0	-5.806e+04	-1.353e+04	-1679.24	7.078e+04	1.614e+05	-8.003e+06
56	46	6.115e+06	1.806e+06	4.42	0.0	0.0	-6.378e+04	-1.833e+04	-1894.63	3.540e+04	1.806e+06	6.115e+06
		-9.832e+06	1.306e+05	6.00	0.0	870.0	-6.000e+04	-1.833e+04	-1894.63	3.540e+04	1.306e+05	-9.832e+06
56	47	3.911e+06	-1.331e+05	2.03	0.0	0.0	-6.196e+04	-1.382e+04	1889.44	-3.012e+04	-1.804e+06	3.911e+06
		-8.115e+06	-1.804e+06	-6.00	0.0	870.0	-5.818e+04	-1.382e+04	1889.44	-3.012e+04	-1.331e+05	-8.115e+06
56	48	6.261e+06	-1.639e+05	4.59	0.0	0.0	-6.389e+04	-1.863e+04	1674.05	-6.550e+04	-1.591e+06	6.261e+06

		-9.945e+06	-1.591e+06	-5.28	0.0	870.0	-6.011e+04	-1.863e+04	1674.05	-6.550e+04	-1.639e+05	-9.945e+06
56	49	1.591e+06	1.411e+06	-3.86	0.0	0.0	-6.018e+04	-9085.65	-1439.94	1.272e+05	1.411e+06	1.591e+06
		-6.313e+06	1.610e+05	4.74	0.0	870.0	-5.640e+04	-9085.65	-1439.94	1.272e+05	1.610e+05	-6.313e+06
56	50	8.480e+06	-6.535e+04	7.36	0.0	0.0	-6.559e+04	-2.316e+04	314.50	-8.205e+04	-3.372e+05	8.480e+06
		-1.167e+07	-3.372e+05	-1.17	0.0	870.0	-6.182e+04	-2.316e+04	314.50	-8.205e+04	-6.535e+04	-1.167e+07
56	51	1.546e+06	3.392e+05	-3.92	0.0	0.0	-6.014e+04	-8992.41	-319.69	8.733e+04	3.392e+05	1.546e+06
		-6.278e+06	6.292e+04	1.18	0.0	870.0	-5.636e+04	-8992.41	-319.69	8.733e+04	6.292e+04	-6.278e+06
56	52	8.434e+06	-1.634e+05	7.30	0.0	0.0	-6.556e+04	-2.307e+04	1434.74	-1.219e+05	-1.409e+06	8.434e+06
		-1.163e+07	-1.409e+06	-4.74	0.0	870.0	-6.178e+04	-2.307e+04	1434.74	-1.219e+05	-1.634e+05	-1.163e+07
56	53	1.547e+06	1.385e+06	-3.92	0.0	0.0	-6.014e+04	-8994.44	-1415.12	1.224e+05	1.385e+06	1.547e+06
		-6.279e+06	1.561e+05	4.65	0.0	870.0	-5.636e+04	-8994.44	-1415.12	1.224e+05	1.561e+05	-6.279e+06
56	54	8.435e+06	-7.020e+04	7.30	0.0	0.0	-6.556e+04	-2.307e+04	339.32	-8.684e+04	-3.636e+05	8.435e+06
		-1.163e+07	-3.636e+05	-1.27	0.0	870.0	-6.178e+04	-2.307e+04	339.32	-8.684e+04	-7.020e+04	-1.163e+07
56	55	1.590e+06	3.657e+05	-3.86	0.0	0.0	-6.017e+04	-9083.62	-344.51	9.212e+04	3.657e+05	1.590e+06
		-6.312e+06	6.778e+04	1.27	0.0	870.0	-5.640e+04	-9083.62	-344.51	9.212e+04	6.778e+04	-6.312e+06
56	56	8.479e+06	-1.586e+05	7.36	0.0	0.0	-6.559e+04	-2.316e+04	1409.93	-1.171e+05	-1.586e+05	8.479e+06
		-1.167e+07	-1.383e+06	-4.65	0.0	870.0	-6.181e+04	-2.316e+04	1409.93	-1.171e+05	-1.586e+05	-1.167e+07
56	57	1.119e+06	1.821e+05	-4.56	0.0	0.0	-5.966e+04	-8116.31	-203.74	8.154e+04	1.821e+05	1.119e+06
		-5.943e+06	9.917e+04	0.58	0.0	870.0	-5.588e+04	-8116.31	-203.74	8.154e+04	9.917e+04	-5.943e+06
56	58	8.952e+06	8.918e+05	8.00	0.0	0.0	-6.611e+04	-2.413e+04	-921.70	-3.640e+04	8.918e+05	8.952e+06
		-1.204e+07	-3527.15	2.98	0.0	870.0	-6.233e+04	-2.413e+04	-921.70	-3.640e+04	-3527.15	-1.204e+07
56	59	1.073e+06	1103.37	-4.63	0.0	0.0	-5.962e+04	-8023.06	916.50	4.168e+04	-8.897e+05	1.073e+06
		-5.907e+06	-8.897e+05	-2.98	0.0	870.0	-5.585e+04	-8023.06	916.50	4.168e+04	1103.37	-5.907e+06
56	60	8.907e+06	-1.016e+05	7.94	0.0	0.0	-6.607e+04	-2.404e+04	198.55	-7.625e+04	-1.800e+05	8.907e+06
		-1.200e+07	-1.800e+05	-0.58	0.0	870.0	-6.230e+04	-2.404e+04	198.55	-7.625e+04	-1.016e+05	-1.200e+07
56	61	1.074e+06	1.557e+05	-4.63	0.0	0.0	-5.962e+04	-8025.09	-178.92	7.675e+04	1.557e+05	1.074e+06
		-5.908e+06	9.431e+04	0.49	0.0	870.0	-5.585e+04	-8025.09	-178.92	7.675e+04	9.431e+04	-5.908e+06
56	62	8.908e+06	8.654e+05	7.94	0.0	0.0	-6.607e+04	-2.404e+04	-896.88	-4.119e+04	8.654e+05	8.908e+06
		-1.201e+07	-8381.89	2.89	0.0	870.0	-6.230e+04	-2.404e+04	-896.88	-4.119e+04	-8381.89	-1.201e+07
56	63	1.118e+06	5958.11	-4.57	0.0	0.0	-5.966e+04	-8114.28	891.68	4.647e+04	-8.633e+05	1.118e+06
		-5.942e+06	-8.633e+05	-2.89	0.0	870.0	-5.588e+04	-8114.28	891.68	4.647e+04	5958.11	-5.942e+06
56	64	8.951e+06	-9.674e+04	8.00	0.0	0.0	-6.611e+04	-2.413e+04	173.73	-7.146e+04	-1.536e+05	8.951e+06
		-1.204e+07	-1.536e+05	-0.49	0.0	870.0	-6.233e+04	-2.413e+04	173.73	-7.146e+04	-9.674e+04	-1.204e+07
56	65	4.554e+06	945.73	2.86	0.0	0.0	-5.748e+04	-1.460e+04	-2.35	2394.00	945.73	4.554e+06
		-8.152e+06	-1099.46	1.28e-03	0.0	870.0	-5.370e+04	-1.460e+04	-2.35	2394.00	-1099.46	-8.152e+06
56	66	5.013e+06	1046.46	3.15	0.0	0.0	-6.287e+04	-1.608e+04	-2.60	2640.87	1046.46	5.013e+06
		-8.974e+06	-1211.89	1.42e-03	0.0	870.0	-5.909e+04	-1.608e+04	-2.60	2640.87	-1211.89	-8.974e+06
57	1	3.927e+06	2.889e+06	2.04	0.0	0.0	-6.200e+04	-1.385e+04	-2976.77	7.440e+04	2.889e+06	3.927e+06
		-8.123e+06	3.032e+05	9.67	0.0	870.0	-5.823e+04	-1.385e+04	-2976.77	7.440e+04	3.032e+05	-8.123e+06
57	2	6.032e+06	2.287e+06	4.33	0.0	0.0	-6.368e+04	-1.815e+04	-2378.55	4.435e+04	2.287e+06	6.032e+06
		-9.755e+06	2.200e+05	7.63	0.0	870.0	-5.990e+04	-1.815e+04	-2378.55	4.435e+04	2.200e+05	-9.755e+06
57	3	3.976e+06	-2.284e+05	2.09	0.0	0.0	-6.205e+04	-1.395e+04	2365.41	-4.251e+04	-2.284e+05	3.976e+06
		-8.162e+06	-2.284e+06	-7.63	0.0	870.0	-5.828e+04	-1.395e+04	2365.41	-4.251e+04	-2.284e+05	-8.162e+06
57	4	6.081e+06	-3.116e+05	4.39	0.0	0.0	-6.373e+04	-1.825e+04	2963.63	-7.256e+04	-2.886e+06	6.081e+06
		-9.794e+06	-2.886e+06	-9.68	0.0	870.0	-5.995e+04	-1.825e+04	2963.63	-7.256e+04	-3.116e+05	-9.794e+06
57	5	3.636e+06	2.466e+06	1.78	0.0	0.0	-6.175e+04	-1.325e+04	-2552.85	6.638e+04	2.466e+06	3.636e+06
		-7.894e+06	2.457e+05	8.24	0.0	870.0	-5.798e+04	-1.325e+04	-2552.85	6.638e+04	2.457e+05	-7.894e+06
57	6	6.323e+06	2.711e+06	4.67	0.0	0.0	-6.393e+04	-1.874e+04	-2802.47	5.237e+04	2.711e+06	6.323e+06
		-9.984e+06	2.775e+05	9.06	0.0	870.0	-6.015e+04	-1.874e+04	-2802.47	5.237e+04	2.775e+05	-9.984e+06
57	7	3.685e+06	-2.859e+05	1.83	0.0	0.0	-6.180e+04	-1.335e+04	2789.33	-5.053e+04	-2.708e+06	3.685e+06
		-7.933e+06	-2.708e+06	-9.07	0.0	870.0	-5.802e+04	-1.335e+04	2789.33	-5.053e+04	-2.859e+05	-7.933e+06
57	8	6.372e+06	-2.541e+05	4.72	0.0	0.0	-6.398e+04	-1.884e+04	2539.71	-6.454e+04	-2.462e+06	6.372e+06
		-1.002e+07	-2.462e+06	-8.24	0.0	870.0	-6.020e+04	-1.884e+04	2539.71	-6.454e+04	-2.541e+05	-1.002e+07
57	9	3.973e+06	2.755e+06	2.09	0.0	0.0	-6.204e+04	-1.395e+04	-2845.44	6.408e+04	2.755e+06	3.973e+06
		-8.161e+06	2.830e+05	9.22	0.0	870.0	-5.827e+04	-1.395e+04	-2845.44	6.408e+04	2.830e+05	-8.161e+06
57	10	6.078e+06	2.153e+06	4.39	0.0	0.0	-6.372e+04	-1.824e+04	-2247.22	3.403e+04	2.153e+06	6.078e+06
		-9.793e+06	1.997e+05	7.17	0.0	870.0	-5.994e+04	-1.824e+04	-2247.22	3.403e+04	1.997e+05	-9.793e+06
57	11	3.929e+06	2.081e+05	2.05	0.0	0.0	-6.201e+04	-1.385e+04	2234.08	-3.220e+04	-2.150e+06	3.929e+06
		-8.124e+06	-2.150e+06	-7.17	0.0	870.0	-5.823e+04	-1.385e+04	2234.08	-3.220e+04	-2.081e+05	-8.124e+06
57	12	6.034e+06	-2.914e+05	4.34	0.0	0.0	-6.369e+04	-1.815e+04	2832.30	-6.225e+04	-2.752e+06	6.034e+06
		-9.756e+06	-2.752e+06	-9.22	0.0	870.0	-5.991e+04	-1.815e+04	2832.30	-6.225e+04	-2.914e+05	-9.756e+06
57	13	3.683e+06	2.332e+06	1.82	0.0	0.0	-6.179e+04	-1.335e+04	-2421.52	5.607e+04	2.332e+06	3.683e+06
		-7.932e+06	2.254e+05	7.78	0.0	870.0	-5.802e+04	-1.335e+04	-2421.52	5.607e+04	2.254e+05	-7.932e+06
57	14	6.369e+06	2.577e+06	4.72	0.0	0.0	-6.397e+04	-1.884e+04	-2671.13	4.205e+04	2.577e+06	6.369e+06
		-1.002e+07	2.573e+05	8.61	0.0	870.0	-6.020e+04	-1.884e+04	-2671.13	4.205e+04	2.573e+05	-1.002e+07
57	15	3.638e+06	-2.657e+05	1.78	0.0	0.0	-6.176e+04	-1.326e+04	2658.00	-4.021e+04	-2.574e+06	3.638e+06
		-7.895e+06	-2.574e+06	-8.61	0.0	870.0	-5.798e+04	-1.326e+04	2658.00	-4.021e+04	-2.657e+05	-7.895e+06
57	16	6.325e+06	-2.338e+05	4.67	0.0	0.0	-6.394e+04	-1.875e+04	2408.38	-5.423e+04	-2.329e+06	6.325e+06
		-9.985e+06	-2.329e+06	-7.78	0.0	870.0	-6.016e+04	-1.875e+04	2408.38	-5.423e+04	-2.338e+05	-9.985e+06
57	17	1.488e+06	1.781e+06	-4.01	0.0	0.0	-6.006e+04	-8874.75	-1804.92	6.854e+04	1.781e+06	1.488e+06
		-6.233e+06	2.143e+05	6.00	0.0	870.0	-5.629e+04	-8874.75	-1804.92	6.854e+04	2.143e+05	-6.233e+06
57	18	8.504e+06	-6.321e+04	7.41	0.0	0.0	-6.565e+04	-2.319e+04	189.14	-3.163e+04	-2.259e+05	8.504e+06
		-1.167e+07	-2.259e+05	-0.82	0.0	870.0	-6.188e+04	-2.319e+04	189.14	-3.163e+04	-6.321e+04	-1.167e+07
57	19	1.503e+06	2.290e+05	-3.99	0.0	0.0	-6.008e+04	-8905.24	-202.27	3.347e+04	2.290e+05	1.503e+06
		-6.245e+06	5.481e+04	0.81	0.0	870.0	-5.630e+04	-8905.24	-202.27	3.347e+04	5.481e+04	-6.245e+06
57	20	8.519e+06	-2.227e+05	7.43	0.0	0.0	-6.567e+04	-2.322e+04	1791.79	-6.670e+04	-1.778e+06	8.519e+06
		-1.168e+07	-1.778e+06	-6.01	0.0	870.0	-6.189e+04	-2.322e+04	1791.79	-6.670e+04	-2.227e+05	-1.168e+07

57	21	1.502e+06	1.741e+06	-3.99	0.0	0.0	-6.008e+04	-8903.94	-1765.52	6.545e+04	1.741e+06	1.502e+06
		-6.244e+06	2.082e+05	5.87	0.0	870.0	-5.630e+04	-8903.94	-1765.52	6.545e+04	2.082e+05	-6.244e+06
57	22	8.518e+06	-6.928e+04	7.43	0.0	0.0	-6.566e+04	-2.322e+04	228.53	-3.473e+04	-2.661e+05	8.518e+06
		-1.168e+07	-2.661e+05	-0.95	0.0	870.0	-6.189e+04	-2.322e+04	228.53	-3.473e+04	-6.928e+04	-1.168e+07
57	23	1.489e+06	2.691e+05	-4.01	0.0	0.0	-6.007e+04	-8876.04	-241.67	3.656e+04	2.691e+05	1.489e+06
		-6.233e+06	6.088e+04	0.95	0.0	870.0	-5.629e+04	-8876.04	-241.67	3.656e+04	6.088e+04	-6.233e+06
57	24	8.505e+06	-2.166e+05	7.41	0.0	0.0	-6.565e+04	-2.319e+04	1752.39	-6.361e+04	-2.1738e+06	8.505e+06
		-1.167e+07	-1.738e+06	-5.87	0.0	870.0	-6.188e+04	-2.319e+04	1752.39	-6.361e+04	-2.166e+05	-1.167e+07
57	25	5.184e+05	3.691e+05	-5.46	0.0	0.0	-5.923e+04	-6882.33	-391.87	4.181e+04	3.691e+05	5.184e+05
		-5.469e+06	2.242e+04	1.22	0.0	870.0	-5.545e+04	-6882.33	-391.87	4.181e+04	2.242e+04	-5.469e+06
57	26	9.474e+06	1.186e+06	8.72	0.0	0.0	-6.649e+04	-2.518e+04	-1223.92	-4902.23	1.186e+06	9.474e+06
		-1.244e+07	1.287e+05	3.97	0.0	870.0	-6.273e+04	-2.518e+04	-1223.92	-4902.23	1.287e+05	-1.244e+07
57	27	5.331e+05	-1.371e+05	-5.44	0.0	0.0	-5.924e+04	-6912.82	1210.79	6738.81	-1.183e+06	5.331e+05
		-5.481e+06	-1.183e+06	-3.97	0.0	870.0	-5.546e+04	-6912.82	1210.79	6738.81	-1.371e+05	-5.481e+06
57	28	9.489e+06	-3.082e+04	8.74	0.0	0.0	-6.651e+04	-2.522e+04	378.73	-3.997e+04	-3.661e+05	9.489e+06
		-1.245e+07	-3.661e+05	-1.22	0.0	870.0	-6.273e+04	-2.522e+04	378.73	-3.997e+04	-3.082e+04	-1.245e+07
57	29	5.324e+05	3.289e+05	-5.44	0.0	0.0	-5.924e+04	-6911.53	-352.47	3.872e+04	3.289e+05	5.324e+05
		-5.481e+06	1.635e+04	1.08	0.0	870.0	-5.546e+04	-6911.53	-352.47	3.872e+04	1.635e+04	-5.481e+06
57	30	9.488e+06	1.146e+06	8.74	0.0	0.0	-6.650e+04	-2.521e+04	-1184.52	-7996.51	1.146e+06	9.488e+06
		-1.245e+07	1.226e+05	3.83	0.0	870.0	-6.273e+04	-2.521e+04	-1184.52	-7996.51	1.226e+05	-1.245e+07
57	31	5.191e+05	-1.310e+05	-5.46	0.0	0.0	-5.923e+04	-6883.63	1171.39	9833.08	-1.143e+06	5.191e+05
		-5.470e+06	-1.143e+06	-3.84	0.0	870.0	-5.545e+04	-6883.63	1171.39	9833.08	-1.310e+05	-5.470e+06
57	32	9.475e+06	-2.475e+04	8.73	0.0	0.0	-6.649e+04	-2.519e+04	339.33	-3.688e+04	-3.259e+05	9.475e+06
		-1.244e+07	-3.259e+05	-1.08	0.0	870.0	-6.272e+04	-2.519e+04	339.33	-3.688e+04	-2.475e+04	-1.244e+07
57	33	4.060e+06	2.042e+06	2.17	0.0	0.0	-6.211e+04	-1.412e+04	-2105.18	5.881e+04	2.042e+06	4.060e+06
		-8.226e+06	2.147e+05	6.84	0.0	870.0	-5.833e+04	-1.412e+04	-2105.18	5.881e+04	2.147e+05	-8.226e+06
57	34	5.905e+06	1.514e+06	4.19	0.0	0.0	-6.358e+04	-1.789e+04	-1580.73	3.246e+04	1.514e+06	5.905e+06
		-9.657e+06	1.417e+05	5.04	0.0	870.0	-5.980e+04	-1.789e+04	-1580.73	3.246e+04	1.417e+05	-9.657e+06
57	35	4.102e+06	-1.501e+05	2.20	0.0	0.0	-6.215e+04	-1.421e+04	1567.60	-3.062e+04	-1.511e+06	4.102e+06
		-8.260e+06	-1.511e+06	-5.05	0.0	870.0	-5.838e+04	-1.421e+04	1567.60	-3.062e+04	-1.501e+05	-8.260e+06
57	36	5.947e+06	-2.231e+05	4.24	0.0	0.0	-6.362e+04	-1.797e+04	2092.05	-5.697e+04	-2.039e+06	5.947e+06
		-9.691e+06	-2.039e+06	-6.84	0.0	870.0	-5.984e+04	-1.797e+04	2092.05	-5.697e+04	-2.231e+05	-9.691e+06
57	37	3.806e+06	1.671e+06	1.94	0.0	0.0	-6.189e+04	-1.360e+04	-1733.58	5.177e+04	1.671e+06	3.806e+06
		-8.026e+06	1.642e+05	5.58	0.0	870.0	-5.811e+04	-1.360e+04	-1733.58	5.177e+04	1.642e+05	-8.026e+06
57	38	6.160e+06	1.885e+06	4.48	0.0	0.0	-6.380e+04	-1.841e+04	-1952.34	3.949e+04	1.885e+06	6.160e+06
		-9.858e+06	1.921e+05	6.30	0.0	870.0	-6.002e+04	-1.841e+04	-1952.34	3.949e+04	1.921e+05	-9.858e+06
57	39	3.847e+06	-2.005e+05	1.97	0.0	0.0	-6.193e+04	-1.369e+04	1939.21	-3.766e+04	-1.882e+06	3.847e+06
		-8.060e+06	-1.882e+06	-6.30	0.0	870.0	-5.816e+04	-1.369e+04	1939.21	-3.766e+04	-2.005e+05	-8.060e+06
57	40	6.202e+06	-1.726e+05	4.53	0.0	0.0	-6.384e+04	-1.850e+04	1720.44	-4.994e+04	-1.668e+06	6.202e+06
		-9.891e+06	-1.668e+06	-5.58	0.0	870.0	-6.007e+04	-1.850e+04	1720.44	-4.994e+04	-1.726e+05	-9.891e+06
57	41	4.100e+06	1.951e+06	2.20	0.0	0.0	-6.214e+04	-1.420e+04	-2016.10	5.152e+04	1.951e+06	4.100e+06
		-8.258e+06	2.007e+05	6.53	0.0	870.0	-5.837e+04	-1.420e+04	-2016.10	5.152e+04	2.007e+05	-8.258e+06
57	42	5.945e+06	1.423e+06	4.23	0.0	0.0	-6.361e+04	-1.797e+04	-1491.64	2.518e+04	1.423e+06	5.945e+06
		-9.689e+06	1.277e+05	4.73	0.0	870.0	-5.984e+04	-1.797e+04	-1491.64	2.518e+04	1.277e+05	-9.689e+06
57	43	4.063e+06	-1.361e+05	2.17	0.0	0.0	-6.212e+04	-1.413e+04	1478.51	-2.334e+04	-1.420e+06	4.063e+06
		-8.228e+06	-1.420e+06	-4.73	0.0	870.0	-5.834e+04	-1.413e+04	1478.51	-2.334e+04	-1.361e+05	-8.228e+06
57	44	5.908e+06	-2.091e+05	4.19	0.0	0.0	-6.359e+04	-1.789e+04	2002.96	-4.969e+04	-1.948e+06	5.908e+06
		-9.659e+06	-1.948e+06	-6.53	0.0	870.0	-5.981e+04	-1.789e+04	2002.96	-4.969e+04	-2.091e+05	-9.659e+06
57	45	3.845e+06	1.580e+06	1.97	0.0	0.0	-6.192e+04	-1.368e+04	-1644.49	4.449e+04	1.580e+06	3.845e+06
		-8.058e+06	1.502e+05	5.27	0.0	870.0	-5.815e+04	-1.368e+04	-1644.49	4.449e+04	1.502e+05	-8.058e+06
57	46	6.200e+06	1.795e+06	4.53	0.0	0.0	-6.383e+04	-1.849e+04	-1863.25	3.221e+04	1.795e+06	6.200e+06
		-9.890e+06	1.782e+05	5.99	0.0	870.0	-6.006e+04	-1.849e+04	-1863.25	3.221e+04	1.782e+05	-9.890e+06
57	47	3.808e+06	-1.866e+05	1.94	0.0	0.0	-6.190e+04	-1.360e+04	1850.12	-3.037e+04	-1.792e+06	3.808e+06
		-8.028e+06	-1.792e+06	-5.99	0.0	870.0	-5.812e+04	-1.360e+04	1850.12	-3.037e+04	-1.866e+05	-8.028e+06
57	48	6.162e+06	-1.586e+05	4.48	0.0	0.0	-6.381e+04	-1.842e+04	1631.35	-4.266e+04	-1.577e+06	6.162e+06
		-9.860e+06	-1.577e+06	-5.27	0.0	870.0	-6.003e+04	-1.842e+04	1631.35	-4.266e+04	-1.586e+05	-9.860e+06
57	49	1.922e+06	1.414e+06	-3.36	0.0	0.0	-6.041e+04	-9760.40	-1431.57	5.824e+04	1.414e+06	1.922e+06
		-6.569e+06	1.722e+05	4.77	0.0	870.0	-5.663e+04	-9760.40	-1431.57	5.824e+04	1.722e+05	-6.569e+06
57	50	8.073e+06	-7.112e+04	6.82	0.0	0.0	-6.531e+04	-2.231e+04	316.60	-2.958e+04	-3.452e+05	8.073e+06
		-1.134e+07	-3.452e+05	-1.21	0.0	870.0	-6.153e+04	-2.231e+04	316.60	-2.958e+04	-7.112e+04	-1.134e+07
57	51	1.935e+06	3.482e+05	-3.34	0.0	0.0	-6.042e+04	-9786.43	-329.74	3.141e+04	3.482e+05	1.935e+06
		-6.579e+06	6.272e+04	1.21	0.0	870.0	-5.665e+04	-9786.43	-329.74	3.141e+04	6.272e+04	-6.579e+06
57	52	8.085e+06	-1.805e+05	6.84	0.0	0.0	-6.532e+04	-2.234e+04	1418.44	-5.641e+04	-1.411e+06	8.085e+06
		-1.135e+07	-1.411e+06	-4.77	0.0	870.0	-6.154e+04	-2.234e+04	1418.44	-5.641e+04	-1.805e+05	-1.135e+07
57	53	1.934e+06	1.387e+06	-3.34	0.0	0.0	-6.042e+04	-9784.97	-1404.85	5.606e+04	1.387e+06	1.934e+06
		-6.579e+06	1.680e+05	4.68	0.0	870.0	-5.664e+04	-9784.97	-1404.85	5.606e+04	1.680e+05	-6.579e+06
57	54	8.084e+06	-7.531e+04	6.84	0.0	0.0	-6.532e+04	-2.234e+04	343.33	-3.176e+04	-3.724e+05	8.084e+06
		-1.135e+07	-3.724e+05	-1.30	0.0	870.0	-6.154e+04	-2.234e+04	343.33	-3.176e+04	-7.531e+04	-1.135e+07
57	55	1.923e+06	3.754e+05	-3.36	0.0	0.0	-6.041e+04	-9761.87	-356.47	3.360e+04	3.754e+05	1.923e+06
		-6.570e+06	6.691e+04	1.30	0.0	870.0	-5.664e+04	-9761.87	-356.47	3.360e+04	6.691e+04	-6.570e+06
57	56	8.073e+06	-1.764e+05	6.82	0.0	0.0	-6.531e+04	-2.231e+04	1391.71	-5.422e+04	-1.384e+06	8.073e+06
		-1.134e+07	-1.384e+06	-4.68	0.0	870.0	-6.153e+04	-2.231e+04	1391.71	-5.422e+04	-1.764e+05	-1.134e+07
57	57	1.073e+06	1.766e+05	-4.62	0.0	0.0	-5.968e+04	-8015.84	-192.88	3.480e+04	1.766e+05	1.073e+06
		-5.901e+06	3958.77	0.57	0.0	870.0	-5.590e+04	-8015.84	-192.88	3.480e+04	3958.77	-5.901e+06
57	58	8.922e+06	8.924e+05	7.97	0.0	0.0	-6.604e+04	-2.406e+04	-922.09	-6136.55	8.924e+05	8.922e+06
		-1.201e+07	9.707e+04	2.99	0.0	870.0	-6.227e+04	-2.406e+04	-922.09	-6136.55	9.707e+04	-1.201e+07
57	59	1.086e+06	-1.055e+05	-4.61	0.0	0.0	-5.969e+04	-8041.88	908.96	7973.12	-8.894e+05	1.086e+06

		-5.911e+06	-8.894e+05	-2.99	0.0	870.0	-5.591e+04	-8041.88	908.96	7973.12	-1.055e+05	-5.911e+06
57	60	8.934e+06	-1.235e+04	7.99	0.0	0.0	-6.606e+04	-2.408e+04	179.74	-3.297e+04	-1.735e+05	8.934e+06
		-1.202e+07	-1.735e+05	-0.58	0.0	870.0	-6.228e+04	-2.408e+04	179.74	-3.297e+04	-1.235e+04	-1.202e+07
57	61	1.085e+06	1.493e+05	-4.61	0.0	0.0	-5.969e+04	-8040.41	-166.15	3.262e+04	1.493e+05	1.085e+06
		-5.910e+06	-231.22	0.48	0.0	870.0	-5.591e+04	-8040.41	-166.15	3.262e+04	-231.22	-5.910e+06
57	62	8.934e+06	8.652e+05	7.99	0.0	0.0	-6.605e+04	-2.408e+04	-895.37	-8321.23	8.652e+05	8.934e+06
		-1.202e+07	9.288e+04	2.89	0.0	870.0	-6.228e+04	-2.408e+04	-895.37	-8321.23	9.288e+04	-1.202e+07
57	63	1.074e+06	-1.013e+05	-4.62	0.0	0.0	-5.968e+04	-8017.31	882.23	1.016e+04	-8.621e+05	1.074e+06
		-5.901e+06	-8.621e+05	-2.90	0.0	870.0	-5.590e+04	-8017.31	882.23	1.016e+04	-1.013e+05	-5.901e+06
57	64	8.923e+06	-8164.59	7.97	0.0	0.0	-6.604e+04	-2.406e+04	153.02	-3.078e+04	-1.463e+05	8.923e+06
		-1.201e+07	-1.463e+05	-0.49	0.0	870.0	-6.227e+04	-2.406e+04	153.02	-3.078e+04	-8164.59	-1.201e+07
57	65	4.545e+06	1371.11	2.86	0.0	0.0	-5.748e+04	-1.458e+04	-5.95	831.11	1371.11	4.545e+06
		-8.136e+06	-3806.40	-1.69e-03	0.0	870.0	-5.370e+04	-1.458e+04	-5.95	831.11	-3806.40	-8.136e+06
57	66	5.004e+06	1515.87	3.15	0.0	0.0	-6.287e+04	-1.605e+04	-6.57	918.29	1515.87	5.004e+06
		-8.959e+06	-4197.90	-1.86e-03	0.0	870.0	-5.909e+04	-1.605e+04	-6.57	918.29	-4197.90	-8.959e+06
58	1	3.425e+06	2.902e+06	1.59	0.0	0.0	-6.158e+04	-1.282e+04	-3006.38	7.212e+04	2.902e+06	3.425e+06
		-7.725e+06	2.176e+05	9.70	0.0	870.0	-5.780e+04	-1.282e+04	-3006.38	7.212e+04	2.176e+05	-7.725e+06
58	2	6.188e+06	2.286e+06	4.51	0.0	0.0	-6.384e+04	-1.847e+04	-2377.52	4.127e+04	2.286e+06	6.188e+06
		-9.877e+06	2.922e+05	7.62	0.0	870.0	-6.007e+04	-1.847e+04	-2377.52	4.127e+04	2.922e+05	-9.877e+06
58	3	3.813e+06	-2.946e+05	1.94	0.0	0.0	-6.189e+04	-1.361e+04	2375.18	-4.234e+04	-2.286e+06	3.813e+06
		-8.028e+06	-2.286e+06	-7.63	0.0	870.0	-5.811e+04	-1.361e+04	2375.18	-4.234e+04	-2.946e+05	-8.028e+06
58	4	6.575e+06	-2.201e+05	4.96	0.0	0.0	-6.415e+04	-1.926e+04	3004.04	-7.320e+04	-2.903e+06	6.575e+06
		-1.018e+07	-2.903e+06	-9.70	0.0	870.0	-6.038e+04	-1.926e+04	3004.04	-7.320e+04	-2.201e+05	-1.018e+07
58	5	3.429e+06	2.469e+06	1.59	0.0	0.0	-6.163e+04	-1.282e+04	-2563.25	5.033e+04	2.469e+06	3.429e+06
		-7.728e+06	2.404e+05	8.24	0.0	870.0	-5.785e+04	-1.282e+04	-2563.25	5.033e+04	2.404e+05	-7.728e+06
58	6	6.185e+06	2.719e+06	4.51	0.0	0.0	-6.379e+04	-1.846e+04	-2820.66	6.306e+04	2.719e+06	6.185e+06
		-9.873e+06	2.694e+05	9.08	0.0	870.0	-6.002e+04	-1.846e+04	-2820.66	6.306e+04	2.694e+05	-9.873e+06
58	7	3.816e+06	-2.719e+05	1.95	0.0	0.0	-6.194e+04	-1.362e+04	2818.32	-6.413e+04	-2.719e+06	3.816e+06
		-8.032e+06	-2.719e+06	-9.08	0.0	870.0	-5.816e+04	-1.362e+04	2818.32	-6.413e+04	-2.719e+05	-8.032e+06
58	8	6.572e+06	-2.428e+05	4.96	0.0	0.0	-6.410e+04	-1.925e+04	2560.90	-5.141e+04	-2.470e+06	6.572e+06
		-1.018e+07	-2.470e+06	-8.25	0.0	870.0	-6.033e+04	-1.925e+04	2560.90	-5.141e+04	-2.428e+05	-1.018e+07
58	9	3.801e+06	2.766e+06	1.93	0.0	0.0	-6.188e+04	-1.359e+04	-2879.83	6.239e+04	2.766e+06	3.801e+06
		-8.019e+06	1.916e+05	9.22	0.0	870.0	-5.810e+04	-1.359e+04	-2879.83	6.239e+04	1.916e+05	-8.019e+06
58	10	6.563e+06	2.149e+06	4.95	0.0	0.0	-6.414e+04	-1.924e+04	-2250.97	3.154e+04	2.149e+06	6.563e+06
		-1.017e+07	2.661e+05	7.15	0.0	870.0	-6.037e+04	-1.924e+04	-2250.97	3.154e+04	2.661e+05	-1.017e+07
58	11	3.437e+06	-2.685e+05	1.60	0.0	0.0	-6.159e+04	-1.284e+04	2248.63	-3.262e+04	-2.150e+06	3.437e+06
		-7.734e+06	-2.150e+06	-7.15	0.0	870.0	-5.781e+04	-1.284e+04	2248.63	-3.262e+04	-2.685e+05	-7.734e+06
58	12	6.200e+06	-1.940e+05	4.53	0.0	0.0	-6.385e+04	-1.849e+04	2877.49	-6.347e+04	-2.767e+06	6.200e+06
		-9.886e+06	-2.767e+06	-9.23	0.0	870.0	-6.008e+04	-1.849e+04	2877.49	-6.347e+04	-1.940e+05	-9.886e+06
58	13	3.804e+06	2.333e+06	1.93	0.0	0.0	-6.193e+04	-1.359e+04	-2436.70	4.061e+04	2.333e+06	3.804e+06
		-8.022e+06	2.143e+05	7.77	0.0	870.0	-5.815e+04	-1.359e+04	-2436.70	4.061e+04	2.143e+05	-8.022e+06
58	14	6.560e+06	2.583e+06	4.94	0.0	0.0	-6.409e+04	-1.923e+04	-2694.11	5.333e+04	2.583e+06	6.560e+06
		-1.017e+07	2.434e+05	8.60	0.0	870.0	-6.032e+04	-1.923e+04	-2694.11	5.333e+04	2.434e+05	-1.017e+07
58	15	3.441e+06	-2.458e+05	1.61	0.0	0.0	-6.164e+04	-1.285e+04	2691.77	-5.441e+04	-2.583e+06	3.441e+06
		-7.737e+06	-2.583e+06	-8.61	0.0	870.0	-5.786e+04	-1.285e+04	2691.77	-5.441e+04	-2.458e+05	-7.737e+06
58	16	6.197e+06	-2.167e+05	4.53	0.0	0.0	-6.380e+04	-1.848e+04	2434.36	-4.168e+04	-2.334e+06	6.197e+06
		-9.882e+06	-2.334e+06	-7.77	0.0	870.0	-6.003e+04	-1.848e+04	2434.36	-4.168e+04	-2.167e+05	-9.882e+06
58	17	3.384e+05	1.806e+06	-5.72	0.0	0.0	-5.904e+04	-6503.55	-1856.50	6.805e+04	1.806e+06	3.384e+05
		-5.320e+06	-4.855e+04	6.06	0.0	870.0	-5.527e+04	-6503.55	-1856.50	6.805e+04	-4.855e+04	-5.320e+06
58	18	9.546e+06	1.998e+05	8.82	0.0	0.0	-6.659e+04	-2.533e+04	239.69	-3.479e+04	-2.500e+05	9.546e+06
		-1.249e+07	-2.500e+05	-0.86	0.0	870.0	-6.282e+04	-2.533e+04	239.69	-3.479e+04	1.998e+05	-1.249e+07
58	19	4.546e+05	2.496e+05	-5.54	0.0	0.0	-5.914e+04	-6741.75	-242.03	3.371e+04	2.496e+05	4.546e+05
		-5.411e+06	-2.022e+05	0.86	0.0	870.0	-5.536e+04	-6741.75	-242.03	3.371e+04	-2.022e+05	-5.411e+06
58	20	9.663e+06	4.614e+04	8.98	0.0	0.0	-6.669e+04	-2.557e+04	1854.16	-6.913e+04	-1.807e+06	9.663e+06
		-1.258e+07	-1.807e+06	-6.06	0.0	870.0	-6.291e+04	-2.557e+04	1854.16	-6.913e+04	4.614e+04	-1.258e+07
58	21	4.510e+05	1.765e+06	-5.55	0.0	0.0	-5.913e+04	-6734.52	-1818.54	6.513e+04	1.765e+06	4.510e+05
		-5.408e+06	-5.637e+04	5.91	0.0	870.0	-5.536e+04	-6734.52	-1818.54	6.513e+04	-5.637e+04	-5.408e+06
58	22	9.659e+06	1.920e+05	8.97	0.0	0.0	-6.668e+04	-2.556e+04	277.66	-3.771e+04	-2.908e+05	9.659e+06
		-1.258e+07	-2.908e+05	-1.01	0.0	870.0	-6.291e+04	-2.556e+04	277.66	-3.771e+04	1.920e+05	-1.258e+07
58	23	3.419e+05	2.905e+05	-5.71	0.0	0.0	-5.905e+04	-6510.79	-280.00	3.663e+04	2.905e+05	3.419e+05
		-5.322e+06	-1.944e+05	1.00	0.0	870.0	-5.527e+04	-6510.79	-280.00	3.663e+04	-1.944e+05	-5.322e+06
58	24	9.550e+06	5.395e+04	8.83	0.0	0.0	-6.660e+04	-2.534e+04	1816.20	-6.621e+04	-1.766e+06	9.550e+06
		-1.250e+07	-1.766e+06	-5.92	0.0	870.0	-6.282e+04	-2.534e+04	1816.20	-6.621e+04	5.395e+04	-1.250e+07
58	25	3.492e+05	3.626e+05	-5.71	0.0	0.0	-5.921e+04	-6530.27	-379.38	-4573.30	3.626e+05	3.492e+05
		-5.332e+06	2.717e+04	1.20	0.0	870.0	-5.543e+04	-6530.27	-379.38	-4573.30	2.717e+04	-5.332e+06
58	26	9.535e+06	1.194e+06	8.81	0.0	0.0	-6.643e+04	-2.531e+04	-1237.43	3.784e+04	1.194e+06	9.535e+06
		-1.248e+07	1.241e+05	3.99	0.0	870.0	-6.266e+04	-2.531e+04	-1237.43	3.784e+04	1.241e+05	-1.248e+07
58	27	4.655e+05	-1.265e+05	-5.53	0.0	0.0	-5.930e+04	-6768.47	1235.09	-3.891e+04	-1.194e+06	4.655e+05
		-5.423e+06	-1.194e+06	-3.99	0.0	870.0	-5.552e+04	-6768.47	1235.09	-3.891e+04	-1.265e+05	-5.423e+06
58	28	9.652e+06	-2.959e+04	8.97	0.0	0.0	-6.652e+04	-2.555e+04	377.04	3497.11	-3.630e+05	9.652e+06
		-1.257e+07	-3.630e+05	-1.21	0.0	870.0	-6.275e+04	-2.555e+04	377.04	3497.11	-2.959e+04	-1.257e+07
58	29	4.619e+05	3.218e+05	-5.54	0.0	0.0	-5.930e+04	-6761.24	-341.42	-7491.17	3.218e+05	4.619e+05
		-5.420e+06	1.936e+04	1.06	0.0	870.0	-5.552e+04	-6761.24	-341.42	-7491.17	1.936e+04	-5.420e+06
58	30	9.648e+06	1.153e+06	8.96	0.0	0.0	-6.652e+04	-2.554e+04	-1199.46	3.492e+04	1.153e+06	9.648e+06
		-1.257e+07	1.163e+05	3.84	0.0	870.0	-6.275e+04	-2.554e+04	-1199.46	3.492e+04	1.163e+05	-1.257e+07
58	31	3.528e+05	-1.187e+05	-5.70	0.0	0.0	-5.921e+04	-6537.50	1197.12	-3.599e+04	-1.153e+06	3.528e+05
		-5.335e+06	-1.153e+06	-3.85	0.0	870.0	-5.543e+04	-6537.50	1197.12	-3.599e+04	-1.187e+05	-5.335e+06

58	32	9.539e+06-2.178e+04	8.81	0.0	0.0	-6.643e+04-2.531e+04	339.08	6414.98	-3.222e+05	9.539e+06
		-1.248e+07-3.222e+05	-1.07	0.0	870.0	-6.266e+04-2.531e+04	339.08	6414.98	-2.178e+04-1.248e+07	
58	33	3.649e+06 2.052e+06	1.79	0.0	0.0	-6.176e+04-1.327e+04	-2126.59	5.703e+04	2.052e+06	3.649e+06
		-7.899e+06 1.418e+05	6.85	0.0	870.0	-5.799e+04-1.327e+04	-2126.59	5.703e+04	1.418e+05-7.899e+06	
58	34	6.071e+06 1.511e+06	4.38	0.0	0.0	-6.375e+04-1.823e+04	-1575.28	2.998e+04	1.511e+06	6.071e+06
		-9.786e+06 2.072e+05	5.03	0.0	870.0	-5.997e+04-1.823e+04	-1575.28	2.998e+04	2.072e+05-9.786e+06	
58	35	3.930e+06-2.096e+05	2.05	0.0	0.0	-6.198e+04-1.385e+04	1572.94	-3.106e+04	-1.512e+06	3.930e+06
		-8.118e+06-1.512e+06	-5.04	0.0	870.0	-5.821e+04-1.385e+04	1572.94	-3.106e+04	-2.096e+05-8.118e+06	
58	36	6.352e+06-1.443e+05	4.70	0.0	0.0	-6.397e+04-1.880e+04	2124.25	-5.811e+04	-2.052e+06	6.352e+06
		-1.001e+07-2.052e+06	-6.86	0.0	870.0	-6.019e+04-1.880e+04	2124.25	-5.811e+04	-1.443e+05-1.001e+07	
58	37	3.653e+06 1.672e+06	1.80	0.0	0.0	-6.180e+04-1.328e+04	-1738.14	3.793e+04	1.672e+06	3.653e+06
		-7.903e+06 1.618e+05	5.58	0.0	870.0	-5.803e+04-1.328e+04	-1738.14	3.793e+04	1.618e+05-7.903e+06	
58	38	6.068e+06 1.891e+06	4.38	0.0	0.0	-6.370e+04-1.822e+04	-1963.73	4.908e+04	1.891e+06	6.068e+06
		-9.782e+06 1.872e+05	6.31	0.0	870.0	-5.993e+04-1.822e+04	-1963.73	4.908e+04	1.872e+05-9.782e+06	
58	39	3.933e+06-1.897e+05	2.05	0.0	0.0	-6.203e+04-1.386e+04	1961.39	-5.016e+04	-1.891e+06	3.933e+06
		-8.122e+06-1.891e+06	-6.32	0.0	870.0	-5.825e+04-1.386e+04	1961.39	-5.016e+04	-1.897e+05-8.122e+06	
58	40	6.348e+06-1.642e+05	4.70	0.0	0.0	-6.393e+04-1.879e+04	1735.80	-3.901e+04	-1.673e+06	6.348e+06
		-1.000e+07-1.673e+06	-5.58	0.0	870.0	-6.015e+04-1.879e+04	1735.80	-3.901e+04	-1.642e+05-1.000e+07	
58	41	3.921e+06 1.960e+06	2.04	0.0	0.0	-6.198e+04-1.383e+04	-2041.04	4.999e+04	1.960e+06	3.921e+06
		-8.112e+06 1.419e+05	6.53	0.0	870.0	-5.820e+04-1.383e+04	-2041.04	4.999e+04	1.419e+05-8.112e+06	
58	42	6.343e+06 1.419e+06	4.69	0.0	0.0	-6.396e+04-1.878e+04	-1489.72	2.294e+04	1.419e+06	6.343e+06
		-9.999e+06 1.893e+05	4.71	0.0	870.0	-6.019e+04-1.878e+04	-1489.72	2.294e+04	1.893e+05-9.999e+06	
58	43	3.658e+06-1.917e+05	1.80	0.0	0.0	-6.177e+04-1.329e+04	1487.38	-2.401e+04	-1.419e+06	3.658e+06
		-7.906e+06-1.419e+06	-4.72	0.0	870.0	-5.799e+04-1.329e+04	1487.38	-2.401e+04	-1.917e+05-7.906e+06	
58	44	6.080e+06-1.264e+05	4.39	0.0	0.0	-6.375e+04-1.824e+04	2038.69	-5.106e+04	-1.960e+06	6.080e+06
		-9.793e+06-1.960e+06	-6.54	0.0	870.0	-5.998e+04-1.824e+04	2038.69	-5.106e+04	-1.264e+05-9.793e+06	
58	45	3.924e+06 1.580e+06	2.04	0.0	0.0	-6.202e+04-1.384e+04	-1652.58	3.089e+04	1.580e+06	3.924e+06
		-8.115e+06 1.439e+05	5.26	0.0	870.0	-5.824e+04-1.384e+04	-1652.58	3.089e+04	1.439e+05-8.115e+06	
58	46	6.339e+06 1.799e+06	4.69	0.0	0.0	-6.392e+04-1.878e+04	-1878.18	4.204e+04	1.799e+06	6.339e+06
		-9.995e+06 1.694e+05	5.99	0.0	870.0	-6.014e+04-1.878e+04	-1878.18	4.204e+04	1.694e+05-9.995e+06	
58	47	3.662e+06-1.718e+05	1.81	0.0	0.0	-6.181e+04-1.330e+04	1875.84	-4.311e+04	-1.799e+06	3.662e+06
		-7.910e+06-1.799e+06	-5.99	0.0	870.0	-5.803e+04-1.330e+04	1875.84	-4.311e+04	-1.718e+05-7.910e+06	
58	48	6.077e+06-1.463e+05	4.39	0.0	0.0	-6.371e+04-1.824e+04	1650.24	-3.196e+04	-1.580e+06	6.077e+06
		-9.789e+06-1.580e+06	-5.26	0.0	870.0	-5.993e+04-1.824e+04	1650.24	-3.196e+04	-1.463e+05-9.789e+06	
58	49	9.218e+05 1.436e+06	-4.84	0.0	0.0	-5.952e+04 -7696.71	-1474.96	5.775e+04	1.436e+06	9.218e+05
		-5.774e+06-5.735e+04	4.81	0.0	870.0	-5.575e+04 -7696.71	-1474.96	5.775e+04	-5.735e+04-5.774e+06	
58	50	8.995e+06 1.604e+05	8.07	0.0	0.0	-6.614e+04-2.421e+04	362.76	-3.240e+04	-3.669e+05	8.995e+06
		-1.206e+07-3.669e+05	-1.25	0.0	870.0	-6.237e+04-2.421e+04	362.76	-3.240e+04	1.604e+05-1.206e+07	
58	51	1.006e+06 3.666e+05	-4.72	0.0	0.0	-5.959e+04 -7869.04	-365.10	3.133e+04	3.666e+05	1.006e+06
		-5.840e+06-1.628e+05	1.25	0.0	870.0	-5.581e+04 -7869.04	-365.10	3.133e+04	-1.628e+05-5.840e+06	
58	52	9.079e+06 5.493e+04	8.19	0.0	0.0	-6.621e+04-2.438e+04	1472.62	-5.883e+04	-1.436e+06	9.079e+06
		-1.213e+07-1.436e+06	-4.82	0.0	870.0	-6.243e+04-2.438e+04	1472.62	-5.883e+04	5.493e+04-1.213e+07	
58	53	1.003e+06 1.408e+06	-4.72	0.0	0.0	-5.959e+04 -7863.63	-1449.29	5.564e+04	1.408e+06	1.003e+06
		-5.838e+06-6.271e+04	4.72	0.0	870.0	-5.581e+04 -7863.63	-1449.29	5.564e+04	-6.271e+04-5.838e+06	
58	54	9.076e+06 1.550e+05	8.18	0.0	0.0	-6.621e+04-2.437e+04	388.43	-3.452e+04	-3.946e+05	9.076e+06
		-1.213e+07-3.946e+05	-1.35	0.0	870.0	-6.243e+04-2.437e+04	388.43	-3.452e+04	1.550e+05-1.213e+07	
58	55	9.245e+05 3.943e+05	-4.84	0.0	0.0	-5.952e+04 -7702.12	-390.77	3.344e+04	3.943e+05	9.245e+05
		-5.776e+06-1.574e+05	1.34	0.0	870.0	-5.575e+04 -7702.12	-390.77	3.344e+04	-1.574e+05-5.776e+06	
58	56	8.998e+06 6.029e+04	8.07	0.0	0.0	-6.614e+04-2.421e+04	1446.95	-5.672e+04	-1.408e+06	8.998e+06
		-1.207e+07-1.408e+06	-4.72	0.0	870.0	-6.237e+04-2.421e+04	1446.95	-5.672e+04	6.029e+04-1.207e+07	
58	57	9.332e+05 1.703e+05	-4.83	0.0	0.0	-5.967e+04 -7724.01	-180.10	-5909.16	1.703e+05	9.332e+05
		-5.787e+06 9038.88	0.56	0.0	870.0	-5.589e+04 -7724.01	-180.10	-5909.16	9038.88-5.787e+06	
58	58	8.984e+06 8.984e+05	8.06	0.0	0.0	-6.600e+04-2.418e+04	-932.10	3.126e+04	8.984e+05	8.984e+06
		-1.205e+07 9.397e+04	3.00	0.0	870.0	-6.222e+04-2.418e+04	-932.10	3.126e+04	9.397e+04-1.205e+07	
58	59	1.017e+06-9.639e+04	-4.70	0.0	0.0	-5.973e+04 -7896.34	929.76	-3.234e+04	-8.988e+05	1.017e+06
		-5.852e+06-8.988e+05	-3.01	0.0	870.0	-5.596e+04 -7896.34	929.76	-3.234e+04	-9.639e+04-5.852e+06	
58	60	9.068e+06-1.146e+05	8.17	0.0	0.0	-6.606e+04-2.435e+04	177.76	4832.97	-1.706e+05	9.068e+06
		-1.212e+07-1.706e+05	-0.57	0.0	870.0	-6.229e+04-2.435e+04	177.76	4832.97	-1.146e+04-1.212e+07	
58	61	1.015e+06 1.426e+05	-4.71	0.0	0.0	-5.973e+04 -7890.93	-154.43	-8022.35	1.426e+05	1.015e+06
		-5.850e+06 3680.12	0.47	0.0	870.0	-5.596e+04 -7890.93	-154.43	-8022.35	3680.12-5.850e+06	
58	62	9.065e+06 8.708e+05	8.17	0.0	0.0	-6.606e+04-2.435e+04	-906.43	2.915e+04	8.708e+05	9.065e+06
		-1.212e+07 8.861e+04	2.90	0.0	870.0	-6.229e+04-2.435e+04	-906.43	2.915e+04	8.861e+04-1.212e+07	
58	63	9.359e+05-9.103e+04	-4.82	0.0	0.0	-5.967e+04 -7729.42	904.09	-3.022e+04	-8.711e+05	9.359e+05
		-5.789e+06-8.711e+05	-2.91	0.0	870.0	-5.589e+04 -7729.42	904.09	-3.022e+04	-9.103e+04-5.789e+06	
58	64	8.986e+06 -6097.23	8.06	0.0	0.0	-6.600e+04-2.418e+04	152.09	6946.16	-1.430e+05	8.986e+06
		-1.205e+07-1.430e+05	-0.47	0.0	870.0	-6.222e+04-2.418e+04	152.09	6946.16	-6097.23-1.205e+07	
58	65	4.542e+06 -176.11	2.86	0.0	0.0	-5.748e+04-1.457e+04	-1.06	-488.86	-176.11	4.542e+06
		-8.131e+06 -1097.00	-2.31e-03	0.0	870.0	-5.370e+04-1.457e+04	-1.06	-488.86	-1097.00-8.131e+06	
58	66	5.000e+06 -190.59	3.14	0.0	0.0	-6.287e+04-1.604e+04	-1.17	-538.10	-190.59	5.000e+06
		-8.952e+06 -1208.55	-2.53e-03	0.0	870.0	-5.909e+04-1.604e+04	-1.17	-538.10	-1208.55-8.952e+06	
59	1	3.218e+06 6.736e+05	9.70	0.0	0.0	-1.089e+04 -3117.18	-1290.17	-5.725e+04	6.736e+05	3.218e+06
		5.098e+05-4.493e+05	1.26	0.0	870.0	-7117.97 -3117.18	-1290.17	-5.725e+04	-4.493e+05	5.098e+05
59	2	2.529e+06-2.349e+05	7.62	0.0	0.0	-1.099e+04 -2455.46	73.65	2.458e+04	-2.986e+05	2.529e+06
		3.946e+05-2.986e+05	-1.16	0.0	870.0	-7214.30 -2455.46	73.65	2.458e+04	-2.349e+05	3.946e+05
59	3	4.019e+05 6.102e+05	-7.63	0.0	0.0	-1.096e+04 2445.22	-1196.29	-2.143e+04	6.102e+05	-2.528e+06
		-2.528e+06-4.302e+05	1.10	0.0	870.0	-7187.01 2445.22	-1196.29	-2.143e+04	-4.302e+05	4.019e+05
59	4	5.171e+05-2.158e+05	-9.71	0.0	0.0	-1.106e+04 3106.94	167.53	6.040e+04	-3.619e+05	-2.158e+05

		-3.216e+06-3.619e+05	-1.31	0.0	870.0	-7283.33	3106.94	167.53	6.040e+04-2.158e+05-5.171e+05
59	5	2.734e+06 5.671e+05	8.24	0.0	0.0	-1.089e+04	-2651.08	-1141.12	-6.411e+04 5.671e+05 2.734e+06
		4.293e+05-4.260e+05	0.99	0.0	870.0	-7118.00	-2651.08	-1141.12	-6.411e+04-4.260e+05 4.293e+05
59	6	3.012e+06-1.921e+05	9.08	0.0	0.0	-1.099e+04	-2921.56	-75.40	3.145e+04-1.921e+05 3.012e+06
		4.750e+05-2.581e+05	-0.90	0.0	870.0	-7214.26	-2921.56	-75.40	3.145e+04-2.581e+05 4.750e+05
59	7	-4.823e+05 5.038e+05	-9.09	0.0	0.0	-1.096e+04	2911.33	-1047.25	-2.829e+04 5.038e+05-3.011e+06
		-3.011e+06-4.070e+05	0.84	0.0	870.0	-7187.04	2911.33	-1047.25	-2.829e+04-4.070e+05-4.823e+05
59	8	-4.366e+05-2.390e+05	-8.25	0.0	0.0	-1.106e+04	2640.84	18.48	6.727e+04-2.555e+05-2.733e+06
		-2.733e+06-2.555e+05	-1.05	0.0	870.0	-7283.30	2640.84	18.48	6.727e+04-2.390e+05-4.366e+05
59	9	3.064e+06 6.099e+05	9.23	0.0	0.0	-1.089e+04	-2979.26	-1200.92	-5.113e+04 6.099e+05 3.064e+06
		4.758e+05-4.455e+05	1.10	0.0	870.0	-7113.66	-2979.26	-1200.92	-5.113e+04-4.455e+05 4.758e+05
59	10	2.375e+06-2.311e+05	7.14	0.0	0.0	-1.099e+04	-2317.54	162.90	3.070e+04-3.622e+05 2.375e+06
		3.606e+05-3.622e+05	-1.32	0.0	870.0	-7209.99	-2317.54	162.90	3.070e+04-2.311e+05 3.606e+05
59	11	-3.679e+05 6.738e+05	-7.15	0.0	0.0	-1.097e+04	2307.30	-1285.55	-2.755e+04 6.738e+05-2.374e+06
		-2.374e+06-4.340e+05	1.26	0.0	870.0	-7191.31	2307.30	-1285.55	-2.755e+04-4.340e+05-3.679e+05
59	12	-4.831e+05-2.195e+05	-9.23	0.0	0.0	-1.106e+04	2969.02	78.27	5.429e+04-2.983e+05-3.062e+06
		-3.062e+06-2.983e+05	-1.16	0.0	870.0	-7287.64	2969.02	78.27	5.429e+04-2.195e+05-4.831e+05
59	13	2.581e+06 5.035e+05	7.77	0.0	0.0	-1.089e+04	-2513.16	-1051.87	-5.800e+04 5.035e+05 2.581e+06
		3.954e+05-4.223e+05	0.83	0.0	870.0	-7113.70	-2513.16	-1051.87	-5.800e+04-4.223e+05 3.954e+05
59	14	2.859e+06-2.544e+05	8.60	0.0	0.0	-1.099e+04	-2783.64	13.86	3.756e+04-2.558e+05 2.859e+06
		4.411e+05-2.558e+05	-1.06	0.0	870.0	-7209.96	-2783.64	13.86	3.756e+04-2.544e+05 4.411e+05
59	15	-4.484e+05 5.674e+05	-8.61	0.0	0.0	-1.097e+04	2773.41	-1136.50	-3.441e+04 5.674e+05-2.857e+06
		-2.857e+06-4.107e+05	1.00	0.0	870.0	-7191.35	2773.41	-1136.50	-3.441e+04-4.107e+05-4.484e+05
59	16	-4.027e+05-1.919e+05	-7.77	0.0	0.0	-1.106e+04	2502.92	-70.77	6.115e+04-1.919e+05-2.579e+06
		-2.579e+06-2.428e+05	-0.89	0.0	870.0	-7287.61	2502.92	-70.77	6.115e+04-2.428e+05-4.027e+05
59	17	2.010e+06 1.785e+06	6.07	0.0	0.0	-1.081e+04	-1942.35	-2848.44	-1.402e+05 1.785e+06 2.010e+06
		3.251e+05-6.928e+05	4.02	0.0	870.0	-7029.75	-1942.35	-2848.44	-1.402e+05-6.928e+05 3.251e+05
59	18	-5.889e+04 2.200e+04	-0.88	0.0	0.0	-1.113e+04	263.39	1697.63	1.326e+05-1.455e+06-2.849e+05
		-2.849e+05-1.455e+06	-4.04	0.0	870.0	-7350.84	263.39	1697.63	1.326e+05 2.200e+04-2.849e+05
59	19	2.865e+05 1.766e+06	0.87	0.0	0.0	-1.083e+04	-273.63	-2820.28	-1.294e+05 1.766e+06 2.865e+05
		5.158e+04-6.871e+05	3.98	0.0	870.0	-7050.46	-273.63	-2820.28	-1.294e+05-6.871e+05 5.158e+04
59	20	-3.324e+05 2.772e+04	-6.07	0.0	0.0	-1.115e+04	1932.11	1725.80	1.433e+05-1.474e+06-2.008e+05
		-2.008e+06-1.474e+06	-4.08	0.0	870.0	-7371.55	1932.11	1725.80	1.433e+05 2.312e+04-3.224e+06
59	21	1.964e+06 1.766e+06	5.93	0.0	0.0	-1.080e+04	-1900.98	-2821.66	-1.383e+05 1.766e+06 1.964e+06
		3.149e+05-6.917e+05	3.98	0.0	870.0	-7028.46	-1900.98	-2821.66	-1.383e+05-6.917e+05 3.149e+05
59	22	-6.907e+04 2.312e+04	-1.02	0.0	0.0	-1.113e+04	304.77	1724.41	1.344e+05-1.474e+06-3.310e+05
		-3.310e+05-1.474e+06	-4.08	0.0	870.0	-7349.55	304.77	1724.41	1.344e+05 2.312e+04-6.907e+04
59	23	3.326e+05 1.786e+06	1.01	0.0	0.0	-1.083e+04	-315.01	-2847.05	-1.313e+05 1.786e+06 3.326e+05
		6.176e+04-6.882e+05	4.03	0.0	870.0	-7051.76	-315.01	-2847.05	-1.313e+05-6.882e+05 6.176e+04
59	24	-3.222e+05 2.659e+04	-5.93	0.0	0.0	-1.115e+04	1890.74	1699.02	1.415e+05-1.455e+06-1.962e+05
		-1.962e+06-1.455e+06	-4.03	0.0	870.0	-7372.84	1890.74	1699.02	1.415e+05 2.659e+04-3.222e+05
59	25	3.991e+05 1.431e+06	1.20	0.0	0.0	-1.081e+04	-388.67	-2351.61	-1.631e+05 1.431e+06 3.991e+05
		5.690e+04-6.153e+05	3.14	0.0	870.0	-7029.86	-388.67	-2351.61	-1.631e+05-6.153e+05 5.690e+04
59	26	1.326e+06-5.552e+04	3.99	0.0	0.0	-1.113e+04	-1290.29	1200.81	1.555e+05-1.100e+06 1.326e+06
		2.093e+05-1.100e+06	-3.15	0.0	870.0	-7350.73	-1290.29	1200.81	1.555e+05-5.552e+04 2.093e+05
59	27	-2.166e+05 1.412e+06	-4.00	0.0	0.0	-1.083e+04	1280.05	-2323.45	-1.523e+05 1.412e+06-1.324e+06
		-1.324e+06-6.096e+05	3.09	0.0	870.0	-7050.57	1280.05	-2323.45	-1.523e+05-6.096e+05-2.166e+05
59	28	-6.421e+04-4.980e+04	-1.21	0.0	0.0	-1.115e+04	378.43	1228.97	1.662e+05-1.119e+06-3.975e+05
		-3.975e+05-1.119e+06	-3.20	0.0	870.0	-7371.44	378.43	1228.97	1.662e+05-4.980e+04-6.421e+04
59	29	3.530e+05 1.412e+06	1.06	0.0	0.0	-1.080e+04	-347.29	-2324.84	-1.612e+05 1.412e+06 3.530e+05
		4.672e+04-6.142e+05	3.09	0.0	870.0	-7028.57	-347.29	-2324.84	-1.612e+05-6.142e+05 4.672e+04
59	30	1.280e+06-5.440e+04	3.85	0.0	0.0	-1.113e+04	-1248.91	1227.58	1.573e+05-1.119e+06 1.280e+06
		1.991e+05-1.119e+06	-3.20	0.0	870.0	-7349.44	-1248.91	1227.58	1.573e+05-5.440e+04 1.991e+05
59	31	-2.064e+05 1.431e+06	-3.86	0.0	0.0	-1.083e+04	1238.68	-2350.23	-1.542e+05 1.431e+06-2.064e+05
		-1.278e+06-6.107e+05	3.14	0.0	870.0	-7051.86	1238.68	-2350.23	-1.542e+05-6.107e+05-2.064e+05
59	32	-5.403e+04-5.093e+04	-1.06	0.0	0.0	-1.115e+04	337.06	1202.19	1.644e+05-1.100e+06-3.514e+05
		-3.514e+05-1.100e+06	-3.15	0.0	870.0	-7372.74	337.06	1202.19	1.644e+05-5.093e+04-5.403e+04
59	33	2.276e+06 6.075e+05	6.86	0.0	0.0	-1.091e+04	-2207.64	-1196.35	-4.761e+04 6.075e+05 2.276e+06
		3.593e+05-4.337e+05	1.09	0.0	870.0	-7134.55	-2207.64	-1196.35	-4.761e+04-4.337e+05 3.593e+05
59	34	1.672e+06-2.448e+05	5.03	0.0	0.0	-1.099e+04	-1627.52	-0.67	2.414e+04-2.448e+05 1.672e+06
		2.583e+05-2.457e+05	-1.03	0.0	870.0	-7218.99	-1627.52	-0.67	2.414e+04-2.457e+05 2.583e+05
59	35	-2.656e+05 5.564e+05	-5.04	0.0	0.0	-1.096e+04	1617.28	-1121.97	-2.098e+04 5.564e+05-1.671e+06
		-1.671e+06-4.194e+05	0.97	0.0	870.0	-7182.31	1617.28	-1121.97	-2.098e+04-4.194e+05-2.656e+05
59	36	-3.666e+05-2.314e+05	-6.87	0.0	0.0	-1.104e+04	2197.41	73.71	5.076e+04-2.959e+05-2.274e+06
		-2.274e+06-2.959e+05	-1.15	0.0	870.0	-7266.76	2197.41	73.71	5.076e+04-2.314e+05-3.666e+05
59	37	1.852e+06 5.141e+05	5.58	0.0	0.0	-1.091e+04	-1799.05	-1065.55	-5.361e+04 5.141e+05 1.852e+06
		2.887e+05-4.132e+05	0.86	0.0	870.0	-7134.58	-1799.05	-1065.55	-5.361e+04-4.132e+05 2.887e+05
59	38	2.096e+06-1.514e+05	6.31	0.0	0.0	-1.099e+04	-2036.11	-131.48	3.014e+04-1.514e+05 2.096e+06
		3.288e+05-2.661e+05	-0.79	0.0	870.0	-7218.96	-2036.11	-131.48	3.014e+04-2.661e+05 3.288e+05
59	39	-3.361e+05 4.630e+05	-6.32	0.0	0.0	-1.096e+04	2025.87	-991.17	-2.698e+04 4.630e+05-2.094e+06
		-2.094e+06-3.990e+05	0.74	0.0	870.0	-7182.35	2025.87	-991.17	-2.698e+04-3.990e+05-3.361e+05
59	40	-2.960e+05-2.025e+05	-5.58	0.0	0.0	-1.104e+04	1788.81	-57.10	5.676e+04-2.025e+05-1.850e+06
		-1.850e+06-2.518e+05	-0.92	0.0	870.0	-7266.72	1788.81	-57.10	5.676e+04-2.518e+05-2.960e+05
59	41	2.171e+06 5.563e+05	6.54	0.0	0.0	-1.091e+04	-2114.34	-1124.51	-4.460e+04 5.563e+05 2.171e+06
		3.360e+05-4.316e+05	0.96	0.0	870.0	-7131.22	-2114.34	-1124.51	-4.460e+04-4.316e+05 3.360e+05
59	42	1.568e+06-2.436e+05	4.71	0.0	0.0	-1.099e+04	-1534.21	71.17	2.714e+04-2.960e+05 1.568e+06
		2.350e+05-2.960e+05	-1.15	0.0	870.0	-7215.66	-1534.21	71.17	2.714e+04-2.436e+05 2.350e+05

59	43	-2.423e+05	6.076e+05	-4.71	0.0	0.0	-1.096e+04	1523.97	-1193.81	-2.399e+04	6.076e+05	-1.566e+06
		-1.566e+06	-4.215e+05	1.10	0.0	870.0	-7185.64	1523.97	-1193.81	-2.399e+04	-4.215e+05	-2.423e+05
59	44	-3.433e+05	-2.335e+05	-6.54	0.0	0.0	-1.105e+04	2104.10	1.86	4.776e+04	-2.446e+05	-2.170e+06
		-2.170e+06	-2.446e+05	-1.02	0.0	870.0	-7270.08	2104.10	1.86	4.776e+04	-2.335e+05	-3.433e+05
59	45	1.748e+06	4.629e+05	5.26	0.0	0.0	-1.091e+04	-1705.75	-993.70	-5.061e+04	4.629e+05	1.748e+06
		2.655e+05	-4.112e+05	0.73	0.0	870.0	-7131.25	-1705.75	-993.70	-5.061e+04	-4.112e+05	2.655e+05
59	46	1.991e+06	-2.026e+05	5.99	0.0	0.0	-1.099e+04	-1942.81	-59.64	3.314e+04	-2.026e+05	1.991e+06
		3.055e+05	-2.640e+05	-0.92	0.0	870.0	-7215.63	-1942.81	-59.64	3.314e+04	-2.640e+05	3.055e+05
59	47	-3.128e+05	5.142e+05	-6.00	0.0	0.0	-1.096e+04	1932.57	-1063.01	-2.999e+04	5.142e+05	-1.990e+06
		-1.990e+06	-4.011e+05	0.86	0.0	870.0	-7185.67	1932.57	-1063.01	-2.999e+04	-4.011e+05	-3.128e+05
59	48	-2.728e+05	-1.513e+05	-5.26	0.0	0.0	-1.105e+04	1695.51	-128.94	5.376e+04	-1.513e+05	-1.746e+06
		-1.746e+06	-2.537e+05	-0.79	0.0	870.0	-7270.05	1695.51	-128.94	5.376e+04	-2.537e+05	-2.728e+05
59	49	1.599e+06	1.584e+06	4.83	0.0	0.0	-1.083e+04	-1545.74	-2565.28	-1.220e+05	1.584e+06	1.599e+06
		2.584e+05	-6.480e+05	3.52	0.0	870.0	-7052.75	-1545.74	-2565.28	-1.220e+05	-6.480e+05	2.584e+05
59	50	-7.822e+04	-2.134e+04	-1.26	0.0	0.0	-1.111e+04	388.02	1420.32	1.172e+05	-1.257e+06	-4.132e+05
		-4.132e+05	-1.257e+06	-3.54	0.0	870.0	-7334.22	388.02	1420.32	1.172e+05	-2.134e+04	-7.822e+04
59	51	4.148e+05	1.569e+06	1.26	0.0	0.0	-1.084e+04	-398.26	-2542.96	-1.140e+05	1.569e+06	4.148e+05
		7.091e+04	-6.437e+05	3.49	0.0	870.0	-7067.08	-398.26	-2542.96	-1.140e+05	-6.437e+05	7.091e+04
59	52	-2.657e+05	-1.707e+04	-4.83	0.0	0.0	-1.112e+04	1535.50	1442.63	1.251e+05	-1.272e+06	-1.597e+06
		-1.597e+06	-1.272e+06	-3.58	0.0	870.0	-7348.55	1535.50	1442.63	1.251e+05	-1.707e+04	-2.657e+05
59	53	1.567e+06	1.569e+06	4.73	0.0	0.0	-1.083e+04	-1517.75	-2543.72	-1.211e+05	1.569e+06	1.567e+06
		2.514e+05	-6.474e+05	3.48	0.0	870.0	-7051.75	-1517.75	-2543.72	-1.211e+05	-6.474e+05	2.514e+05
59	54	-8.520e+04	-2.072e+04	-1.36	0.0	0.0	-1.111e+04	416.01	1441.87	1.181e+05	-1.272e+06	-4.445e+05
		-4.445e+05	-1.272e+06	-3.58	0.0	870.0	-7333.22	416.01	1441.87	1.181e+05	-2.072e+04	-8.520e+04
59	55	4.461e+05	1.584e+06	1.35	0.0	0.0	-1.084e+04	-426.25	-2564.52	-1.149e+05	1.584e+06	4.461e+05
		7.789e+04	-6.444e+05	3.52	0.0	870.0	-7068.08	-426.25	-2564.52	-1.149e+05	-6.444e+05	7.789e+04
59	56	-2.587e+05	-1.769e+04	-4.73	0.0	0.0	-1.113e+04	1507.51	1421.08	1.242e+05	-1.257e+06	-1.566e+06
		-1.566e+06	-1.257e+06	-3.54	0.0	870.0	-7349.55	1507.51	1421.08	1.242e+05	-1.769e+04	-2.587e+05
59	57	1.865e+05	1.273e+06	0.56	0.0	0.0	-1.083e+04	-183.76	-2129.26	-1.420e+05	1.273e+06	1.865e+05
		2.330e+04	-5.800e+05	2.75	0.0	870.0	-7052.86	-183.76	-2129.26	-1.420e+05	-5.800e+05	2.330e+04
59	58	9.989e+05	-8.937e+04	3.01	0.0	0.0	-1.111e+04	-973.95	984.30	1.372e+05	-9.457e+05	9.989e+05
		1.568e+05	-9.457e+05	-2.77	0.0	870.0	-7334.12	-973.95	984.30	1.372e+05	-8.937e+04	1.568e+05
59	59	-1.642e+05	1.273e+06	-3.01	0.0	0.0	-1.084e+04	963.71	-2106.94	-1.340e+05	1.273e+06	-1.642e+05
		-9.973e+05	-5.757e+05	2.71	0.0	870.0	-7067.19	963.71	-2106.94	-1.340e+05	-5.757e+05	-9.973e+05
59	60	-3.061e+04	-8.510e+04	-0.56	0.0	0.0	-1.112e+04	173.53	1006.61	1.452e+05	-9.610e+05	-1.849e+05
		-1.849e+05	-9.610e+05	-2.81	0.0	870.0	-7348.45	173.53	1006.61	1.452e+05	-8.510e+04	-3.061e+04
59	61	1.552e+05	1.273e+06	0.46	0.0	0.0	-1.083e+04	-155.77	-2107.70	-1.411e+05	1.273e+06	1.552e+05
		1.632e+04	-5.794e+05	2.71	0.0	870.0	-7051.86	-155.77	-2107.70	-1.411e+05	-5.794e+05	1.632e+04
59	62	9.676e+05	-8.876e+04	2.91	0.0	0.0	-1.111e+04	-945.96	1005.85	1.381e+05	-9.610e+05	9.676e+05
		1.499e+05	-9.610e+05	-2.81	0.0	870.0	-7333.12	-945.96	1005.85	1.381e+05	-8.876e+04	1.499e+05
59	63	-1.572e+05	-1.273e+06	-2.91	0.0	0.0	-1.084e+04	935.72	-2128.49	-1.349e+05	-1.273e+06	-1.572e+05
		-9.660e+05	-5.763e+05	2.75	0.0	870.0	-7068.19	935.72	-2128.49	-1.349e+05	-5.763e+05	-9.660e+05
59	64	-2.363e+04	-8.572e+04	-0.47	0.0	0.0	-1.113e+04	145.53	985.06	1.442e+05	-9.456e+05	-1.536e+05
		-1.536e+05	-9.456e+05	-2.77	0.0	870.0	-7349.44	145.53	985.06	1.442e+05	-8.572e+04	-2.363e+04
59	65	719.64	1.413e+05	-2.62e-03	0.0	0.0	-1.037e+04	-4.64	-509.18	1431.20	1.413e+05	719.64
		-3316.84	-3.017e+05	0.08	0.0	870.0	-6593.22	-4.64	-509.18	1431.20	-3.017e+05	-3316.84
59	66	797.74	1.558e+05	-2.88e-03	0.0	0.0	-1.098e+04	-5.12	-561.32	1577.09	1.558e+05	797.74
		-3656.28	-3.325e+05	0.09	0.0	870.0	-7200.65	-5.12	-561.32	1577.09	-3.325e+05	-3656.28
60		1-5.854e+05	5.030e+05	-9.75	0.0	0.0	-2.911e+04	3540.61	1423.96	1.275e+05	-7.359e+05	-3.666e+06
		-3.666e+06	-7.359e+05	-1.54	0.0	870.0	-2.534e+04	3540.61	1423.96	1.275e+05	5.030e+05	-1.54
60		2-6.390e+05	9.777e+05	-10.90	0.0	0.0	-2.405e+04	3982.39	-1870.63	4.033e+04	9.777e+05	-4.104e+06
		-4.104e+06	-6.497e+05	2.08	0.0	870.0	-2.027e+04	3982.39	-1870.63	4.033e+04	-6.497e+05	-6.390e+05
60		3 4.102e+06	6.641e+05	10.89	0.0	0.0	-2.996e+04	-3981.04	1883.61	-3.882e+04	-9.747e+05	4.102e+06
		6.388e+05	-9.747e+05	-2.05	0.0	870.0	-2.619e+04	-3981.04	1883.61	-3.882e+04	6.641e+05	6.388e+05
60		4 3.664e+06	7.389e+05	9.75	0.0	0.0	-2.490e+04	-3539.25	-1410.97	-1.259e+05	7.389e+05	3.664e+06
		5.853e+05	-4.886e+05	1.57	0.0	870.0	-2.112e+04	-3539.25	-1410.97	-1.259e+05	-4.886e+05	5.853e+05
60		5-6.241e+05	4.993e+05	-10.58	0.0	0.0	-2.909e+04	3860.50	1414.35	6.552e+04	-7.312e+05	-3.983e+06
		-3.983e+06	-7.312e+05	-1.53	0.0	870.0	-2.531e+04	3860.50	1414.35	6.552e+04	4.993e+05	-6.241e+05
60		6-6.004e+05	9.731e+05	-10.07	0.0	0.0	-2.407e+04	3662.50	-1861.02	1.023e+05	9.731e+05	-3.787e+06
		-3.787e+06	-6.460e+05	2.07	0.0	870.0	-2.030e+04	3662.50	-1861.02	1.023e+05	-6.460e+05	-6.004e+05
60		7 3.785e+06	6.604e+05	10.06	0.0	0.0	-2.994e+04	-3661.14	1874.01	-1.008e+05	6.604e+05	3.785e+06
		6.002e+05	-9.700e+05	-2.04	0.0	870.0	-2.616e+04	-3661.14	1874.01	-1.008e+05	-9.700e+05	6.002e+05
60		8 3.981e+06	7.343e+05	10.58	0.0	0.0	-2.492e+04	-3859.15	-1401.36	-6.401e+04	7.343e+05	3.981e+06
		6.239e+05	-4.849e+05	1.57	0.0	870.0	-2.115e+04	-3859.15	-1401.36	-6.401e+04	-4.849e+05	6.239e+05
60		9-6.055e+05	6.577e+05	-10.14	0.0	0.0	-2.979e+04	3686.97	1866.02	1.086e+05	-9.657e+05	-3.813e+06
		-3.813e+06	-9.657e+05	-2.03	0.0	870.0	-2.601e+04	3686.97	1866.02	1.086e+05	6.577e+05	-6.055e+05
60		10-6.591e+05	7.479e+05	-11.28	0.0	0.0	-2.472e+04	4128.76	-1428.56	2.151e+04	7.479e+05	-4.251e+06
		-4.251e+06	-4.950e+05	1.59	0.0	870.0	-2.095e+04	4128.76	-1428.56	2.151e+04	-4.950e+05	-6.591e+05
60		11 4.250e+06	5.093e+05	11.28	0.0	0.0	-2.929e+04	-4127.40	1441.55	-2.000e+04	-7.448e+05	4.250e+06
		6.589e+05	-7.448e+05	-1.56	0.0	870.0	-2.551e+04	-4127.40	1441.55	-2.000e+04	5.093e+05	6.589e+05
60		12 3.812e+06	9.688e+05	10.14	0.0	0.0	-2.472e+04	-3685.62	-1853.04	-1.071e+05	9.688e+05	-4.251e+06
		6.054e+05	-6.433e+05	2.06	0.0	870.0	-2.045e+04	-3685.62	-1853.04	-1.071e+05	-6.433e+05	6.054e+05
60		13-6.442e+05	6.540e+05	-10.97	0.0	0.0	-2.977e+04	4006.87	1856.42	4.670e+04	-9.611e+05	-4.130e+06
		-4.130e+06	-9.611e+05	-2.02	0.0	870.0	-2.599e+04	4006.87	1856.42	4.670e+04	6.540e+05	-6.442e+05
60		14-6.205e+05	7.432e+05	-10.46	0.0	0.0	-2.475e+04	3808.86	-1418.95	8.344e+04	7.432e+05	-3.934e+06
		-3.934e+06	-4.913e+05	1.58	0.0	870.0	-2.097e+04	3808.86	-1418.95	8.344e+04	-4.913e+05	-6.205e+05
60		15 3.933e+06	5.057e+05	10.45	0.0	0.0	-2.926e+04	-3807.50	1431.94	-8.193e+04	-7.401e+05	3.933e+06

# ZUPELLI DESIGN ARCHITETTURA

		6.203e+05	-7.401e+05	-1.55	0.0	870.0	-2.549e+04	-3807.50	1431.94	-8.193e+04	5.057e+05	6.203e+05
60	16	4.129e+06	9.641e+05	10.96	0.0	0.0	-2.425e+04	-4005.51	-1843.43	-4.519e+04	9.641e+05	4.129e+06
		6.440e+05	-6.397e+05	2.05	0.0	870.0	-2.047e+04	-4005.51	-1843.43	-4.519e+04	-6.397e+05	6.440e+05
60	17	-9.445e+04	1.904e+06	-1.19	0.0	0.0	-3.532e+04	392.62	5428.53	1.709e+05	-2.819e+06	-4.361e+05
		-4.361e+05	-2.819e+06	-5.94	0.0	870.0	-3.154e+04	392.62	5428.53	1.709e+05	1.904e+06	-9.445e+04
60	18	-2.730e+05	2.893e+06	-5.01	0.0	0.0	-1.844e+04	1865.23	-5553.43	-1.195e+05	2.893e+06	-1.896e+06
		-1.896e+06	-1.938e+06	6.13	0.0	870.0	-1.466e+04	1865.23	-5553.43	-1.195e+05	-1.938e+06	-2.730e+05
60	19	1.894e+06	1.952e+06	5.00	0.0	0.0	-3.557e+04	-1863.88	5566.42	1.210e+05	-2.890e+06	1.894e+06
		2.728e+05	-2.890e+06	-6.09	0.0	870.0	-3.180e+04	-1863.88	5566.42	1.210e+05	1.952e+06	2.728e+05
60	20	4.348e+05	2.822e+06	1.19	0.0	0.0	-1.869e+04	-391.26	-5415.54	-1.694e+05	2.822e+06	4.348e+05
		9.429e+04	-1.890e+06	5.97	0.0	870.0	-1.492e+04	-391.26	-5415.54	-1.694e+05	-1.890e+06	9.429e+04
60	21	-1.005e+05	1.951e+06	-1.31	0.0	0.0	-3.552e+04	436.53	5561.14	1.653e+05	-2.888e+06	-4.803e+05
		-4.803e+05	-2.888e+06	-6.09	0.0	870.0	-3.175e+04	436.53	5561.14	1.653e+05	1.951e+06	-1.005e+05
60	22	-2.790e+05	2.824e+06	-5.12	0.0	0.0	-1.864e+04	1909.14	-5420.81	-1.252e+05	2.824e+06	-1.940e+06
		-1.940e+06	-1.892e+06	5.98	0.0	870.0	-1.486e+04	1909.14	-5420.81	-1.252e+05	-1.892e+06	-2.790e+05
60	23	1.939e+06	1.906e+06	5.12	0.0	0.0	-3.537e+04	-1907.79	5433.80	1.267e+05	-2.821e+06	1.939e+06
		2.789e+05	-2.821e+06	-5.95	0.0	870.0	-3.160e+04	-1907.79	5433.80	1.267e+05	1.906e+06	2.789e+05
60	24	4.790e+05	2.891e+06	1.30	0.0	0.0	-1.849e+04	-435.17	-5548.16	-1.637e+05	2.891e+06	4.790e+05
		1.003e+05	-1.936e+06	6.12	0.0	870.0	-1.471e+04	-435.17	-5548.16	-1.637e+05	-1.936e+06	1.003e+05
60	25	-2.233e+05	1.892e+06	-3.95	0.0	0.0	-3.524e+04	1458.94	5396.50	-3.553e+04	1.892e+06	-2.233e+05
		-1.492e+06	-2.803e+06	-5.91	0.0	870.0	-3.146e+04	1458.94	5396.50	-3.553e+04	-2.803e+06	-1.492e+06
60	26	-1.442e+05	2.878e+06	-2.25	0.0	0.0	-1.852e+04	798.91	-5521.40	8.693e+04	2.878e+06	-8.393e+05
		-8.393e+05	-1.926e+06	6.10	0.0	870.0	-1.474e+04	798.91	-5521.40	8.693e+04	-1.926e+06	-1.442e+05
60	27	8.380e+05	1.940e+06	2.24	0.0	0.0	-3.549e+04	-797.55	5534.39	-8.542e+04	1.940e+06	8.380e+05
		1.440e+05	-2.875e+06	-6.06	0.0	870.0	-3.172e+04	-797.55	5534.39	-8.542e+04	-2.875e+06	1.440e+05
60	28	1.491e+06	2.806e+06	3.95	0.0	0.0	-1.877e+04	-1457.58	-5383.51	3.705e+04	2.806e+06	1.491e+06
		2.231e+05	-1.878e+06	5.94	0.0	870.0	-1.500e+04	-1457.58	-5383.51	3.705e+04	-1.878e+06	2.231e+05
60	29	-2.293e+05	1.938e+06	-4.07	0.0	0.0	-3.544e+04	1502.85	5529.11	-4.118e+04	1.938e+06	-2.293e+05
		-1.537e+06	-2.872e+06	-6.06	0.0	870.0	-3.167e+04	1502.85	5529.11	-4.118e+04	-2.872e+06	-1.537e+06
60	30	-1.502e+05	2.809e+06	-2.36	0.0	0.0	-1.872e+04	842.82	-5388.78	8.128e+04	2.809e+06	-8.835e+05
		-8.835e+05	-1.879e+06	5.95	0.0	870.0	-1.495e+04	842.82	-5388.78	8.128e+04	-1.879e+06	-1.502e+05
60	31	8.822e+05	1.894e+06	2.36	0.0	0.0	-3.529e+04	-841.46	5401.77	-7.977e+04	1.894e+06	8.822e+05
		1.501e+05	-2.806e+06	-5.92	0.0	870.0	-3.151e+04	-841.46	5401.77	-7.977e+04	-2.806e+06	1.501e+05
60	32	1.535e+06	2.875e+06	4.06	0.0	0.0	-1.857e+04	-1501.49	-5516.13	4.269e+04	2.875e+06	1.535e+06
		2.291e+05	-1.924e+06	6.09	0.0	870.0	-1.479e+04	-1501.49	-5516.13	4.269e+04	-1.924e+06	2.291e+05
60	33	-3.962e+05	4.548e+05	-6.58	0.0	0.0	-2.892e+04	2385.06	1286.26	1.033e+05	-6.642e+05	-2.471e+06
		-2.471e+06	-6.642e+05	-1.39	0.0	870.0	-2.515e+04	2385.06	1286.26	1.033e+05	-6.642e+05	-2.471e+06
60	34	-4.432e+05	8.378e+05	-7.58	0.0	0.0	-2.449e+04	2772.35	-1601.47	2.693e+04	8.378e+05	-2.855e+06
		-2.855e+06	-5.555e+05	1.78	0.0	870.0	-2.071e+04	2772.35	-1601.47	2.693e+04	-5.555e+05	-4.432e+05
60	35	2.854e+06	5.698e+05	7.58	0.0	0.0	-2.953e+04	-2771.00	1614.46	-2.542e+04	5.698e+05	2.854e+06
		4.430e+05	-8.347e+05	-1.75	0.0	870.0	-2.575e+04	-2771.00	1614.46	-2.542e+04	-8.347e+05	4.430e+05
60	36	2.470e+06	6.673e+05	6.57	0.0	0.0	-2.509e+04	-2383.71	-1273.27	-1.018e+05	6.673e+05	2.470e+06
		3.961e+05	-4.405e+05	1.42	0.0	870.0	-2.131e+04	-2383.71	-1273.27	-1.018e+05	-4.405e+05	3.961e+05
60	37	-4.301e+05	4.516e+05	-7.30	0.0	0.0	-2.890e+04	2665.47	1277.67	4.902e+04	-6.600e+05	-2.749e+06
		-2.749e+06	-6.600e+05	-1.38	0.0	870.0	-2.513e+04	2665.47	1277.67	4.902e+04	-6.600e+05	-2.749e+06
60	38	-4.093e+05	8.336e+05	-6.85	0.0	0.0	-2.451e+04	2491.94	-1592.89	8.122e+04	8.336e+05	-2.577e+06
		-2.577e+06	-5.522e+05	1.77	0.0	870.0	-2.073e+04	2491.94	-1592.89	8.122e+04	-5.522e+05	-4.093e+05
60	39	2.576e+06	5.666e+05	6.85	0.0	0.0	-2.950e+04	-2490.58	1605.88	-7.971e+04	5.666e+05	2.576e+06
		4.092e+05	-8.305e+05	-1.74	0.0	870.0	-2.573e+04	-2490.58	1605.88	-7.971e+04	-8.305e+05	4.092e+05
60	40	2.748e+06	6.631e+05	7.30	0.0	0.0	-2.511e+04	-2664.12	-1264.69	-4.751e+04	6.631e+05	2.748e+06
		4.300e+05	-4.372e+05	1.41	0.0	870.0	-2.133e+04	-2664.12	-1264.69	-4.751e+04	-4.372e+05	4.300e+05
60	41	-4.101e+05	5.653e+05	-6.84	0.0	0.0	-2.941e+04	2485.65	1601.95	9.129e+04	-8.284e+05	-2.573e+06
		-2.573e+06	-8.284e+05	-1.74	0.0	870.0	-2.563e+04	2485.65	1601.95	9.129e+04	-8.284e+05	-2.573e+06
60	42	-4.570e+05	6.736e+05	-7.85	0.0	0.0	-2.497e+04	2872.95	-1285.78	1.491e+04	6.736e+05	-2.956e+06
		-2.956e+06	-4.450e+05	1.44	0.0	870.0	-2.119e+04	2872.95	-1285.78	1.491e+04	-4.450e+05	-2.956e+06
60	43	2.955e+06	4.594e+05	7.84	0.0	0.0	-2.904e+04	-2871.59	1298.77	-1.340e+04	4.594e+05	2.955e+06
		4.569e+05	-6.706e+05	-1.40	0.0	870.0	-2.526e+04	-2871.59	1298.77	-1.340e+04	-6.706e+05	4.569e+05
60	44	2.571e+06	8.314e+05	6.84	0.0	0.0	-2.460e+04	-2484.30	-1588.97	-8.978e+04	8.314e+05	2.571e+06
		4.099e+05	-5.510e+05	1.77	0.0	870.0	-2.083e+04	-2484.30	-1588.97	-8.978e+04	-5.510e+05	4.099e+05
60	45	-4.439e+05	5.621e+05	-7.57	0.0	0.0	-2.939e+04	2766.07	1593.37	3.700e+04	-8.242e+05	-2.850e+06
		-2.850e+06	-8.242e+05	-1.73	0.0	870.0	-2.561e+04	2766.07	1593.37	3.700e+04	-8.242e+05	-2.850e+06
60	46	-4.231e+05	6.694e+05	-7.12	0.0	0.0	-2.499e+04	2592.53	-1277.19	6.920e+04	6.694e+05	-2.679e+06
		-2.679e+06	-4.417e+05	1.43	0.0	870.0	-2.122e+04	2592.53	-1277.19	6.920e+04	-4.417e+05	-2.679e+06
60	47	2.677e+06	4.561e+05	7.12	0.0	0.0	-2.902e+04	-2591.18	1290.18	-6.769e+04	4.561e+05	2.677e+06
		4.230e+05	-6.664e+05	-1.40	0.0	870.0	-2.524e+04	-2591.18	1290.18	-6.769e+04	-6.664e+05	4.230e+05
60	48	2.849e+06	8.272e+05	7.57	0.0	0.0	-2.462e+04	-2764.71	-1580.38	-3.549e+04	8.272e+05	2.849e+06
		4.438e+05	-5.477e+05	1.76	0.0	870.0	-2.085e+04	-2764.71	-1580.38	-3.549e+04	-5.477e+05	4.438e+05
60	49	-4.771e+04	1.674e+06	-0.45	0.0	0.0	-3.431e+04	128.60	4770.15	1.474e+05	-2.476e+06	-1.597e+05
		-1.597e+05	-2.476e+06	-5.22	0.0	870.0	-3.054e+04	128.60	4770.15	1.474e+05	-2.476e+06	-1.597e+05
60	50	-2.042e+05	2.530e+06	-3.80	0.0	0.0	-1.952e+04	1419.57	-4855.62	-1.072e+05	2.530e+06	-1.439e+06
		-1.439e+06	-1.694e+06	5.36	0.0	870.0	-1.574e+04	1419.57	-4855.62	-1.072e+05	-1.694e+06	-2.042e+05
60	51	1.438e+06	1.708e+06	3.79	0.0	0.0	-3.449e+04	-1418.22	4868.61	1.087e+05	-2.527e+06	1.438e+06
		2.041e+05	-2.527e+06	-5.33	0.0	870.0	-3.072e+04	-1418.22	4868.61	1.087e+05	-2.527e+06	2.041e+05
60	52	1.583e+05	2.479e+06	0.45	0.0	0.0	-1.970e+04	-127.24	-4757.16	-1.459e+05	2.479e+06	1.583e+05
		4.755e+04	-1.659e+06	5.25	0.0	870.0	-1.592e+04	-127.24	-4757.16	-1.459e+05	-1.659e+06	4.755e+04
60	53	-5.185e+04	1.707e+06	-0.53	0.0	0.0	-3.446e+04	158.78	4864.86	1.438e+05	-2.525e+06	-1.901e+05
		-1.901e+05	-2.525e+06	-5.32	0.0	870.0	-3.068e+04	158.78	4864.86	1.438e+05	-2.525e+06	-1.901e+05

60	54	-2.084e+05	2.481e+06	-3.88	0.0	0.0	-1.966e+04	1449.75	-4760.91	-1.108e+05	2.481e+06	-1.470e+06
		-1.470e+06	-1.661e+06	5.25	0.0	870.0	-1.589e+04	1449.75	-4760.91	-1.108e+05	-1.661e+06	-2.084e+05
60	55	1.468e+06	1.675e+06	3.87	0.0	0.0	-3.435e+04	-1448.40	4773.90	1.123e+05	-2.478e+06	1.468e+06
		2.082e+05	-2.478e+06	-5.22	0.0	870.0	-3.057e+04	-1448.40	4773.90	1.123e+05	1.675e+06	2.082e+05
60	56	1.887e+05	2.529e+06	0.53	0.0	0.0	-1.955e+04	-157.42	-4851.87	-1.422e+05	2.529e+06	1.887e+05
		5.170e+04	-1.693e+06	5.35	0.0	870.0	-1.578e+04	-157.42	-4851.87	-1.422e+05	-1.693e+06	5.170e+04
60	57	-1.606e+05	1.663e+06	-2.87	0.0	0.0	-3.424e+04	1063.31	4741.54	-3.360e+04	-2.462e+06	-1.086e+06
		-1.086e+06	-2.462e+06	-5.19	0.0	870.0	-3.047e+04	1063.31	4741.54	-3.360e+04	1.663e+06	-1.606e+05
60	58	-9.132e+04	2.516e+06	-1.38	0.0	0.0	-1.959e+04	484.86	-4827.01	7.373e+04	2.516e+06	-5.132e+05
		-5.132e+05	-1.683e+06	5.33	0.0	870.0	-1.581e+04	484.86	-4827.01	7.373e+04	-1.683e+06	-9.132e+04
60	59	5.119e+05	1.697e+06	1.37	0.0	0.0	-3.442e+04	-483.50	4840.00	-7.222e+04	-2.513e+06	5.119e+05
		9.117e+04	-2.512e+06	-5.30	0.0	870.0	-3.050e+04	-483.50	4840.00	-7.222e+04	1.697e+06	9.117e+04
60	60	1.084e+06	2.465e+06	2.87	0.0	0.0	-1.977e+04	-1061.96	-4728.55	3.511e+04	2.465e+06	1.084e+06
		1.605e+05	-1.649e+06	5.22	0.0	870.0	-1.599e+04	-1061.96	-4728.55	3.511e+04	-1.649e+06	1.605e+05
60	61	-1.648e+05	1.696e+06	-2.95	0.0	0.0	-3.439e+04	1093.49	4836.25	-3.720e+04	-2.512e+06	-1.116e+06
		-1.116e+06	-2.512e+06	-5.30	0.0	870.0	-3.061e+04	1093.49	4836.25	-3.720e+04	1.696e+06	1.696e+06
60	62	-9.547e+04	2.467e+06	-1.46	0.0	0.0	-1.973e+04	515.04	-4732.30	7.012e+04	2.467e+06	-5.436e+05
		-5.436e+05	-1.650e+06	5.23	0.0	870.0	-1.596e+04	515.04	-4732.30	7.012e+04	-1.650e+06	-9.547e+04
60	63	5.423e+05	1.664e+06	1.45	0.0	0.0	-3.428e+04	-513.68	4745.29	-6.861e+04	-2.464e+06	5.423e+05
		9.531e+04	-2.464e+06	-5.19	0.0	870.0	-3.050e+04	-513.68	4745.29	-6.861e+04	1.664e+06	9.531e+04
60	64	1.115e+06	2.515e+06	2.95	0.0	0.0	-1.962e+04	-1092.14	-4823.26	3.872e+04	2.515e+06	1.115e+06
		1.646e+05	-1.682e+06	5.33	0.0	870.0	-1.585e+04	-1092.14	-4823.26	3.872e+04	-1.682e+06	1.646e+05
60	65	-72.10	6665.18	-1.60e-03	0.0	0.0	-2.492e+04	0.62	6.17	686.57	1294.59	-614.23
		-614.23	1294.59	0.01	0.0	870.0	-2.114e+04	0.62	6.17	686.57	6665.18	-72.10
60	66	-77.63	7182.93	-1.74e-03	0.0	0.0	-2.701e+04	0.68	6.49	755.74	1533.08	-667.10
		-667.10	1533.08	0.02	0.0	870.0	-2.323e+04	0.68	6.49	755.74	7182.93	-77.63
61		1	-6.593e+05	4.844e+05	-11.30	0.0	0.0	-2.473e+04	4136.37	1405.49	-4.593e+04	-7.384e+05
			-4.258e+06	-7.384e+05	-1.58	0.0	870.0	-2.095e+04	4136.37	1405.49	-4.593e+04	4.844e+05
61		2	-6.067e+05	9.747e+05	-10.17	0.0	0.0	-2.981e+04	3701.11	-1886.60	-1.366e+05	9.747e+05
			-3.827e+06	-6.667e+05	2.04	0.0	870.0	-2.603e+04	3701.11	-1886.60	-1.366e+05	-6.667e+05
61		3	3.825e+06	6.417e+05	10.17	0.0	0.0	-2.418e+04	-3699.68	1855.98	1.350e+05	-9.730e+05
			6.065e+05	-9.730e+05	-2.08	0.0	870.0	-2.040e+04	-3699.68	1855.98	1.350e+05	6.417e+05
61		4	4.256e+06	7.300e+05	11.30	0.0	0.0	-2.926e+04	-4134.93	-1436.10	4.437e+04	7.400e+05
			6.591e+05	-5.094e+05	1.54	0.0	870.0	-2.548e+04	-4134.93	-1436.10	4.437e+04	-5.094e+05
61		5	-6.213e+05	4.807e+05	-10.49	0.0	0.0	-2.475e+04	3821.10	1395.90	-1.104e+05	-7.337e+05
			-3.946e+06	-7.337e+05	-1.57	0.0	870.0	-2.098e+04	3821.10	1395.90	-1.104e+05	4.807e+05
61		6	-6.447e+05	9.700e+05	-10.99	0.0	0.0	-2.978e+04	4016.38	-1877.01	-7.216e+04	9.700e+05
			-4.139e+06	-6.630e+05	2.03	0.0	870.0	-2.601e+04	4016.38	-1877.01	-7.216e+04	-6.630e+05
61		7	4.137e+06	6.380e+05	10.99	0.0	0.0	-2.420e+04	-4014.94	1846.39	7.061e+04	-9.684e+05
			6.445e+05	-9.684e+05	-2.07	0.0	870.0	-2.043e+04	-4014.94	1846.39	7.061e+04	6.380e+05
61		8	3.944e+06	7.353e+05	10.48	0.0	0.0	-2.924e+04	-3819.67	-1426.51	1.088e+05	-5.058e+05
			6.211e+05	-5.058e+05	1.54	0.0	870.0	-2.546e+04	-3819.67	-1426.51	1.088e+05	-5.058e+05
61		9	-6.396e+05	6.389e+05	-10.92	0.0	0.0	-2.405e+04	3992.76	1847.23	-6.833e+04	-9.682e+05
			-4.113e+06	-9.682e+05	-2.06	0.0	870.0	-2.027e+04	3992.76	1847.23	-6.833e+04	6.389e+05
61		10	-5.870e+05	7.449e+05	-9.79	0.0	0.0	-2.913e+04	3557.50	-1444.85	-1.590e+05	7.449e+05
			-3.682e+06	-5.122e+05	1.56	0.0	870.0	-2.535e+04	3557.50	-1444.85	-1.590e+05	-5.122e+05
61		11	3.681e+06	4.871e+05	9.79	0.0	0.0	-2.486e+04	-3556.07	1414.23	1.575e+05	-7.432e+05
			5.868e+05	-7.432e+05	-1.59	0.0	870.0	-2.108e+04	-3556.07	1414.23	1.575e+05	4.871e+05
61		12	4.112e+06	6.998e+05	10.92	0.0	0.0	-2.994e+04	-3991.32	-1877.85	6.678e+04	9.698e+05
			6.395e+05	-6.639e+05	2.03	0.0	870.0	-2.616e+04	-3991.32	-1877.85	6.678e+04	-6.639e+05
61		13	-6.016e+05	6.353e+05	-10.11	0.0	0.0	-2.407e+04	3677.49	1837.64	-1.328e+05	-9.635e+05
			-3.801e+06	-9.635e+05	-2.06	0.0	870.0	-2.029e+04	3677.49	1837.64	-1.328e+05	6.353e+05
61		14	-6.250e+05	7.402e+05	-10.61	0.0	0.0	-2.910e+04	3872.77	-1435.26	-9.457e+04	7.402e+05
			-3.994e+06	-5.085e+05	1.55	0.0	870.0	-2.533e+04	3872.77	-1435.26	-9.457e+04	-5.085e+05
61		15	3.993e+06	4.835e+05	10.61	0.0	0.0	-2.488e+04	-3871.33	1404.65	9.301e+04	-7.386e+05
			6.248e+05	-7.386e+05	-1.58	0.0	870.0	-2.111e+04	-3871.33	1404.65	9.301e+04	4.835e+05
61		16	3.800e+06	9.651e+05	10.10	0.0	0.0	-2.992e+04	-3676.06	-1868.26	1.312e+05	9.651e+05
			6.015e+05	-6.603e+05	2.02	0.0	870.0	-2.614e+04	-3676.06	-1868.26	1.312e+05	-6.603e+05
61		17	-2.777e+05	1.882e+06	-5.10	0.0	0.0	-1.861e+04	1901.55	5403.92	1.232e+05	-2.819e+06
			-1.932e+06	-2.819e+06	-5.98	0.0	870.0	-1.483e+04	1901.55	5403.92	1.232e+05	1.882e+06
61		18	-1.022e+05	2.891e+06	-1.34	0.0	0.0	-3.554e+04	450.70	-5569.68	-1.790e+05	2.891e+06
			-4.944e+05	-1.955e+06	6.09	0.0	870.0	-3.177e+04	450.70	-5569.68	-1.790e+05	-1.955e+06
61		19	4.930e+05	1.930e+06	1.34	0.0	0.0	-1.844e+04	-449.27	5539.07	1.775e+05	-2.889e+06
			1.021e+05	-2.889e+06	-6.13	0.0	870.0	-1.467e+04	-449.27	5539.07	1.775e+05	1.930e+06
61		20	1.931e+06	2.821e+06	5.10	0.0	0.0	-3.538e+04	-1900.11	-5434.54	-1.248e+05	2.821e+06
			2.775e+05	-1.907e+06	5.94	0.0	870.0	-3.160e+04	-1900.11	-5434.54	-1.248e+05	-1.907e+06
61		21	-2.718e+05	1.929e+06	-4.99	0.0	0.0	-1.840e+04	1858.46	5536.45	1.165e+05	1.929e+06
			-1.889e+06	-2.888e+06	-6.12	0.0	870.0	-1.463e+04	1858.46	5536.45	1.165e+05	-2.718e+05
61		22	-9.635e+04	2.822e+06	-1.23	0.0	0.0	-3.534e+04	407.62	-5437.16	-1.858e+05	2.822e+06
			-4.511e+05	-1.908e+06	5.95	0.0	870.0	-3.156e+04	407.62	-5437.16	-1.858e+05	-1.908e+06
61		23	4.496e+05	1.883e+06	1.23	0.0	0.0	-1.865e+04	-406.18	5406.55	1.842e+05	-2.821e+06
			9.618e+04	-2.821e+06	-5.98	0.0	870.0	-1.487e+04	-406.18	5406.55	1.842e+05	1.883e+06
61		24	1.887e+06	2.890e+06	4.98	0.0	0.0	-3.558e+04	-1857.03	-5567.06	-1.180e+05	2.890e+06
			2.716e+05	-1.954e+06	6.09	0.0	870.0	-3.181e+04	-1857.03	-5567.06	-1.180e+05	-1.954e+06
61		25	-1.510e+05	1.870e+06	-2.38	0.0	0.0	-1.869e+04	850.66	5371.96	-9.160e+04	-2.803e+06
			-8.912e+05	-2.803e+06	-5.95	0.0	870.0	-1.491e+04	850.66	5371.96	-9.160e+04	1.870e+06
61		26	-2.289e+05	2.875e+06	-4.06	0.0	0.0	-3.546e+04	1501.59	-5537.73	3.575e+04	2.875e+06

		-1.535e+06	-1.942e+06	6.06	0.0	870.0	-3.169e+04	1501.59	-5537.73	3.575e+04	-1.942e+06	-2.289e+05
61	27	1.534e+06	1.917e+06	4.06	0.0	0.0	-1.852e+04	-1500.15	5507.11	-3.731e+04	-2.874e+06	1.534e+06
		2.287e+05	-2.874e+06	-6.10	0.0	870.0	-1.475e+04	-1500.15	5507.11	-3.731e+04	1.917e+06	2.287e+05
61	28	8.898e+05	2.805e+06	2.38	0.0	0.0	-3.530e+04	-849.23	-5402.58	9.005e+04	2.805e+06	8.898e+05
		1.509e+05	-1.895e+06	5.91	0.0	870.0	-3.152e+04	-849.23	-5402.58	9.005e+04	-1.895e+06	1.509e+05
61	29	-1.451e+05	1.917e+06	-2.27	0.0	0.0	-1.848e+04	807.58	5504.49	-9.832e+04	-2.872e+06	-8.478e+05
		-8.478e+05	-2.872e+06	-6.09	0.0	870.0	-1.471e+04	807.58	5504.49	-9.832e+04	1.917e+06	-1.451e+05
61	30	-2.230e+05	2.807e+06	-3.95	0.0	0.0	-3.526e+04	1458.50	-5405.20	2.903e+04	2.807e+06	-1.492e+06
		-1.492e+06	-1.896e+06	5.92	0.0	870.0	-3.148e+04	1458.50	-5405.20	2.903e+04	-1.896e+06	-2.230e+05
61	31	1.490e+06	1.871e+06	3.95	0.0	0.0	-1.873e+04	-1457.07	5374.59	-3.059e+04	-2.805e+06	1.490e+06
		2.228e+05	-2.805e+06	-5.95	0.0	870.0	-1.495e+04	-1457.07	5374.59	-3.059e+04	1.871e+06	2.228e+05
61	32	8.464e+05	2.835e+06	2.26	0.0	0.0	-3.550e+04	-806.14	-5535.10	9.677e+04	2.835e+06	8.464e+05
		1.450e+05	-1.942e+06	6.06	0.0	870.0	-3.173e+04	-806.14	-5535.10	9.677e+04	-1.942e+06	1.450e+05
61	33	-4.571e+05	4.357e+05	-7.86	0.0	0.0	-2.497e+04	2877.64	1266.39	-3.022e+04	-6.660e+05	-2.961e+06
		-2.961e+06	-6.660e+05	-1.43	0.0	870.0	-2.119e+04	2877.64	1266.39	-3.022e+04	4.357e+05	-4.571e+05
61	34	-4.109e+05	8.355e+05	-6.87	0.0	0.0	-2.942e+04	2496.07	-1619.14	-1.097e+05	8.355e+05	-2.583e+06
		-2.583e+06	-5.732e+05	1.75	0.0	870.0	-2.564e+04	2496.07	-1619.14	-1.097e+05	-5.732e+05	-4.109e+05
61	35	2.581e+06	5.482e+05	6.86	0.0	0.0	-2.457e+04	-2494.64	1588.53	1.082e+05	-8.338e+05	2.581e+06
		4.108e+05	-8.338e+05	-1.78	0.0	870.0	-2.079e+04	-2494.64	1588.53	1.082e+05	5.482e+05	4.108e+05
61	36	2.959e+06	6.677e+05	7.85	0.0	0.0	-2.902e+04	-2876.20	-1297.01	2.867e+04	6.677e+05	2.959e+06
		4.569e+05	-4.607e+05	1.39	0.0	870.0	-2.524e+04	-2876.20	-1297.01	2.867e+04	-4.607e+05	4.569e+05
61	37	-4.238e+05	4.325e+05	-7.14	0.0	0.0	-2.499e+04	2601.28	1257.83	-8.671e+04	-6.618e+05	-2.687e+06
		-2.687e+06	-6.618e+05	-1.42	0.0	870.0	-2.121e+04	2601.28	1257.83	-8.671e+04	4.325e+05	-4.238e+05
61	38	-4.442e+05	8.313e+05	-7.58	0.0	0.0	-2.940e+04	2772.43	-1610.58	-5.323e+04	8.313e+05	-2.856e+06
		-2.856e+06	-5.699e+05	1.74	0.0	870.0	-2.562e+04	2772.43	-1610.58	-5.323e+04	-5.699e+05	-4.442e+05
61	39	2.855e+06	5.449e+05	7.58	0.0	0.0	-2.459e+04	-2770.99	1579.96	5.167e+04	-8.296e+05	2.855e+06
		4.441e+05	-8.296e+05	-1.77	0.0	870.0	-2.081e+04	-2770.99	1579.96	5.167e+04	5.449e+05	4.441e+05
61	40	2.685e+06	6.635e+05	7.14	0.0	0.0	-2.900e+04	-2599.85	-1288.44	8.515e+04	6.635e+05	2.685e+06
		4.236e+05	-4.575e+05	1.38	0.0	870.0	-2.522e+04	-2599.85	-1288.44	8.515e+04	-4.575e+05	4.236e+05
61	41	-4.435e+05	5.461e+05	-7.59	0.0	0.0	-2.448e+04	2778.87	1581.87	-4.490e+04	-8.302e+05	-2.861e+06
		-2.861e+06	-8.302e+05	-1.77	0.0	870.0	-2.070e+04	2778.87	1581.87	-4.490e+04	5.461e+05	-4.435e+05
61	42	-3.974e+05	6.713e+05	-6.61	0.0	0.0	-2.893e+04	2397.31	-1303.67	-1.244e+05	6.713e+05	-2.483e+06
		-2.483e+06	-4.629e+05	1.40	0.0	870.0	-2.516e+04	2397.31	-1303.67	-1.244e+05	-4.629e+05	-3.974e+05
61	43	2.482e+06	4.378e+05	6.60	0.0	0.0	-2.505e+04	-2395.87	1273.05	1.228e+05	-6.697e+05	2.482e+06
		3.972e+05	-6.697e+05	-1.43	0.0	870.0	-2.128e+04	-2395.87	1273.05	1.228e+05	4.378e+05	3.972e+05
61	44	2.860e+06	8.318e+05	7.59	0.0	0.0	-2.951e+04	-2777.44	-1612.48	4.334e+04	8.318e+05	2.860e+06
		4.434e+05	-5.711e+05	1.74	0.0	870.0	-2.573e+04	-2777.44	-1612.48	4.334e+04	-5.711e+05	4.434e+05
61	45	-4.102e+05	5.428e+05	-6.88	0.0	0.0	-2.450e+04	2502.52	1573.30	-1.014e+05	-8.260e+05	-2.587e+06
		-2.587e+06	-8.260e+05	-1.77	0.0	870.0	-2.073e+04	2502.52	1573.30	-1.014e+05	5.428e+05	-4.102e+05
61	46	-4.307e+05	6.671e+05	-7.32	0.0	0.0	-2.891e+04	2673.66	-1295.10	-6.790e+04	6.671e+05	-2.757e+06
		-2.757e+06	-4.596e+05	1.39	0.0	870.0	-2.514e+04	2673.66	-1295.10	-6.790e+04	-4.596e+05	-4.307e+05
61	47	2.755e+06	4.346e+05	7.32	0.0	0.0	-2.508e+04	-2672.23	1264.49	6.635e+04	-6.655e+05	2.755e+06
		4.305e+05	-6.655e+05	-1.43	0.0	870.0	-2.130e+04	-2672.23	1264.49	6.635e+04	4.346e+05	4.305e+05
61	48	2.586e+06	8.276e+05	6.88	0.0	0.0	-2.949e+04	-2501.08	-1603.92	9.983e+04	8.276e+05	2.586e+06
		4.101e+05	-5.678e+05	1.73	0.0	870.0	-2.571e+04	-2501.08	-1603.92	9.983e+04	-5.678e+05	4.101e+05
61	49	-2.071e+05	1.652e+06	-3.86	0.0	0.0	-1.963e+04	1442.50	4745.60	1.109e+05	-2.476e+06	-1.462e+06
		-1.462e+06	-2.476e+06	-5.25	0.0	870.0	-1.586e+04	1442.50	4745.60	1.109e+05	1.652e+06	-2.071e+05
61	50	-5.337e+04	2.528e+06	-0.56	0.0	0.0	-3.447e+04	170.62	-4872.85	-1.540e+05	2.528e+06	-2.019e+05
		-2.019e+05	-1.711e+06	5.33	0.0	870.0	-3.070e+04	170.62	-4872.85	-1.540e+05	-1.711e+06	-5.337e+04
61	51	2.005e+05	1.686e+06	0.56	0.0	0.0	-1.951e+04	-169.18	4842.24	1.525e+05	-2.527e+06	2.005e+05
		5.320e+04	-2.527e+06	-5.36	0.0	870.0	-1.574e+04	-169.18	4842.24	1.525e+05	1.686e+06	5.320e+04
61	52	1.461e+06	2.478e+06	3.85	0.0	0.0	-3.435e+04	-1441.07	-4776.21	-1.125e+05	2.478e+06	1.461e+06
		2.070e+05	-1.677e+06	5.22	0.0	870.0	-3.058e+04	-1441.07	-4776.21	-1.125e+05	-1.677e+06	2.070e+05
61	53	-2.031e+05	1.685e+06	-3.78	0.0	0.0	-1.949e+04	1412.87	4840.24	1.065e+05	-2.526e+06	-1.432e+06
		-1.432e+06	-2.526e+06	-5.36	0.0	870.0	-1.571e+04	1412.87	4840.24	1.065e+05	1.685e+06	-2.031e+05
61	54	-4.931e+04	2.479e+06	-0.48	0.0	0.0	-3.433e+04	140.99	-4778.21	-1.584e+05	2.479e+06	-1.720e+05
		-1.720e+05	-1.678e+06	5.22	0.0	870.0	-3.055e+04	140.99	-4778.21	-1.584e+05	-1.678e+06	4.931e+04
61	55	1.706e+05	1.653e+06	0.48	0.0	0.0	-1.966e+04	-139.55	4747.59	1.569e+05	-2.478e+06	1.706e+05
		4.914e+04	-2.478e+06	-5.26	0.0	870.0	-1.588e+04	-139.55	4747.59	1.569e+05	1.653e+06	4.914e+04
61	56	1.431e+06	2.527e+06	3.77	0.0	0.0	-3.450e+04	-1411.44	-4870.85	-1.081e+05	2.527e+06	1.431e+06
		2.029e+05	-1.710e+06	5.32	0.0	870.0	-3.073e+04	-1411.44	-4870.85	-1.081e+05	-1.710e+06	2.029e+05
61	57	-9.616e+04	1.641e+06	-1.47	0.0	0.0	-1.970e+04	521.32	4717.05	-7.734e+04	-2.463e+06	-5.498e+05
		-5.498e+05	-2.463e+06	-5.23	0.0	870.0	-1.593e+04	521.32	4717.05	-7.734e+04	1.641e+06	-9.616e+04
61	58	-1.644e+05	2.514e+06	-2.95	0.0	0.0	-3.440e+04	1091.80	-4844.30	3.427e+04	2.514e+06	-1.114e+06
		-1.114e+06	-1.700e+06	5.30	0.0	870.0	-3.063e+04	1091.80	-4844.30	3.427e+04	-1.700e+06	-1.644e+05
61	59	1.113e+06	1.675e+06	2.94	0.0	0.0	-1.958e+04	-1090.36	4813.69	-3.583e+04	-2.513e+06	1.113e+06
		1.642e+05	-2.513e+06	-5.33	0.0	870.0	-1.581e+04	-1090.36	4813.69	-3.583e+04	1.675e+06	1.642e+05
61	60	5.484e+05	2.464e+06	1.47	0.0	0.0	-3.428e+04	-519.89	-4747.66	7.579e+04	2.464e+06	5.484e+05
		9.599e+04	-1.666e+06	5.19	0.0	870.0	-3.051e+04	-519.89	-4747.66	7.579e+04	-1.666e+06	9.599e+04
61	61	-9.210e+04	1.674e+06	-1.39	0.0	0.0	-1.956e+04	491.69	4811.69	-8.175e+04	-2.512e+06	-5.199e+05
		-5.199e+05	-2.512e+06	-5.33	0.0	870.0	-1.578e+04	491.69	4811.69	-8.175e+04	1.674e+06	-9.210e+04
61	62	-1.603e+05	2.465e+06	-2.87	0.0	0.0	-3.426e+04	1062.17	-4749.66	2.987e+04	2.465e+06	-1.084e+06
		-1.084e+06	-1.667e+06	5.19	0.0	870.0	-3.048e+04	1062.17	-4749.66	2.987e+04	-1.667e+06	-1.603e+05
61	63	1.083e+06	1.642e+06	2.86	0.0	0.0	-1.973e+04	-1060.73	4719.05	-3.143e+04	-2.464e+06	1.083e+06
		1.601e+05	-2.464e+06	-5.23	0.0	870.0	-1.595e+04	-1060.73	4719.05	-3.143e+04	1.642e+06	1.601e+05
61	64	5.185e+05	2.513e+06	1.39	0.0	0.0	-3.443e+04	-490.26	-4842.31	8.019e+04	2.513e+06	5.185e+05
		9.194e+04	-1.699e+06	5.30	0.0	870.0	-3.065e+04	-490.26	-4842.31	8.019e+04	-1.699e+06	9.194e+04

61	65	-77.14	833.04	-1.70e-03	0.0	0.0	-2.491e+04	0.66	-14.18	-707.69	833.04	-650.23
		-650.23	-1.150e+04	-0.02	0.0	870.0	-2.113e+04	0.66	-14.18	-707.69	-1.150e+04	-77.14
61	66	-83.24	811.80	-1.84e-03	0.0	0.0	-2.699e+04	0.72	-15.31	-778.86	811.80	-707.20
		-707.20	-1.251e+04	-0.02	0.0	870.0	-2.322e+04	0.72	-15.31	-778.86	-1.251e+04	-83.24
62	1	3.599e+06	6.230e+05	9.70	0.0	0.0	-2.896e+04	-3354.20	-1205.53	1.802e+05	6.230e+05	3.599e+06
		7.065e+05	-4.258e+05	1.31	0.0	870.0	-2.518e+04	-3354.20	-1205.53	1.802e+05	-4.258e+05	7.065e+05
62	2	4.077e+06	3.629e+05	10.87	0.0	0.0	-2.550e+04	-3914.99	1051.85	6.340e+04	-5.522e+05	4.077e+06
		6.452e+05	-5.522e+05	-1.18	0.0	870.0	-2.172e+04	-3914.99	1051.85	6.340e+04	3.629e+05	6.452e+05
62	3	-6.430e+05	5.487e+05	-10.87	0.0	0.0	-2.869e+04	3918.18	-1063.61	-6.075e+04	5.487e+05	-4.077e+06
		-4.077e+06	-3.767e+05	1.15	0.0	870.0	-2.492e+04	3918.18	-1063.61	-6.075e+04	-3.767e+05	-6.430e+05
62	4	-7.043e+05	4.121e+05	-9.70	0.0	0.0	-2.523e+04	3357.39	1193.77	-1.775e+05	-6.265e+05	-3.599e+06
		-3.599e+06	-6.294e+05	-1.34	0.0	870.0	-2.146e+04	3357.39	1193.77	-1.775e+05	4.121e+05	-7.043e+05
62	5	3.717e+06	4.943e+05	10.02	0.0	0.0	-2.859e+04	-3467.59	-958.40	1.561e+05	4.943e+05	3.717e+06
		7.110e+05	-3.395e+05	1.03	0.0	870.0	-2.482e+04	-3467.59	-958.40	1.561e+05	-3.395e+05	7.110e+05
62	6	3.958e+06	2.767e+05	10.56	0.0	0.0	-2.586e+04	-3801.60	804.72	8.751e+04	-4.234e+05	3.958e+06
		6.407e+05	-4.234e+05	-0.91	0.0	870.0	-2.209e+04	-3801.60	804.72	8.751e+04	2.767e+05	6.407e+05
62	7	-6.385e+05	4.199e+05	-10.56	0.0	0.0	-2.833e+04	3804.79	-816.48	-8.486e+04	4.199e+05	-3.959e+06
		-3.959e+06	-2.904e+05	0.87	0.0	870.0	-2.455e+04	3804.79	-816.48	-8.486e+04	-2.904e+05	-6.385e+05
62	8	-7.088e+05	3.258e+05	-10.01	0.0	0.0	-2.560e+04	3470.78	946.64	-1.534e+05	-4.978e+05	-3.718e+06
		-3.718e+06	-4.978e+05	-1.07	0.0	870.0	-2.182e+04	3470.78	946.64	-1.534e+05	3.258e+05	-7.088e+05
62	9	3.753e+06	5.458e+05	10.09	0.0	0.0	-2.873e+04	-3520.62	-1057.09	1.538e+05	5.458e+05	3.753e+06
		7.161e+05	-3.739e+05	1.14	0.0	870.0	-2.495e+04	-3520.62	-1057.09	1.538e+05	-3.739e+05	7.161e+05
62	10	4.231e+06	4.148e+05	11.26	0.0	0.0	-2.526e+04	-4081.41	1200.28	3.703e+04	-6.294e+05	4.231e+06
		6.548e+05	-6.294e+05	-1.34	0.0	870.0	-2.149e+04	-4081.41	1200.28	3.703e+04	4.148e+05	6.548e+05
62	11	-6.525e+05	6.259e+05	-11.26	0.0	0.0	-2.893e+04	4084.60	-1212.04	-3.439e+04	6.259e+05	-4.232e+06
		-4.232e+06	-4.286e+05	1.31	0.0	870.0	-2.515e+04	4084.60	-1212.04	-3.439e+04	-4.286e+05	-6.525e+05
62	12	-7.139e+05	3.602e+05	-10.09	0.0	0.0	-2.546e+04	3523.81	1045.33	-1.512e+05	-5.493e+05	-3.754e+06
		-3.754e+06	-5.493e+05	-1.18	0.0	870.0	-2.169e+04	3523.81	1045.33	-1.512e+05	3.602e+05	-7.139e+05
62	13	3.872e+06	4.170e+05	10.41	0.0	0.0	-2.836e+04	-3634.01	-809.96	1.297e+05	4.170e+05	3.872e+06
		7.206e+05	-2.876e+05	0.87	0.0	870.0	-2.458e+04	-3634.01	-809.96	1.297e+05	-2.876e+05	7.206e+05
62	14	4.113e+06	3.286e+05	10.95	0.0	0.0	-2.563e+04	-3968.02	953.15	6.114e+04	-5.007e+05	4.113e+06
		6.503e+05	-5.007e+05	-1.07	0.0	870.0	-2.185e+04	-3968.02	953.15	6.114e+04	3.286e+05	6.503e+05
62	15	-6.480e+05	4.972e+05	-10.95	0.0	0.0	-2.856e+04	3971.21	-964.91	-5.850e+04	4.972e+05	-6.480e+05
		-4.113e+06	-3.423e+05	1.04	0.0	870.0	-2.478e+04	3971.21	-964.91	-5.850e+04	-3.423e+05	-6.480e+05
62	16	-7.183e+05	2.739e+05	-10.41	0.0	0.0	-2.583e+04	3637.21	798.20	-1.271e+05	-4.205e+05	-3.872e+06
		-3.872e+06	-4.205e+05	-0.90	0.0	870.0	-2.206e+04	3637.21	798.20	-1.271e+05	2.739e+05	-7.183e+05
62	17	3.549e+05	1.968e+06	1.13	0.0	0.0	-3.291e+04	-154.62	-3789.46	2.321e+05	1.968e+06	3.549e+05
		3.058e+05	-1.329e+06	4.15	0.0	870.0	-2.913e+04	-154.62	-3789.46	2.321e+05	-1.329e+06	3.058e+05
62	18	1.947e+06	1.300e+06	5.04	0.0	0.0	-2.136e+04	-2023.91	3735.12	-1.572e+05	-1.949e+06	1.947e+06
		1.013e+05	-1.949e+06	-4.14	0.0	870.0	-1.759e+04	-2023.91	3735.12	-1.572e+05	1.300e+06	1.013e+05
62	19	-9.906e+04	1.946e+06	-5.04	0.0	0.0	-3.283e+04	2027.10	-3746.88	1.598e+05	1.946e+06	-1.948e+06
		-1.948e+06	-1.314e+06	4.10	0.0	870.0	-2.905e+04	2027.10	-3746.88	1.598e+05	-1.314e+06	-9.906e+04
62	20	-3.036e+05	1.315e+06	-1.13	0.0	0.0	-2.128e+04	157.81	3777.70	-2.295e+05	-1.972e+06	-3.554e+05
		-3.554e+05	-1.972e+06	-4.18	0.0	870.0	-1.751e+04	157.81	3777.70	-2.295e+05	1.315e+06	-3.036e+05
62	21	4.012e+05	1.945e+06	1.25	0.0	0.0	-3.284e+04	-204.54	-3744.93	2.242e+05	1.945e+06	4.012e+05
		3.087e+05	-1.313e+06	4.10	0.0	870.0	-2.906e+04	-204.54	-3744.93	2.242e+05	-1.313e+06	3.087e+05
62	22	1.994e+06	1.316e+06	5.16	0.0	0.0	-2.129e+04	-2073.83	3779.65	-1.651e+05	-1.972e+06	1.994e+06
		1.042e+05	-1.972e+06	-4.18	0.0	870.0	-1.752e+04	-2073.83	3779.65	-1.651e+05	1.316e+06	1.042e+05
62	23	-1.019e+05	1.969e+06	-5.16	0.0	0.0	-3.290e+04	2077.02	-3791.41	1.677e+05	1.969e+06	-1.019e+05
		-1.994e+06	-1.330e+06	4.15	0.0	870.0	-2.912e+04	2077.02	-3791.41	1.677e+05	-1.330e+06	-1.994e+06
62	24	-3.064e+05	1.299e+06	-1.25	0.0	0.0	-2.135e+04	207.73	3733.17	-2.216e+05	-1.948e+06	-4.018e+05
		-4.018e+05	-1.948e+06	-4.13	0.0	870.0	-1.758e+04	207.73	3733.17	-2.216e+05	1.299e+06	-3.064e+05
62	25	7.496e+05	1.539e+06	2.18	0.0	0.0	-3.168e+04	-532.59	-2965.69	1.517e+05	1.539e+06	7.496e+05
		3.207e+05	-1.041e+06	3.24	0.0	870.0	-2.791e+04	-532.59	-2965.69	1.517e+05	-1.041e+06	3.207e+05
62	26	1.553e+06	1.013e+06	3.99	0.0	0.0	-2.259e+04	-1645.93	2911.35	-7.682e+04	-1.520e+06	1.553e+06
		8.638e+04	-1.520e+06	-3.23	0.0	870.0	-1.881e+04	-1645.93	2911.35	-7.682e+04	1.013e+06	8.638e+04
62	27	-8.415e+04	1.517e+06	-3.99	0.0	0.0	-3.160e+04	1649.13	-2923.12	7.946e+04	1.517e+06	-8.415e+04
		-1.553e+06	-1.026e+06	3.19	0.0	870.0	-2.783e+04	1649.13	-2923.12	7.946e+04	-1.026e+06	-1.553e+06
62	28	-3.185e+05	1.027e+06	-2.18	0.0	0.0	-2.251e+04	535.78	2953.93	-1.491e+05	-1.542e+06	-7.502e+05
		-7.502e+05	-1.542e+06	-3.27	0.0	870.0	-1.873e+04	535.78	2953.93	-1.491e+05	1.027e+06	-3.185e+05
62	29	7.960e+05	1.516e+06	2.30	0.0	0.0	-3.161e+04	-582.51	-2921.16	1.438e+05	1.516e+06	7.960e+05
		3.236e+05	-1.026e+06	3.19	0.0	870.0	-2.784e+04	-582.51	-2921.16	1.438e+05	-1.026e+06	3.236e+05
62	30	1.599e+06	1.028e+06	4.11	0.0	0.0	-2.252e+04	-1695.86	2955.88	-8.473e+04	-1.543e+06	1.599e+06
		8.925e+04	-1.543e+06	-3.28	0.0	870.0	-1.874e+04	-1695.86	2955.88	-8.473e+04	1.028e+06	8.925e+04
62	31	-8.702e+04	1.540e+06	-4.11	0.0	0.0	-3.167e+04	1699.05	-2967.65	8.737e+04	1.540e+06	-1.600e+06
		-1.600e+06	-1.042e+06	3.24	0.0	870.0	-2.790e+04	1699.05	-2967.65	8.737e+04	-1.042e+06	-8.702e+04
62	32	-3.213e+05	1.012e+06	-2.30	0.0	0.0	-2.258e+04	585.71	2909.40	-1.412e+05	-1.519e+06	-7.965e+05
		-7.965e+05	-1.519e+06	-3.23	0.0	870.0	-1.880e+04	585.71	2909.40	-1.412e+05	1.012e+06	-3.213e+05
62	33	2.421e+06	5.437e+05	6.54	0.0	0.0	-2.872e+04	-2244.99	-1053.32	1.421e+05	5.437e+05	2.421e+06
		4.908e+05	-3.727e+05	1.14	0.0	870.0	-2.494e+04	-2244.99	-1053.32	1.421e+05	-3.727e+05	4.908e+05
62	34	2.840e+06	3.188e+05	7.57	0.0	0.0	-2.568e+04	-2736.64	925.74	3.974e+04	-4.866e+05	2.840e+06
		4.370e+05	-4.866e+05	-1.04	0.0	870.0	-2.190e+04	-2736.64	925.74	3.974e+04	3.188e+05	4.370e+05
62	35	-4.347e+05	4.831e+05	-7.56	0.0	0.0	-2.851e+04	2739.83	-937.51	-3.710e+04	4.831e+05	-2.841e+06
		-2.841e+06	-3.325e+05	1.01	0.0	870.0	-2.474e+04	2739.83	-937.51	-3.710e+04	-3.325e+05	-4.347e+05
62	36	-4.885e+05	3.590e+05	-6.54	0.0	0.0	-2.547e+04	2248.18	1041.56	-1.395e+05	3.590e+05	-4.885e+05
		-2.422e+06	-5.472e+05	-1.17	0.0	870.0	-2.170e+04	2248.18	1041.56	-1.395e+05	-5.472e+05	-2.422e+06
62	37	2.525e+06	4.307e+05	6.81	0.0	0.0	-2.839e+04	-2344.46	-836.44	1.210e+05	4.307e+05	2.525e+06

		4.947e+05	-2.970e+05	0.90	0.0	870.0	-2.462e+04	-2344.46	-836.44	1.210e+05	-2.970e+05	4.947e+05
62	38	2.736e+06	2.431e+05	7.29	0.0	0.0	-2.600e+04	-2637.17	708.86	6.089e+04	-3.736e+05	2.736e+06
		4.331e+05	-3.736e+05	-0.80	0.0	870.0	-2.223e+04	-2637.17	708.86	6.089e+04	2.431e+05	4.331e+05
62	39	-4.308e+05	3.701e+05	-7.29	0.0	0.0	-2.819e+04	2640.36	-720.62	-5.825e+04	3.701e+05	-2.737e+06
		-2.737e+06	-2.568e+05	0.77	0.0	870.0	-2.441e+04	2640.36	-720.62	-5.825e+04	-2.568e+05	-4.308e+05
62	40	-4.924e+05	2.833e+05	-6.81	0.0	0.0	-2.580e+04	2347.65	824.68	-1.183e+05	-4.342e+05	-2.526e+06
		-2.526e+06	-4.342e+05	-0.93	0.0	870.0	-2.202e+04	2347.65	824.68	-1.183e+05	2.833e+05	-4.924e+05
62	41	2.527e+06	4.816e+05	6.81	0.0	0.0	-2.853e+04	-2359.25	-933.99	1.247e+05	4.816e+05	2.527e+06
		4.973e+05	-3.310e+05	1.01	0.0	870.0	-2.475e+04	-2359.25	-933.99	1.247e+05	-3.310e+05	4.973e+05
62	42	2.946e+06	3.605e+05	7.83	0.0	0.0	-2.549e+04	-2850.90	1045.07	2.232e+04	-5.487e+05	2.946e+06
		4.436e+05	-5.487e+05	-1.17	0.0	870.0	-2.172e+04	-2850.90	1045.07	2.232e+04	3.605e+05	4.436e+05
62	43	-4.413e+05	5.452e+05	-7.83	0.0	0.0	-2.838e+04	2854.09	-1056.83	-1.968e+04	5.452e+05	-4.924e+06
		-2.947e+06	-3.742e+05	1.14	0.0	870.0	-2.492e+04	2854.09	-1056.83	-1.968e+04	-3.742e+05	-4.413e+05
62	44	-4.951e+05	3.173e+05	-6.81	0.0	0.0	-2.566e+04	2362.45	922.23	-1.221e+05	-4.851e+05	-2.528e+06
		-2.528e+06	-4.851e+05	-1.04	0.0	870.0	-2.189e+04	2362.45	922.23	-1.221e+05	3.173e+05	-4.951e+05
62	45	2.631e+06	3.686e+05	7.08	0.0	0.0	-2.821e+04	-2458.72	-717.11	1.036e+05	3.686e+05	2.631e+06
		5.013e+05	-2.553e+05	0.77	0.0	870.0	-2.443e+04	-2458.72	-717.11	1.036e+05	-2.553e+05	5.013e+05
62	46	2.842e+06	2.848e+05	7.56	0.0	0.0	-2.581e+04	-2751.43	828.19	4.347e+04	-4.357e+05	2.842e+06
		4.396e+05	-4.357e+05	-0.93	0.0	870.0	-2.204e+04	-2751.43	828.19	4.347e+04	2.848e+05	4.396e+05
62	47	-4.374e+05	4.322e+05	-7.56	0.0	0.0	-2.838e+04	2754.62	-839.95	-4.083e+04	4.322e+05	-4.374e+05
		-2.843e+06	-2.985e+05	0.90	0.0	870.0	-2.460e+04	2754.62	-839.95	-4.083e+04	-2.985e+05	-4.374e+05
62	48	-4.990e+05	2.416e+05	-7.08	0.0	0.0	-2.598e+04	2461.91	705.35	-1.009e+05	-3.721e+05	-2.632e+06
		-2.632e+06	-3.721e+05	-0.80	0.0	870.0	-2.221e+04	2461.91	705.35	-1.009e+05	2.416e+05	-4.990e+05
62	49	2.296e+05	1.724e+06	0.40	0.0	0.0	-3.321e+04	73.28	-3321.70	1.989e+05	1.724e+06	9.094e+04
		9.094e+04	-1.165e+06	3.63	0.0	870.0	-2.841e+04	73.28	-3321.70	1.989e+05	-1.165e+06	2.296e+05
62	50	1.487e+06	1.140e+06	3.83	0.0	0.0	-2.206e+04	-1565.53	3275.19	-1.424e+05	-1.710e+06	1.487e+06
		5.031e+04	-1.710e+06	-3.63	0.0	870.0	-1.829e+04	-1565.53	3275.19	-1.424e+05	1.140e+06	5.031e+04
62	51	-4.808e+04	1.706e+06	-3.83	0.0	0.0	-3.213e+04	1568.73	-3286.95	1.451e+05	1.706e+06	-1.488e+06
		-1.488e+06	-1.153e+06	3.60	0.0	870.0	-2.835e+04	1568.73	-3286.95	1.451e+05	-1.153e+06	-4.808e+04
62	52	-9.148e+04	1.152e+06	-0.40	0.0	0.0	-2.200e+04	-70.09	3309.94	-1.962e+05	-1.728e+06	-9.148e+04
		-2.273e+05	-1.728e+06	-3.67	0.0	870.0	-1.823e+04	-70.09	3309.94	-1.962e+05	1.152e+06	-2.273e+05
62	53	2.315e+05	1.706e+06	0.49	0.0	0.0	-3.213e+04	39.00	-3285.90	1.936e+05	1.706e+06	1.228e+05
		1.228e+05	-1.153e+06	3.60	0.0	870.0	-2.835e+04	39.00	-3285.90	1.936e+05	-1.153e+06	2.315e+05
62	54	1.519e+06	1.152e+06	3.91	0.0	0.0	-2.201e+04	-1599.81	3310.99	-1.477e+05	-1.728e+06	1.519e+06
		5.228e+04	-1.728e+06	-3.67	0.0	870.0	-1.823e+04	-1599.81	3310.99	-1.477e+05	1.152e+06	5.228e+04
62	55	-5.005e+04	1.725e+06	-3.91	0.0	0.0	-3.218e+04	1603.00	-3322.75	1.503e+05	1.725e+06	-1.519e+06
		-1.519e+06	-1.166e+06	3.64	0.0	870.0	-2.841e+04	1603.00	-3322.75	1.503e+05	-1.166e+06	-5.005e+04
62	56	-1.233e+05	1.139e+06	-0.48	0.0	0.0	-2.206e+04	-35.81	3274.14	-1.910e+05	-1.709e+06	-1.233e+05
		-2.293e+05	-1.709e+06	-3.63	0.0	870.0	-1.828e+04	-35.81	3274.14	-1.910e+05	1.139e+06	-2.293e+05
62	57	4.371e+05	1.348e+06	1.32	0.0	0.0	-3.111e+04	-258.27	-2598.75	1.284e+05	1.348e+06	4.371e+05
		2.426e+05	-9.130e+05	2.84	0.0	870.0	-2.734e+04	-258.27	-2598.75	1.284e+05	-9.130e+05	2.426e+05
62	58	1.141e+06	8.872e+05	2.91	0.0	0.0	-2.314e+04	-1233.99	2552.24	-7.194e+04	-1.333e+06	1.141e+06
		3.726e+04	-1.333e+06	-2.83	0.0	870.0	-1.936e+04	-1233.99	2552.24	-7.194e+04	8.872e+05	3.726e+04
62	59	-3.503e+04	1.330e+06	-2.91	0.0	0.0	-3.105e+04	1237.18	-2564.00	7.459e+04	1.330e+06	-1.141e+06
		-1.141e+06	-9.010e+05	2.80	0.0	870.0	-2.727e+04	1237.18	-2564.00	7.459e+04	-9.010e+05	-3.503e+04
62	60	-2.404e+05	8.993e+05	-1.32	0.0	0.0	-2.308e+04	261.46	2586.99	-1.257e+05	-1.351e+06	-2.404e+05
		-4.376e+05	-1.351e+06	-2.87	0.0	870.0	-1.930e+04	261.46	2586.99	-1.257e+05	8.993e+05	-2.404e+05
62	61	4.689e+05	1.329e+06	1.40	0.0	0.0	-3.106e+04	-292.55	-2562.95	1.231e+05	1.329e+06	4.689e+05
		2.446e+05	-9.005e+05	2.80	0.0	870.0	-2.728e+04	-292.55	-2562.95	1.231e+05	-9.005e+05	2.446e+05
62	62	1.173e+06	8.997e+05	2.99	0.0	0.0	-2.308e+04	-1268.26	2588.04	-7.717e+04	-1.352e+06	1.173e+06
		3.924e+04	-1.352e+06	-2.87	0.0	870.0	-1.931e+04	-1268.26	2588.04	-7.717e+04	8.997e+05	3.924e+04
62	63	-3.700e+04	1.348e+06	-2.99	0.0	0.0	-3.111e+04	1271.46	-2599.80	7.981e+04	1.348e+06	-1.173e+06
		-1.173e+06	-9.135e+05	2.84	0.0	870.0	-2.733e+04	1271.46	-2599.80	7.981e+04	-9.135e+05	-3.700e+04
62	64	-2.424e+05	8.868e+05	-1.40	0.0	0.0	-2.313e+04	295.74	2551.19	-1.205e+05	-1.333e+06	-2.424e+05
		-4.695e+05	-1.333e+06	-2.83	0.0	870.0	-1.936e+04	295.74	2551.19	-1.205e+05	8.868e+05	-2.424e+05
62	65	1016.10	-1534.71	6.66e-04	0.0	0.0	-2.501e+04	1.44	-5.50	1199.68	-1534.71	-237.71
		-237.71	-6318.18	-0.01	0.0	870.0	-2.123e+04	1.44	-5.50	1199.68	-6318.18	1016.10
62	66	1117.41	-1750.53	7.08e-04	0.0	0.0	-2.710e+04	1.60	-5.88	1320.89	-1750.53	-271.21
		-271.21	-6866.56	-0.02	0.0	870.0	-2.332e+04	1.60	-5.88	1320.89	-6866.56	1117.41
63	1	4.240e+06	6.240e+05	11.29	0.0	0.0	-2.525e+04	-4090.08	-1185.03	-6.651e+04	6.240e+05	4.240e+06
		6.562e+05	-4.070e+05	1.34	0.0	870.0	-2.147e+04	-4090.08	-1185.03	-6.651e+04	-4.070e+05	6.562e+05
63	2	3.773e+06	3.807e+05	10.14	0.0	0.0	-2.872e+04	-3539.70	1070.66	-1.880e+05	-5.508e+05	3.773e+06
		7.185e+05	-5.508e+05	-1.15	0.0	870.0	-2.495e+04	-3539.70	1070.66	-1.880e+05	3.807e+05	7.185e+05
63	3	-7.163e+05	5.492e+05	-10.14	0.0	0.0	-2.544e+04	3542.61	-1040.60	1.852e+05	5.492e+05	-3.773e+06
		-3.773e+06	-3.561e+05	1.18	0.0	870.0	-2.167e+04	3542.61	-1040.60	1.852e+05	-3.561e+05	-7.163e+05
63	4	-6.540e+05	4.316e+05	-11.29	0.0	0.0	-2.892e+04	4092.99	1215.09	6.377e+04	-6.256e+05	-4.240e+06
		-4.240e+06	-6.256e+05	-1.30	0.0	870.0	-2.514e+04	4092.99	1215.09	6.377e+04	4.316e+05	-6.540e+05
63	5	4.123e+06	4.953e+05	10.98	0.0	0.0	-2.562e+04	-3978.45	-938.06	-9.163e+04	4.953e+05	4.123e+06
		6.516e+05	-3.208e+05	1.07	0.0	870.0	-2.184e+04	-3978.45	-938.06	-9.163e+04	-3.208e+05	6.516e+05
63	6	3.889e+06	2.945e+05	10.45	0.0	0.0	-2.835e+04	-3651.33	823.69	-1.628e+05	-4.221e+05	3.889e+06
		7.230e+05	-4.221e+05	-0.87	0.0	870.0	-2.458e+04	-3651.33	823.69	-1.628e+05	2.945e+05	7.230e+05
63	7	-7.209e+05	4.205e+05	-10.45	0.0	0.0	-2.581e+04	3654.24	-793.63	1.601e+05	4.205e+05	-3.890e+06
		-3.890e+06	-2.699e+05	0.91	0.0	870.0	-2.204e+04	3654.24	-793.63	1.601e+05	-2.699e+05	-7.209e+05
63	8	-6.495e+05	3.454e+05	-10.98	0.0	0.0	-2.855e+04	3981.36	968.13	8.890e+04	-4.969e+05	-4.124e+06
		-4.124e+06	-4.969e+05	-1.03	0.0	870.0	-2.477e+04	3981.36	968.13	8.890e+04	3.454e+05	-6.495e+05
63	9	4.089e+06	5.468e+05	10.91	0.0	0.0	-2.549e+04	-3926.95	-1036.96	-9.525e+04	5.468e+05	4.089e+06
		6.473e+05	-3.553e+05	1.18	0.0	870.0	-2.171e+04	-3926.95	-1036.96	-9.525e+04	-3.553e+05	6.473e+05

63	10	3.622e+06	4.324e+05	9.76	0.0	0.0	-2.896e+04	-3376.57	1218.74	-2.167e+05	-6.279e+05	3.622e+06
		7.095e+05	-6.279e+05	-1.31	0.0	870.0	-2.519e+04	-3376.57	1218.74	-2.167e+05	4.324e+05	7.095e+05
63	11	-7.073e+05	6.264e+05	-9.76	0.0	0.0	-2.520e+04	3379.48	-1188.67	2.140e+05	6.264e+05	3.622e+06
		-3.622e+06	-4.077e+05	1.34	0.0	870.0	-2.143e+04	3379.48	-1188.67	2.140e+05	-4.077e+05	-7.073e+05
63	12	-6.451e+05	3.799e+05	-10.90	0.0	0.0	-2.868e+04	3929.86	1067.02	9.252e+04	-5.484e+05	-4.089e+06
		-4.089e+06	-5.484e+05	-1.14	0.0	870.0	-2.490e+04	3929.86	1067.02	9.252e+04	3.799e+05	-6.451e+05
63	13	3.972e+06	4.181e+05	10.60	0.0	0.0	-2.586e+04	-3815.32	-789.99	-1.204e+05	4.181e+05	3.972e+06
		6.427e+05	-2.691e+05	0.90	0.0	870.0	-2.208e+04	-3815.32	-789.99	-1.204e+05	-2.691e+05	6.427e+05
63	14	3.738e+06	3.462e+05	10.07	0.0	0.0	-2.859e+04	-3488.21	971.77	-1.916e+05	-4.992e+05	3.738e+06
		7.141e+05	-4.992e+05	-1.04	0.0	870.0	-2.482e+04	-3488.21	971.77	-1.916e+05	3.462e+05	7.141e+05
63	15	-7.119e+05	4.977e+05	-10.07	0.0	0.0	-2.557e+04	3491.12	-941.70	1.888e+05	4.977e+05	-3.739e+06
		-3.739e+06	-3.216e+05	1.07	0.0	870.0	-2.180e+04	3491.12	-941.70	1.888e+05	-3.216e+05	-7.119e+05
63	16	-6.405e+05	2.938e+05	-10.59	0.0	0.0	-2.831e+04	3818.23	820.05	1.176e+05	-4.197e+05	-3.973e+06
		-3.973e+06	-4.197e+05	-0.87	0.0	870.0	-2.453e+04	3818.23	820.05	1.176e+05	2.938e+05	-6.405e+05
63	17	1.981e+06	1.968e+06	5.12	0.0	0.0	-2.126e+04	-2060.74	-3766.12	1.633e+05	1.968e+06	1.981e+06
		1.032e+05	-1.308e+06	4.18	0.0	870.0	-1.749e+04	-2060.74	-3766.12	1.633e+05	-1.308e+06	1.032e+05
63	18	4.229e+05	1.317e+06	1.31	0.0	0.0	-3.284e+04	-226.15	3752.85	-2.415e+05	-1.948e+06	4.229e+05
		3.107e+05	-1.948e+06	-4.10	0.0	870.0	-2.907e+04	-226.15	3752.85	-2.415e+05	1.317e+06	3.107e+05
63	19	-3.085e+05	1.946e+06	-1.31	0.0	0.0	-2.132e+04	229.07	-3722.79	2.388e+05	1.946e+06	-4.232e+05
		-4.232e+05	-1.293e+06	4.14	0.0	870.0	-1.755e+04	229.07	-3722.79	2.388e+05	-1.293e+06	-4.232e+05
63	20	-1.011e+05	1.333e+06	-5.12	0.0	0.0	-3.290e+04	2063.65	3796.18	-1.660e+05	-1.970e+06	-1.981e+06
		-1.981e+06	-1.970e+06	-4.15	0.0	870.0	-2.913e+04	2063.65	3796.18	-1.660e+05	1.333e+06	-1.011e+05
63	21	1.935e+06	1.945e+06	5.01	0.0	0.0	-2.134e+04	-2011.80	-3721.70	1.547e+05	1.945e+06	1.935e+06
		1.006e+05	-1.293e+06	4.13	0.0	870.0	-1.756e+04	-2011.80	-3721.70	1.547e+05	-1.293e+06	1.006e+05
63	22	3.776e+05	1.333e+06	1.19	0.0	0.0	-3.292e+04	-177.22	3797.28	-2.502e+05	-1.971e+06	3.776e+05
		3.080e+05	-1.971e+06	-4.15	0.0	870.0	-2.914e+04	-177.22	3797.28	-2.502e+05	1.333e+06	3.080e+05
63	23	-3.058e+05	1.969e+06	-1.19	0.0	0.0	-2.125e+04	180.13	-3767.21	2.474e+05	1.969e+06	-3.779e+05
		-3.779e+05	-1.308e+06	4.19	0.0	870.0	-1.747e+04	180.13	-3767.21	2.474e+05	-1.308e+06	-3.058e+05
63	24	-9.837e+04	1.317e+06	-5.01	0.0	0.0	-3.283e+04	2014.71	3751.76	-1.574e+05	-1.541e+06	-1.592e+06
		-1.936e+06	-1.947e+06	-4.10	0.0	870.0	-2.906e+04	2014.71	3751.76	-1.574e+05	1.317e+06	-9.837e+04
63	25	1.592e+06	1.539e+06	4.09	0.0	0.0	-2.249e+04	-1688.63	-2942.89	7.955e+04	1.539e+06	1.592e+06
		8.796e+04	-1.021e+06	3.28	0.0	870.0	-1.872e+04	-1688.63	-2942.89	7.955e+04	-1.021e+06	8.796e+04
63	26	8.118e+05	1.030e+06	2.34	0.0	0.0	-3.161e+04	-598.26	2929.63	-1.578e+05	-1.541e+06	1.592e+06
		3.260e+05	-1.519e+06	-3.19	0.0	870.0	-2.784e+04	-598.26	2929.63	-1.578e+05	1.030e+06	3.260e+05
63	27	-3.238e+05	1.517e+06	-2.34	0.0	0.0	-2.255e+04	601.17	-2899.56	1.551e+05	1.517e+06	-8.121e+05
		-8.121e+05	-1.006e+06	3.23	0.0	870.0	-1.878e+04	601.17	-2899.56	1.551e+05	-1.006e+06	-3.238e+05
63	28	-8.578e+04	1.046e+06	-4.09	0.0	0.0	-3.167e+04	1691.54	2972.95	-8.228e+04	1.046e+06	-8.578e+04
		-1.592e+06	-1.541e+06	-3.24	0.0	870.0	-2.790e+04	1691.54	2972.95	-8.228e+04	1.046e+06	-8.578e+04
63	29	1.546e+06	1.516e+06	3.98	0.0	0.0	-2.257e+04	-1639.70	-2898.47	7.092e+04	1.516e+06	1.546e+06
		8.528e+04	-1.005e+06	3.23	0.0	870.0	-1.879e+04	-1639.70	-2898.47	7.092e+04	-1.005e+06	8.528e+04
63	30	7.665e+05	1.046e+06	2.23	0.0	0.0	-3.169e+04	-549.32	2974.05	-1.664e+05	1.046e+06	7.665e+05
		3.233e+05	-1.542e+06	-3.24	0.0	870.0	-2.791e+04	-549.32	2974.05	-1.664e+05	1.046e+06	3.233e+05
63	31	-3.211e+05	1.540e+06	-2.22	0.0	0.0	-2.248e+04	552.23	-2943.98	1.637e+05	1.540e+06	-7.668e+05
		-7.668e+05	-1.021e+06	3.28	0.0	870.0	-1.870e+04	552.23	-2943.98	1.637e+05	-1.021e+06	-3.211e+05
63	32	-8.309e+04	1.030e+06	-3.97	0.0	0.0	-3.160e+04	1642.61	2928.53	-7.366e+04	-1.518e+06	-1.547e+06
		-1.547e+06	-1.518e+06	-3.19	0.0	870.0	-2.782e+04	1642.61	2928.53	-7.366e+04	1.030e+06	-8.309e+04
63	33	2.951e+06	5.446e+05	7.85	0.0	0.0	-2.548e+04	-2855.98	-1032.32	-4.127e+04	5.446e+05	2.951e+06
		4.445e+05	-3.535e+05	1.17	0.0	870.0	-2.170e+04	-2855.98	-1032.32	-4.127e+04	-3.535e+05	4.445e+05
63	34	2.542e+06	3.370e+05	6.85	0.0	0.0	-2.852e+04	-2373.46	945.27	-1.477e+05	-4.854e+05	2.542e+06
		4.990e+05	-4.854e+05	-1.01	0.0	870.0	-2.475e+04	-2373.46	945.27	-1.477e+05	3.370e+05	4.990e+05
63	35	-4.968e+05	4.838e+05	-6.84	0.0	0.0	-2.564e+04	2376.37	-915.21	1.450e+05	4.838e+05	-2.542e+06
		-2.542e+06	-3.124e+05	1.04	0.0	870.0	-2.187e+04	2376.37	-915.21	1.450e+05	-3.124e+05	-4.968e+05
63	36	-4.423e+05	3.782e+05	-7.85	0.0	0.0	-2.869e+04	2858.89	1062.39	3.854e+04	-5.461e+05	-2.952e+06
		-2.952e+06	-5.461e+05	-1.14	0.0	870.0	-2.491e+04	2858.89	1062.39	3.854e+04	3.782e+05	-4.423e+05
63	37	2.849e+06	4.316e+05	7.58	0.0	0.0	-2.580e+04	-2758.06	-815.58	-6.331e+04	4.316e+05	2.849e+06
		4.405e+05	-2.779e+05	0.93	0.0	870.0	-2.203e+04	-2758.06	-815.58	-6.331e+04	-2.779e+05	4.405e+05
63	38	2.644e+06	2.614e+05	7.12	0.0	0.0	-2.820e+04	-2471.38	728.53	-1.257e+05	-3.724e+05	2.644e+06
		5.030e+05	-3.724e+05	-0.77	0.0	870.0	-2.442e+04	-2471.38	728.53	-1.257e+05	2.614e+05	5.030e+05
63	39	-5.009e+05	3.709e+05	-7.12	0.0	0.0	-2.597e+04	2474.29	-698.46	1.230e+05	3.709e+05	-2.644e+06
		-2.644e+06	-2.368e+05	0.80	0.0	870.0	-2.219e+04	2474.29	-698.46	1.230e+05	-2.368e+05	-5.009e+05
63	40	-4.383e+05	3.025e+05	-7.58	0.0	0.0	-2.837e+04	2760.97	845.64	6.057e+04	-4.332e+05	-2.849e+06
		-2.849e+06	-4.332e+05	-0.90	0.0	870.0	-2.459e+04	2760.97	845.64	6.057e+04	3.025e+05	-4.383e+05
63	41	2.847e+06	4.825e+05	7.59	0.0	0.0	-2.567e+04	-2743.90	-913.27	-6.054e+04	4.825e+05	2.847e+06
		4.383e+05	-3.120e+05	1.04	0.0	870.0	-2.189e+04	-2743.90	-913.27	-6.054e+04	-3.120e+05	4.383e+05
63	42	2.438e+06	3.786e+05	6.58	0.0	0.0	-2.872e+04	-2261.38	1064.33	-1.670e+05	-5.474e+05	2.438e+06
		4.929e+05	-5.474e+05	-1.14	0.0	870.0	-2.494e+04	-2261.38	1064.33	-1.670e+05	3.786e+05	4.929e+05
63	43	-4.907e+05	5.459e+05	-6.58	0.0	0.0	-2.545e+04	2264.29	-1034.26	1.643e+05	5.459e+05	-2.438e+06
		-2.438e+06	-3.539e+05	1.17	0.0	870.0	-2.168e+04	2264.29	-1034.26	1.643e+05	-3.539e+05	-4.907e+05
63	44	-4.361e+05	3.366e+05	-7.58	0.0	0.0	-2.850e+04	2746.81	943.33	5.780e+04	-4.841e+05	-2.848e+06
		-2.848e+06	-4.841e+05	-1.01	0.0	870.0	-2.472e+04	2746.81	943.33	5.780e+04	3.366e+05	-4.361e+05
63	45	2.745e+06	3.696e+05	7.31	0.0	0.0	-2.599e+04	-2645.98	-696.52	-8.258e+04	3.696e+05	2.745e+06
		4.343e+05	-2.364e+05	0.80	0.0	870.0	-2.222e+04	-2645.98	-696.52	-8.258e+04	-2.364e+05	4.343e+05
63	46	2.540e+06	3.029e+05	6.85	0.0	0.0	-2.839e+04	-2359.30	847.58	-1.450e+05	-4.345e+05	2.540e+06
		4.969e+05	-4.345e+05	-0.90	0.0	870.0	-2.462e+04	-2359.30	847.58	-1.450e+05	3.029e+05	4.969e+05
63	47	-4.947e+05	4.329e+05	-6.85	0.0	0.0	-2.578e+04	2362.22	-817.52	1.422e+05	4.329e+05	-2.540e+06
		-2.540e+06	-2.783e+05	0.94	0.0	870.0	-2.200e+04	2362.22	-817.52	1.422e+05	-2.783e+05	-4.947e+05
63	48	-4.321e+05	2.610e+05	-7.31	0.0	0.0	-2.817e+04	2648.89	726.59	7.984e+04	-3.711e+05	-2.746e+06

		-2.746e+06	-3.711e+05	-0.77	0.0	870.0	-2.440e+04	2648.89	726.59	7.984e+04	2.610e+05	-4.321e+05
63	49	1.507e+06	1.725e+06	3.88	0.0	0.0	-2.198e+04	-1587.59	-3298.53	1.481e+05	1.725e+06	1.507e+06
		5.136e+04	-1.145e+06	3.67	0.0	870.0	-1.821e+04	-1587.59	-3298.53	1.481e+05	-1.145e+06	5.136e+04
63	50	2.332e+05	1.157e+06	0.53	0.0	0.0	-3.214e+04	20.79	3293.45	-2.068e+05	-1.708e+06	1.410e+05
		1.410e+05	-1.708e+06	-3.60	0.0	870.0	-2.836e+04	20.79	3293.45	-2.068e+05	1.157e+06	2.332e+05
63	51	-1.413e+05	1.707e+06	-0.53	0.0	0.0	-2.203e+04	-17.88	-3263.39	2.040e+05	1.707e+06	-1.413e+05
		-2.310e+05	-1.132e+06	3.63	0.0	870.0	-1.826e+04	-17.88	-3263.39	2.040e+05	-1.132e+06	-2.310e+05
63	52	-4.917e+04	1.169e+06	-3.88	0.0	0.0	-3.219e+04	1590.50	3328.59	-1.509e+05	-1.726e+06	-1.507e+06
		-1.507e+06	-1.726e+06	-3.63	0.0	870.0	-2.841e+04	1590.50	3328.59	-1.509e+05	1.169e+06	-4.917e+04
63	53	1.475e+06	1.706e+06	3.80	0.0	0.0	-2.204e+04	-1553.97	-3262.81	1.424e+05	1.706e+06	1.475e+06
		4.951e+04	-1.132e+06	3.63	0.0	870.0	-1.826e+04	-1553.97	-3262.81	1.424e+05	-1.132e+06	4.951e+04
63	54	2.314e+05	1.170e+06	0.45	0.0	0.0	-3.213e+04	54.42	3329.17	-2.126e+05	-1.732e+06	1.099e+05
		1.099e+05	-1.727e+06	-3.64	0.0	870.0	-2.842e+04	54.42	3329.17	-2.126e+05	1.170e+06	2.314e+05
63	55	-1.102e+05	1.725e+06	-0.45	0.0	0.0	-2.197e+04	-51.51	-3299.11	2.098e+05	1.725e+06	-1.102e+05
		-2.292e+05	-1.145e+06	3.67	0.0	870.0	-1.820e+04	-51.51	-3299.11	2.098e+05	-1.145e+06	-2.292e+05
63	56	-4.732e+04	1.157e+06	-3.80	0.0	0.0	-3.213e+04	1556.88	3292.87	-1.451e+05	-1.708e+06	-1.476e+06
		-1.476e+06	-1.708e+06	-3.59	0.0	870.0	-2.835e+04	1556.88	3292.87	-1.451e+05	1.157e+06	-4.732e+04
63	57	1.166e+06	1.348e+06	2.97	0.0	0.0	-2.306e+04	-1261.19	-2576.05	7.469e+04	1.348e+06	1.166e+06
		3.800e+04	-8.927e+05	2.87	0.0	870.0	-1.929e+04	-1261.19	-2576.05	7.469e+04	-8.927e+05	3.800e+04
63	58	4.820e+05	9.050e+05	1.44	0.0	0.0	-3.106e+04	-305.61	2570.97	-1.333e+05	9.050e+05	2.466e+05
		2.466e+05	-1.332e+06	-2.80	0.0	870.0	-2.728e+04	-305.61	2570.97	-1.333e+05	-1.332e+06	2.466e+05
63	59	-2.444e+05	1.330e+06	-1.44	0.0	0.0	-2.311e+04	308.52	-2540.91	1.306e+05	1.330e+06	-2.444e+05
		-4.824e+05	-8.804e+05	2.83	0.0	870.0	-1.934e+04	308.52	-2540.91	1.306e+05	-8.804e+05	-4.824e+05
63	60	-3.581e+04	9.173e+05	-2.97	0.0	0.0	-3.111e+04	1264.10	2606.11	-7.743e+04	-1.350e+06	1.166e+06
		-1.166e+06	-1.350e+06	-2.84	0.0	870.0	-2.733e+04	1264.10	2606.11	-7.743e+04	9.173e+05	-3.581e+04
63	61	1.134e+06	1.330e+06	2.89	0.0	0.0	-2.312e+04	-1227.57	-2540.33	6.891e+04	1.330e+06	1.134e+06
		3.615e+04	-8.803e+05	2.83	0.0	870.0	-1.934e+04	-1227.57	-2540.33	6.891e+04	-8.803e+05	3.615e+04
63	62	4.509e+05	9.175e+05	1.36	0.0	0.0	-3.111e+04	-271.98	2606.69	-1.391e+05	-1.350e+06	4.509e+05
		2.447e+05	-1.350e+06	-2.84	0.0	870.0	-2.734e+04	-271.98	2606.69	-1.391e+05	9.175e+05	2.447e+05
63	63	-2.425e+05	1.349e+06	-1.36	0.0	0.0	-2.305e+04	274.89	-2576.63	1.364e+05	1.349e+06	-2.425e+05
		-4.512e+05	-8.928e+05	2.87	0.0	870.0	-1.928e+04	274.89	-2576.63	1.364e+05	-8.928e+05	-4.512e+05
63	64	-3.396e+04	9.049e+05	-2.89	0.0	0.0	-3.105e+04	1230.48	2570.39	-7.165e+04	-1.331e+06	-1.135e+06
		-1.135e+06	-1.331e+06	-2.80	0.0	870.0	-2.727e+04	1230.48	2570.39	-7.165e+04	9.049e+05	-3.396e+04
63	65	995.48	1.126e+04	8.62e-04	0.0	0.0	-2.500e+04	1.31	13.81	-1242.82	-750.29	-147.83
		-147.83	-750.29	0.02	0.0	870.0	-2.122e+04	1.31	13.81	-1242.82	1.126e+04	995.48
63	66	1094.44	1.231e+04	9.26e-04	0.0	0.0	-2.708e+04	1.46	15.03	-1368.13	-767.82	-171.48
		-171.48	-767.82	0.02	0.0	870.0	-2.331e+04	1.46	15.03	-1368.13	1.231e+04	1094.44
136	1	-4.556e+05	5.283e+05	-1.38	0.0	0.0	-2.494e+04	3246.41	-6204.07	1.802e+05	5.283e+05	-7.084e+05
		-7.084e+05	6.235e+04	-0.06	0.0	75.0	-2.454e+04	3246.41	-6204.07	1.802e+05	6.235e+04	-4.556e+05
136	2	-3.760e+05	-1.926e+05	-1.53	0.0	0.0	-2.147e+04	3744.10	-1.312e+04	6.340e+04	-1.926e+05	-6.469e+05
		-6.469e+05	-1.177e+06	0.06	0.0	75.0	-2.108e+04	3744.10	-1.312e+04	6.340e+04	-1.177e+06	-6.469e+05
136	3	6.446e+05	4.846e+05	1.53	0.0	0.0	-2.467e+04	-3747.29	-6750.06	-6.075e+04	4.846e+05	6.446e+05
		3.735e+05	-2.098e+04	-0.06	0.0	75.0	-2.428e+04	-3747.29	-6750.06	-6.075e+04	-2.098e+04	3.735e+05
136	4	7.061e+05	-2.363e+05	1.38	0.0	0.0	-2.121e+04	-3249.60	-1.366e+04	-1.775e+05	-2.363e+05	7.061e+05
		4.531e+05	-1.260e+06	0.07	0.0	75.0	-2.082e+04	-3249.60	-1.366e+04	-1.775e+05	-1.260e+06	4.531e+05
136	5	-4.599e+05	4.497e+05	-1.42	0.0	0.0	-2.457e+04	3347.28	-6989.52	1.561e+05	4.497e+05	-7.126e+05
		-7.126e+05	-7.523e+04	-0.05	0.0	75.0	-2.418e+04	3347.28	-6989.52	1.561e+05	-7.523e+04	-4.599e+05
136	6	-3.717e+05	-1.139e+05	-1.49	0.0	0.0	-2.184e+04	3643.23	-1.233e+04	8.751e+04	-1.139e+05	-6.427e+05
		-6.427e+05	1.039e+06	0.04	0.0	75.0	-2.145e+04	3643.23	-1.233e+04	8.751e+04	1.039e+06	-6.427e+05
136	7	6.404e+05	4.059e+05	1.49	0.0	0.0	-2.430e+04	-3646.42	-7535.50	-8.486e+04	4.059e+05	6.404e+05
		3.692e+05	-1.586e+05	-0.04	0.0	75.0	-2.391e+04	-3646.42	-7535.50	-8.486e+04	-1.586e+05	3.692e+05
136	8	7.103e+05	-1.577e+05	1.42	0.0	0.0	-2.158e+04	-3350.48	-1.288e+04	-1.534e+05	-1.577e+05	7.103e+05
		4.574e+05	-1.123e+06	0.05	0.0	75.0	-2.118e+04	-3350.48	-1.288e+04	-1.534e+05	-1.123e+06	4.574e+05
136	9	-4.546e+05	4.807e+05	-1.43	0.0	0.0	-2.470e+04	3393.69	-6673.40	1.538e+05	4.807e+05	-7.185e+05
		-7.185e+05	-1.917e+04	-0.06	0.0	75.0	-2.431e+04	3393.69	-6673.40	1.538e+05	-1.917e+04	-4.546e+05
136	10	-3.751e+05	-2.402e+05	-1.58	0.0	0.0	-2.124e+04	3891.38	-1.359e+04	3.703e+04	-2.402e+05	-6.570e+05
		-6.570e+05	-1.259e+06	0.07	0.0	75.0	-2.085e+04	3891.38	-1.359e+04	3.703e+04	-1.259e+06	-3.751e+05
136	11	6.548e+05	5.323e+05	1.58	0.0	0.0	-2.491e+04	-3894.57	-6280.73	-3.439e+04	5.323e+05	6.548e+05
		3.726e+05	6.053e+04	-0.06	0.0	75.0	-2.451e+04	-3894.57	-6280.73	-3.439e+04	6.053e+04	3.726e+05
136	12	7.163e+05	-1.886e+05	1.43	0.0	0.0	-2.144e+04	-3396.88	-1.319e+04	-1.512e+05	-1.886e+05	7.163e+05
		4.522e+05	-1.179e+06	0.06	0.0	75.0	-2.105e+04	-3396.88	-1.319e+04	-1.512e+05	-1.179e+06	4.522e+05
136	13	-4.590e+05	4.020e+05	-1.48	0.0	0.0	-2.434e+04	3494.56	-7458.85	1.297e+05	4.020e+05	-7.227e+05
		-7.227e+05	-1.567e+05	-0.04	0.0	75.0	-2.394e+04	3494.56	-7458.85	1.297e+05	-1.567e+05	-4.590e+05
136	14	-3.707e+05	-1.616e+05	-1.54	0.0	0.0	-2.161e+04	3790.50	-1.280e+04	6.114e+04	-1.616e+05	-6.528e+05
		-6.528e+05	-1.121e+06	0.05	0.0	75.0	-2.122e+04	3790.50	-1.280e+04	6.114e+04	-1.121e+06	-3.707e+05
136	15	6.506e+05	4.536e+05	1.54	0.0	0.0	-2.454e+04	-3793.70	-7066.18	-5.850e+04	4.536e+05	6.506e+05
		3.682e+05	-7.704e+04	-0.05	0.0	75.0	-2.414e+04	-3793.70	-7066.18	-5.850e+04	-7.704e+04	3.682e+05
136	16	7.205e+05	-1.100e+05	1.48	0.0	0.0	-2.181e+04	-3497.75	-1.241e+04	-1.271e+05	-1.100e+05	7.205e+05
		4.565e+05	-1.041e+06	0.04	0.0	75.0	-2.142e+04	-3497.75	-1.241e+04	-1.271e+05	-1.041e+06	4.565e+05
136	17	-2.583e+05	1.479e+06	-0.19	0.0	0.0	-2.889e+04	217.98	1669.54	2.321e+05	1.479e+06	-3.066e+05
		-3.066e+05	1.354e+06	-0.21	0.0	75.0	-2.849e+04	217.98	1669.54	2.321e+05	1.354e+06	-2.583e+05
136	18	7042.53	-1.049e+06	-0.69	0.0	0.0	-1.734e+04	1876.94	-2.137e+04	-1.572e+05	-1.049e+06	-1.015e+05
		-1.015e+05	-2.652e+06	0.20	0.0	75.0	-1.695e+04	1876.94	-2.137e+04	-1.572e+05	-2.652e+06	7042.53
136	19	9.929e+04	1.454e+06	0.69	0.0	0.0	-2.881e+04	-1880.13	1505.75	1.598e+05	1.454e+06	9.929e+04
		-9534.45	1.341e+06	-0.20	0.0	75.0	-2.841e+04	-1880.13	1505.75	1.598e+05	1.341e+06	-9534.45
136	20	3.044e+05	-1.062e+06	0.19	0.0	0.0	-1.726e+04	-221.17	-2.154e+04	-2.295e+05	-1.062e+06	3.044e+05
		2.558e+05	-2.677e+06	0.21	0.0	75.0	-1.687e+04	-221.17	-2.154e+04	-2.295e+05	-2.677e+06	2.558e+05

136	21	-2.580e+05	1.455e+06	-0.20	0.0	0.0	-2.882e+04	262.16	1528.75	2.242e+05	1.340e+06	-3.097e+05
		-3.097e+05	1.340e+06	-0.20	0.0	75.0	-2.842e+04	262.16	1528.75	2.242e+05	1.455e+06	-2.580e+05
136	22	7330.12	-1.063e+06	-0.70	0.0	0.0	-1.727e+04	1921.12	-2.151e+04	-1.651e+05	-1.063e+06	1.046e+05
		-1.046e+05	-2.676e+06	0.21	0.0	75.0	-1.688e+04	1921.12	-2.151e+04	-1.651e+05	-2.676e+06	7330.12
136	23	1.023e+05	1.479e+06	0.70	0.0	0.0	-2.888e+04	-1924.31	1646.55	1.677e+05	1.355e+06	1.023e+05
		-9822.03	1.355e+06	-0.21	0.0	75.0	-2.848e+04	-1924.31	1646.55	1.677e+05	1.479e+06	-9822.03
136	24	3.074e+05	-1.048e+06	0.20	0.0	0.0	-1.733e+04	-265.36	-2.140e+04	-2.216e+05	-1.048e+06	3.074e+05
		2.555e+05	-2.653e+06	0.20	0.0	75.0	-1.694e+04	-265.36	-2.140e+04	-2.216e+05	-2.653e+06	2.555e+05
136	25	-2.727e+05	1.092e+06	-0.33	0.0	0.0	-2.766e+04	554.22	-948.62	1.517e+05	1.092e+06	-3.206e+05
		-3.206e+05	1.020e+06	-0.16	0.0	75.0	-2.727e+04	554.22	-948.62	1.517e+05	1.020e+06	-2.727e+05
136	26	2.145e+04	-7.868e+05	-0.54	0.0	0.0	-1.857e+04	1540.70	-1.875e+04	-7.682e+04	-7.868e+05	-8.754e+04
		-8.754e+04	-2.193e+06	0.16	0.0	75.0	-1.817e+04	1540.70	-1.875e+04	-7.682e+04	-2.193e+06	2.145e+04
136	27	8.529e+04	1.079e+06	0.54	0.0	0.0	-2.758e+04	-1543.89	-1112.42	7.946e+04	1.079e+06	8.529e+04
		-2.394e+04	9.955e+05	-0.16	0.0	75.0	-2.719e+04	-1543.89	-1112.42	7.946e+04	9.955e+05	-2.394e+04
136	28	3.184e+05	-7.999e+05	0.33	0.0	0.0	-1.849e+04	-557.41	-1.892e+04	-1.491e+05	-7.999e+05	3.184e+05
		2.702e+05	-2.218e+06	0.16	0.0	75.0	-1.809e+04	-557.41	-1.892e+04	-1.491e+05	-2.218e+06	2.702e+05
136	29	-2.724e+05	1.078e+06	-0.35	0.0	0.0	-2.759e+04	598.41	-1089.42	1.438e+05	1.078e+06	-3.237e+05
		-3.237e+05	9.960e+05	-0.16	0.0	75.0	-2.720e+04	598.41	-1089.42	1.438e+05	9.960e+05	-2.724e+05
136	30	2.174e+04	-8.011e+05	-0.56	0.0	0.0	-1.850e+04	1584.88	-1.890e+04	-8.473e+04	-8.011e+05	-9.059e+04
		-9.059e+04	-2.194e+06	0.16	0.0	75.0	-1.810e+04	1584.88	-1.890e+04	-8.473e+04	-2.194e+06	2.174e+04
136	31	8.833e+04	1.093e+06	0.56	0.0	0.0	-2.765e+04	-1588.07	-971.62	8.737e+04	1.093e+06	8.833e+04
		-2.423e+04	1.020e+06	-0.16	0.0	75.0	-2.726e+04	-1588.07	-971.62	8.737e+04	1.020e+06	-2.423e+04
136	32	3.214e+05	-7.856e+05	0.35	0.0	0.0	-1.856e+04	-601.60	-1.878e+04	-1.412e+05	-7.856e+05	3.214e+05
		2.699e+05	-2.194e+06	0.16	0.0	75.0	-1.816e+04	-601.60	-1.878e+04	-1.412e+05	-2.194e+06	2.699e+05
136	33	-3.207e+05	4.801e+05	-0.93	0.0	0.0	-2.469e+04	2176.97	-6694.65	1.421e+05	4.801e+05	-4.921e+05
		-4.921e+05	-2.248e+04	-0.06	0.0	75.0	-2.430e+04	2176.97	-6694.65	1.421e+05	-2.248e+04	-3.207e+05
136	34	-2.509e+05	-1.519e+05	-1.06	0.0	0.0	-2.166e+04	2613.30	-1.276e+04	3.974e+04	-1.519e+05	-4.381e+05
		-4.381e+05	-1.109e+06	0.05	0.0	75.0	-2.126e+04	2613.30	-1.276e+04	3.974e+04	-1.109e+06	-2.509e+05
136	35	4.359e+05	4.439e+05	1.06	0.0	0.0	-2.449e+04	-2616.49	-7111.70	-3.710e+04	4.439e+05	4.359e+05
		2.484e+05	-8.895e+04	-0.05	0.0	75.0	-2.410e+04	-2616.49	-7111.70	-3.710e+04	-8.895e+04	2.484e+05
136	36	4.898e+05	-1.881e+05	0.93	0.0	0.0	-2.145e+04	-2180.16	-1.317e+04	-1.395e+05	-1.881e+05	4.898e+05
		3.182e+05	-1.175e+06	0.06	0.0	75.0	-2.106e+04	-2180.16	-1.317e+04	-1.395e+05	-1.175e+06	3.182e+05
136	37	-3.245e+05	4.111e+05	-0.97	0.0	0.0	-2.417e+04	2265.46	-7383.96	1.210e+05	4.111e+05	-4.957e+05
		-4.957e+05	-1.432e+05	-0.04	0.0	75.0	-2.398e+04	2265.46	-7383.96	1.210e+05	-1.432e+05	-3.245e+05
136	38	-2.472e+05	-8.288e+04	-1.03	0.0	0.0	-2.198e+04	2524.81	-1.207e+04	6.089e+04	-8.288e+04	-4.345e+05
		-4.345e+05	-9.883e+05	0.04	0.0	75.0	-2.159e+04	2524.81	-1.207e+04	6.089e+04	-9.883e+05	-2.472e+05
136	39	4.322e+05	3.749e+05	1.03	0.0	0.0	-2.417e+04	-2528.01	-7801.00	-5.825e+04	3.749e+05	4.322e+05
		2.447e+05	-2.097e+05	-0.04	0.0	75.0	-2.377e+04	-2528.01	-7801.00	-5.825e+04	-2.097e+05	2.447e+05
136	40	4.935e+05	-1.191e+05	0.97	0.0	0.0	-2.178e+04	-2268.65	-1.248e+04	-1.183e+05	-1.191e+05	4.935e+05
		3.220e+05	-1.055e+06	0.05	0.0	75.0	-2.138e+04	-2268.65	-1.248e+04	-1.183e+05	-1.055e+06	3.220e+05
136	41	-3.201e+05	4.418e+05	-0.97	0.0	0.0	-2.451e+04	2277.88	-7069.25	1.247e+05	4.418e+05	-4.990e+05
		-4.990e+05	-8.793e+04	-0.05	0.0	75.0	-2.411e+04	2277.88	-7069.25	1.247e+05	-8.793e+04	-3.201e+05
136	42	-2.503e+05	-1.902e+05	-1.10	0.0	0.0	-2.147e+04	2714.21	-1.313e+04	2.232e+04	-1.902e+05	-4.451e+05
		-4.451e+05	-1.174e+06	0.06	0.0	75.0	-2.108e+04	2714.21	-1.313e+04	2.232e+04	-1.174e+06	-2.503e+05
136	43	4.429e+05	4.822e+05	1.10	0.0	0.0	-2.468e+04	-2717.40	-6737.10	-1.968e+04	4.822e+05	4.429e+05
		2.478e+05	-2.350e+04	-0.06	0.0	75.0	-2.428e+04	-2717.40	-6737.10	-1.968e+04	-2.350e+04	2.478e+05
136	44	4.968e+05	-1.498e+05	0.97	0.0	0.0	-2.164e+04	-2281.07	-1.280e+04	-1.221e+05	-1.498e+05	4.968e+05
		3.176e+05	-1.110e+06	0.05	0.0	75.0	-2.125e+04	-2281.07	-1.280e+04	-1.221e+05	-1.110e+06	3.176e+05
136	45	-3.238e+05	3.728e+05	-1.01	0.0	0.0	-2.418e+04	2366.36	-7758.56	1.036e+05	3.728e+05	-5.027e+05
		-5.027e+05	-2.087e+05	-0.04	0.0	75.0	-2.379e+04	2366.36	-7758.56	1.036e+05	-2.087e+05	-3.238e+05
136	46	-2.465e+05	-1.212e+05	-1.06	0.0	0.0	-2.179e+04	2625.72	-1.244e+04	4.347e+04	-1.212e+05	-4.414e+05
		-4.414e+05	-1.054e+06	0.05	0.0	75.0	-2.140e+04	2625.72	-1.244e+04	4.347e+04	-1.054e+06	-2.465e+05
136	47	4.392e+05	4.132e+05	1.06	0.0	0.0	-2.435e+04	-2628.91	-7426.40	-4.083e+04	4.132e+05	4.392e+05
		2.440e+05	-1.442e+05	-0.04	0.0	75.0	-2.396e+04	-2628.91	-7426.40	-4.083e+04	-1.442e+05	2.440e+05
136	48	5.005e+05	-8.076e+04	1.01	0.0	0.0	-2.196e+04	-2369.56	-1.211e+04	-1.009e+05	-8.076e+04	5.005e+05
		3.213e+05	-9.893e+05	0.04	0.0	75.0	-2.157e+04	-2369.56	-1.211e+04	-1.009e+05	-9.893e+05	3.213e+05
136	49	-2.029e+05	1.222e+06	-0.08	0.0	0.0	-2.816e+04	-9.80	229.82	1.989e+05	1.205e+06	-2.302e+05
		-2.302e+05	1.205e+06	-0.18	0.0	75.0	-2.777e+04	-9.80	229.82	1.989e+05	1.222e+06	-2.029e+05
136	50	2.969e+04	-9.019e+05	-0.52	0.0	0.0	-1.804e+04	1444.64	-1.997e+04	-1.424e+05	-9.019e+05	-5.043e+04
		-5.043e+04	-2.400e+06	0.18	0.0	75.0	-1.765e+04	1444.64	-1.997e+04	-1.424e+05	-2.400e+06	2.969e+04
136	51	4.818e+04	1.202e+06	0.52	0.0	0.0	-2.810e+04	-1447.83	104.71	1.451e+05	1.194e+06	4.818e+04
		-3.218e+04	1.194e+06	-0.18	0.0	75.0	-2.771e+04	-1447.83	104.71	1.451e+05	1.202e+06	-3.218e+04
136	52	2.279e+05	-9.128e+05	0.08	0.0	0.0	-1.798e+04	6.60	-2.010e+04	-1.962e+05	-9.128e+05	2.279e+05
		2.004e+05	-2.420e+06	0.18	0.0	75.0	-1.759e+04	6.60	-2.010e+04	-1.962e+05	-2.420e+06	2.004e+05
136	53	-2.027e+05	1.202e+06	-0.09	0.0	0.0	-2.811e+04	20.48	117.44	1.936e+05	1.193e+06	-2.323e+05
		-2.323e+05	1.193e+06	-0.18	0.0	75.0	-2.772e+04	20.48	117.44	1.936e+05	1.202e+06	-2.027e+05
136	54	2.988e+04	-9.134e+05	-0.53	0.0	0.0	-1.799e+04	1474.91	-2.008e+04	-1.477e+05	-9.134e+05	-5.253e+04
		-5.253e+04	-2.420e+06	0.18	0.0	75.0	-1.759e+04	1474.91	-2.008e+04	-1.477e+05	-2.420e+06	2.988e+04
136	55	5.028e+04	1.222e+06	0.53	0.0	0.0	-2.816e+04	-1478.11	217.09	1.503e+05	1.205e+06	5.028e+04
		-3.237e+04	1.205e+06	-0.18	0.0	75.0	-2.777e+04	-1478.11	217.09	1.503e+05	1.222e+06	-3.237e+04
136	56	2.300e+05	-9.013e+05	0.09	0.0	0.0	-1.804e+04	-23.67	-1.998e+04	-1.910e+05	-9.013e+05	2.300e+05
		2.002e+05	-2.400e+06	0.18	0.0	75.0	-1.764e+04	-23.67	-1.998e+04	-1.910e+05	-2.400e+06	2.002e+05
136	57	-2.155e+05	9.747e+05	-0.21	0.0	0.0	-2.709e+04	285.16	-2067.86	1.284e+05	9.747e+05	-2.424e+05
		-2.424e+05	8.194e+05	-0.14	0.0	75.0	-2.670e+04	285.16	-2067.86	1.284e+05	8.194e+05	-2.155e+05
136	58	4.427e+04	-6.719e+05	-0.39	0.0	0.0	-1.912e+04	1149.68	-1.767e+04	-7.194e+04	-6.719e+05	-3.818e+04
		-3.818e+04	-1.997e+06	0.14	0.0	75.0	-1.873e+04	1149.68	-1.767e+04	-7.194e+04	-1.997e+06	4.427e+04
136	59	3.593e+04	9.639e+05	0.39	0.0	0.0	-2.703e+04	-1152.88	-2192.97	7.459e+04	9.639e+05	3.593e+04

		-4.476e+04	7.995e+05	-0.14	0.0	75.0	-2.663e+04	-1152.88	-2192.97	7.459e+04	7.995e+05	-4.476e+04
136	60	2.402e+05	-6.827e+05	0.21	0.0	0.0	-1.906e+04	-288.36	-1.780e+04	-1.257e+05	-6.827e+05	2.402e+05
		2.130e+05	-2.017e+06	0.14	0.0	75.0	-1.866e+04	-288.36	-1.780e+04	-1.257e+05	-2.017e+06	2.130e+05
136	61	-2.153e+05	9.632e+05	-0.22	0.0	0.0	-2.703e+04	315.44	-2180.24	1.231e+05	9.632e+05	-2.445e+05
		-2.445e+05	7.998e+05	-0.14	0.0	75.0	-2.664e+04	315.44	-2180.24	1.231e+05	7.998e+05	-2.153e+05
136	62	4.246e+04	-6.833e+05	-0.40	0.0	0.0	-1.906e+04	1179.95	-1.779e+04	-7.717e+04	-6.833e+05	-4.028e+04
		-4.028e+04	-2.017e+06	0.14	0.0	75.0	-1.867e+04	1179.95	-1.779e+04	-7.717e+04	-2.017e+06	4.246e+04
136	63	3.803e+04	9.754e+05	0.40	0.0	0.0	-2.708e+04	-1183.15	-2080.59	7.981e+04	9.754e+05	3.803e+04
		-4.496e+04	8.191e+05	-0.14	0.0	75.0	-2.669e+04	-1183.15	-2080.59	7.981e+04	8.191e+05	-4.496e+04
136	64	2.423e+05	-6.712e+05	0.22	0.0	0.0	-1.911e+04	-318.63	-1.769e+04	-1.205e+05	-6.712e+05	2.423e+05
		2.128e+05	-1.998e+06	0.14	0.0	75.0	-1.872e+04	-318.63	-1.769e+04	-1.205e+05	-1.998e+06	2.128e+05
136	65	-1024.15	1.325e+05	-2.80e-04	0.0	0.0	-2.099e+04	-1.44	-9006.40	1199.68	1.325e+05	-1024.15
		-1132.24	-5.430e+05	2.82e-03	0.0	75.0	-2.059e+04	-1.44	-9006.40	1199.68	-5.430e+05	-1132.24
136	66	-1126.25	1.460e+05	-3.05e-04	0.0	0.0	-2.307e+04	-1.60	-9933.36	1320.89	1.460e+05	-1126.25
		-1245.96	-5.990e+05	3.10e-03	0.0	75.0	-2.268e+04	-1.60	-9933.36	1320.89	-5.990e+05	-1245.96
137		1-3.756e+05	1.261e+06	-1.59	0.0	0.0	-2.123e+04	3900.21	1.376e+04	-6.651e+04	1.261e+06	-3.756e+05
		-6.586e+05	2.298e+05	-0.07	0.0	75.0	-2.083e+04	3900.21	1.376e+04	-6.651e+04	2.298e+05	-6.586e+05
137		2-4.561e+05	1.299e+04	-1.44	0.0	0.0	-2.470e+04	3411.40	6688.62	-1.880e+05	-4.879e+05	-7.210e+05
		-7.210e+05	-4.879e+05	0.06	0.0	75.0	-2.431e+04	3411.40	6688.62	-1.880e+05	1.299e+04	-4.561e+05
137		3	7.188e+05	1.185e+06	1.44	0.0	0.0	-2.142e+04	-3414.31	1.337e+04	1.852e+05	1.185e+06
		4.537e+05	1.821e+05	-0.06	0.0	75.0	-2.103e+04	-3414.31	1.337e+04	1.852e+05	1.821e+05	4.537e+05
137		4	6.564e+05	-6.244e+04	1.59	0.0	0.0	-2.490e+04	-3903.12	6297.81	6.377e+04	-5.356e+05
		3.731e+05	-5.356e+05	0.06	0.0	75.0	-2.450e+04	-3903.12	6297.81	6.377e+04	-6.244e+04	3.731e+05
137		5-3.713e+05	1.122e+06	-0.96	0.0	0.0	-2.160e+04	3800.92	1.295e+04	-9.163e+04	1.122e+06	-3.713e+05
		-6.543e+05	1.515e+05	-0.05	0.0	75.0	-2.120e+04	3800.92	1.295e+04	-9.163e+04	1.515e+05	-6.543e+05
137		6-4.604e+05	1.515e+05	-2.07	0.0	0.0	-2.433e+04	3510.69	7491.10	-1.628e+05	-4.096e+05	-7.253e+05
		-7.253e+05	-4.096e+05	0.04	0.0	75.0	-2.394e+04	3510.69	7491.10	-1.628e+05	1.515e+05	-4.604e+05
137		7	7.231e+05	1.047e+06	2.07	0.0	0.0	-2.179e+04	-3513.60	1.256e+04	1.601e+05	1.037e+05
		4.580e+05	1.037e+05	-0.05	0.0	75.0	-2.140e+04	-3513.60	1.256e+04	1.601e+05	1.047e+06	7.231e+05
137		8	6.521e+05	7.607e+04	0.96	0.0	0.0	-2.453e+04	-3803.83	7100.30	8.890e+04	-4.573e+05
		3.689e+05	-4.573e+05	0.05	0.0	75.0	-2.413e+04	-3803.83	7100.30	8.890e+04	7.607e+04	3.689e+05
137		9-3.769e+05	1.178e+06	-1.54	0.0	0.0	-2.147e+04	3756.12	1.326e+04	-9.525e+04	1.178e+06	-3.769e+05
		-6.491e+05	1.827e+05	-0.06	0.0	75.0	-2.108e+04	3756.12	1.326e+04	-9.525e+04	1.827e+05	-6.491e+05
137		10-4.575e+05	-6.987e+04	-1.39	0.0	0.0	-2.494e+04	3267.32	6193.24	-2.167e+05	-5.349e+05	-7.115e+05
		-7.115e+05	-5.349e+05	0.06	0.0	75.0	-2.455e+04	3267.32	6193.24	-2.167e+05	-6.987e+04	-4.575e+05
137		11	7.092e+05	1.268e+06	1.39	0.0	0.0	-2.118e+04	-3270.23	1.386e+04	2.140e+05	2.291e+05
		4.550e+05	2.291e+05	-0.07	0.0	75.0	-2.079e+04	-3270.23	1.386e+04	2.140e+05	2.291e+05	7.092e+05
137		12	6.469e+05	2.043e+04	1.54	0.0	0.0	-2.466e+04	-3759.03	6793.18	9.252e+04	-4.885e+05
		3.745e+05	-4.885e+05	0.05	0.0	75.0	-2.426e+04	-3759.03	6793.18	9.252e+04	2.043e+04	3.745e+05
137		13-3.726e+05	1.039e+06	-0.91	0.0	0.0	-2.184e+04	3656.83	1.246e+04	-1.204e+05	1.044e+05	-6.447e+05
		-6.447e+05	1.044e+05	-0.05	0.0	75.0	-2.144e+04	3656.83	1.246e+04	-1.204e+05	1.039e+06	-3.726e+05
137		14-4.617e+05	6.864e+04	-2.02	0.0	0.0	-2.457e+04	3366.61	6995.73	-1.916e+05	-4.566e+05	-7.158e+05
		-7.158e+05	-4.566e+05	0.05	0.0	75.0	-2.418e+04	3366.61	6995.73	-1.916e+05	6.864e+04	-4.617e+05
137		15	7.136e+05	1.130e+06	2.02	0.0	0.0	-2.155e+04	-3369.52	1.306e+04	1.888e+05	1.508e+05
		4.593e+05	1.508e+05	-0.05	0.0	75.0	-2.116e+04	-3369.52	1.306e+04	1.888e+05	1.130e+06	4.593e+05
137		16	6.425e+05	1.589e+05	0.91	0.0	0.0	-2.429e+04	-3659.74	7595.67	1.176e+05	-4.102e+05
		3.702e+05	-4.102e+05	0.04	0.0	75.0	-2.389e+04	-3659.74	7595.67	1.176e+05	1.589e+05	3.702e+05
137		17	8676.60	2.690e+06	-0.70	0.0	0.0	-1.724e+04	1910.40	2.187e+04	1.633e+05	1.050e+06
		-1.037e+05	1.050e+06	-0.21	0.0	75.0	-1.685e+04	1910.40	2.187e+04	1.633e+05	2.690e+06	8676.60
137		18-2.599e+05	-1.342e+06	-0.21	0.0	0.0	-2.882e+04	281.04	-1695.03	-2.415e+05	-1.342e+06	-3.117e+05
		-3.117e+05	-1.469e+06	0.20	0.0	75.0	-2.843e+04	281.04	-1695.03	-2.415e+05	-1.469e+06	-2.599e+05
137		19	3.095e+05	2.667e+06	0.21	0.0	0.0	-1.730e+04	-283.95	2.175e+04	2.388e+05	1.036e+06
		2.575e+05	1.036e+06	-0.21	0.0	75.0	-1.691e+04	-283.95	2.175e+04	2.388e+05	2.667e+06	2.575e+05
137		20	1.015e+05	-1.356e+06	0.70	0.0	0.0	-2.888e+04	-1913.31	-1812.27	-1.660e+05	-1.356e+06
		-1.110e+04	-1.492e+06	0.20	0.0	75.0	-2.849e+04	-1913.31	-1812.27	-1.660e+05	-1.492e+06	-1.110e+04
137		21	8279.83	2.665e+06	-0.68	0.0	0.0	-1.731e+04	1867.18	2.172e+04	1.547e+05	1.036e+06
		-1.009e+05	1.036e+06	-0.21	0.0	75.0	-1.692e+04	1867.18	2.172e+04	1.547e+05	2.665e+06	8279.83
137		22-2.603e+05	-1.356e+06	-0.19	0.0	0.0	-2.889e+04	237.82	-1843.64	-2.502e+05	-1.356e+06	-3.088e+05
		-3.088e+05	-1.494e+06	0.20	0.0	75.0	-2.850e+04	237.82	-1843.64	-2.502e+05	-1.494e+06	-2.603e+05
137		23	3.066e+05	2.692e+06	0.19	0.0	0.0	-1.723e+04	-240.73	2.190e+04	2.474e+05	1.050e+06
		2.579e+05	1.050e+06	-0.21	0.0	75.0	-1.684e+04	-240.73	2.190e+04	2.474e+05	2.692e+06	2.579e+05
137		24	9.865e+04	-1.342e+06	0.68	0.0	0.0	-2.881e+04	-1870.09	-1663.66	-1.574e+05	-1.342e+06
		-1.071e+04	-1.467e+06	0.20	0.0	75.0	-2.842e+04	-1870.09	-1663.66	-1.574e+05	-1.467e+06	-1.071e+04
137		25	2.282e+04	2.228e+06	1.40	0.0	0.0	-1.847e+04	1579.44	1.919e+04	7.955e+04	7.893e+05
		-8.931e+04	7.893e+05	-0.16	0.0	75.0	-1.808e+04	1579.44	1.919e+04	7.955e+04	2.228e+06	2.282e+04
137		26-2.740e+05	-1.007e+06	-2.31	0.0	0.0	-2.759e+04	612.01	979.92	-1.578e+05	-1.081e+06	-3.261e+05
		-3.261e+05	-1.081e+06	0.16	0.0	75.0	-2.720e+04	612.01	979.92	-1.578e+05	-1.007e+06	-2.740e+05
137		27	3.239e+05	2.206e+06	2.31	0.0	0.0	-1.853e+04	-614.92	1.908e+04	1.551e+05	7.750e+05
		2.716e+05	7.750e+05	-0.16	0.0	75.0	-1.814e+04	-614.92	1.908e+04	1.551e+05	2.206e+06	2.716e+05
137		28	8.711e+04	-1.030e+06	-1.40	0.0	0.0	-2.765e+04	-1582.35	862.68	-8.228e+04	-1.095e+06
		-2.525e+04	-1.095e+06	0.16	0.0	75.0	-2.726e+04	-1582.35	862.68	-8.228e+04	-1.030e+06	-2.525e+04
137		29	2.242e+04	2.204e+06	1.41	0.0	0.0	-1.855e+04	1536.21	1.904e+04	7.092e+04	7.752e+05
		-8.645e+04	7.752e+05	-0.16	0.0	75.0	-1.815e+04	1536.21	1.904e+04	7.092e+04	2.204e+06	2.242e+04
137		30-2.744e+05	-1.032e+06	-2.29	0.0	0.0	-2.766e+04	568.78	831.31	-1.664e+05	-1.095e+06	-3.232e+05
		-3.232e+05	-1.095e+06	0.16	0.0	75.0	-2.727e+04	568.78	831.31	-1.664e+05	-1.032e+06	-2.744e+05
137		31	3.210e+05	2.231e+06	2.29	0.0	0.0	-1.846e+04	-571.69	1.922e+04	1.637e+05	7.891e+05
		2.720e+05	7.891e+05	-0.16	0.0	75.0	-1.807e+04	-571.69	1.922e+04	1.637e+05	2.231e+06	2.720e+05

137	32	8.424e+04	-1.005e+06	-1.41	0.0	0.0	-2.758e+04	-1539.12	1011.29	-7.366e+04	-1.081e+06	8.424e+04
		-2.485e+04	-1.081e+06	0.16	0.0	75.0	-2.718e+04	-1539.12	1011.29	-7.366e+04	-1.005e+06	-2.485e+04
137	33	-2.505e+05	1.177e+06	-1.10	0.0	0.0	-2.146e+04	2719.50	1.329e+04	-4.127e+04	1.808e+05	-4.461e+05
		-4.461e+05	1.808e+05	-0.06	0.0	75.0	-2.106e+04	2719.50	1.329e+04	-4.127e+04	1.177e+06	-2.505e+05
137	34	-3.211e+05	8.342e+04	-0.97	0.0	0.0	-2.450e+04	2290.95	7097.34	-1.477e+05	-4.484e+05	-5.008e+05
		-5.008e+05	-4.484e+05	0.05	0.0	75.0	-2.411e+04	2290.95	7097.34	-1.477e+05	8.342e+04	-3.211e+05
137	35	4.986e+05	1.115e+06	0.97	0.0	0.0	-2.162e+04	-2293.86	1.296e+04	1.450e+05	1.426e+05	4.986e+05
		3.187e+05	1.426e+05	-0.05	0.0	75.0	-2.123e+04	-2293.86	1.296e+04	1.450e+05	1.115e+06	3.187e+05
137	36	4.439e+05	2.097e+04	1.10	0.0	0.0	-2.467e+04	-2722.41	6760.57	3.854e+04	-4.866e+05	4.439e+05
		2.481e+05	-4.866e+05	0.05	0.0	75.0	-2.427e+04	-2722.41	6760.57	3.854e+04	2.097e+04	2.481e+05
137	37	-2.468e+05	1.056e+06	-0.55	0.0	0.0	-2.178e+04	2632.40	1.259e+04	-6.331e+04	1.121e+05	-4.423e+05
		-4.423e+05	1.121e+05	-0.05	0.0	75.0	-2.139e+04	2632.40	1.259e+04	-6.331e+04	1.056e+06	-2.468e+05
137	38	-3.249e+05	2.050e+05	-1.53	0.0	0.0	-2.418e+04	2378.05	7801.59	-1.257e+05	-3.797e+05	-5.046e+05
		-5.046e+05	-3.797e+05	0.04	0.0	75.0	-2.378e+04	2378.05	7801.59	-1.257e+05	2.050e+05	-3.249e+05
137	39	5.024e+05	9.934e+05	1.52	0.0	0.0	-2.195e+04	-2380.96	1.225e+04	1.230e+05	7.384e+04	5.024e+05
		3.224e+05	7.384e+04	-0.04	0.0	75.0	-2.155e+04	-2380.96	1.225e+04	1.230e+05	9.934e+05	3.224e+05
137	40	4.401e+05	1.425e+05	0.55	0.0	0.0	-2.434e+04	-2635.31	7464.82	6.057e+04	-4.179e+05	4.401e+05
		2.444e+05	-4.179e+05	0.04	0.0	75.0	-2.395e+04	-2635.31	7464.82	6.057e+04	1.425e+05	2.444e+05
137	41	-2.514e+05	1.111e+06	-1.07	0.0	0.0	-2.165e+04	2620.73	1.290e+04	-6.054e+04	1.429e+05	-4.395e+05
		-4.395e+05	1.429e+05	-0.05	0.0	75.0	-2.125e+04	2620.73	1.290e+04	-6.054e+04	1.111e+06	-2.514e+05
137	42	-3.220e+05	1.695e+04	-0.94	0.0	0.0	-2.469e+04	2192.18	6703.12	-1.670e+05	-4.862e+05	-4.942e+05
		-4.942e+05	-4.862e+05	0.06	0.0	75.0	-2.430e+04	2192.18	6703.12	-1.670e+05	1.695e+04	-3.220e+05
137	43	4.920e+05	1.181e+06	0.94	0.0	0.0	-2.143e+04	-2195.09	1.335e+04	1.643e+05	1.804e+05	4.920e+05
		3.196e+05	1.804e+05	-0.06	0.0	75.0	-2.104e+04	-2195.09	1.335e+04	1.643e+05	1.181e+06	3.196e+05
137	44	4.373e+05	8.744e+04	1.07	0.0	0.0	-2.448e+04	-2623.64	7154.79	5.780e+04	-4.488e+05	4.373e+05
		2.490e+05	-4.488e+05	0.05	0.0	75.0	-2.408e+04	-2623.64	7154.79	5.780e+04	8.744e+04	2.490e+05
137	45	-2.477e+05	9.893e+05	-0.52	0.0	0.0	-2.197e+04	2533.63	1.220e+04	-8.258e+04	7.422e+04	-4.357e+05
		-4.357e+05	7.422e+04	-0.04	0.0	75.0	-2.158e+04	2533.63	1.220e+04	-8.258e+04	9.893e+05	-2.477e+05
137	46	-3.257e+05	1.385e+05	-1.49	0.0	0.0	-2.437e+04	2279.28	7407.37	-1.450e+05	-4.175e+05	-4.980e+05
		-4.980e+05	-4.175e+05	0.04	0.0	75.0	-2.398e+04	2279.28	7407.37	-1.450e+05	1.385e+05	-3.257e+05
137	47	4.958e+05	1.060e+06	1.49	0.0	0.0	-2.175e+04	-2282.19	1.265e+04	1.422e+05	1.117e+05	4.958e+05
		3.233e+05	1.117e+05	-0.05	0.0	75.0	-2.136e+04	-2282.19	1.265e+04	1.422e+05	1.060e+06	3.233e+05
137	48	4.335e+05	2.090e+05	0.52	0.0	0.0	-2.415e+04	-2536.54	7859.04	7.984e+04	-3.800e+05	4.335e+05
		2.453e+05	-3.800e+05	0.04	0.0	75.0	-2.376e+04	-2536.54	7859.04	7.984e+04	2.090e+05	2.453e+05
137	49	3.113e+04	2.432e+06	-0.53	0.0	0.0	-1.796e+04	1464.79	2.041e+04	1.481e+05	9.014e+05	-5.165e+04
		-5.165e+04	9.014e+05	-0.18	0.0	75.0	-1.757e+04	1464.79	2.041e+04	1.481e+05	2.432e+06	3.113e+04
137	50	-2.043e+05	-1.196e+06	-0.10	0.0	0.0	-2.811e+04	36.31	-250.67	-2.068e+05	-1.196e+06	-2.340e+05
		-2.340e+05	-1.215e+06	0.18	0.0	75.0	-2.772e+04	36.31	-250.67	-2.068e+05	-1.215e+06	-2.043e+05
137	51	2.318e+05	2.413e+06	0.10	0.0	0.0	-1.801e+04	-39.22	2.031e+04	2.040e+05	8.900e+05	2.318e+05
		2.019e+05	8.900e+05	-0.18	0.0	75.0	-1.762e+04	-39.22	2.031e+04	2.040e+05	2.413e+06	2.019e+05
137	52	4.944e+04	-1.207e+06	0.53	0.0	0.0	-2.816e+04	-1467.70	-351.70	-1.509e+05	-1.207e+06	4.944e+04
		-3.355e+04	-1.233e+06	0.18	0.0	75.0	-2.777e+04	-1467.70	-351.70	-1.509e+05	-1.233e+06	-3.355e+04
137	53	3.086e+04	2.412e+06	-0.52	0.0	0.0	-1.802e+04	1435.16	2.029e+04	1.424e+05	8.901e+05	-4.968e+04
		-4.968e+04	8.901e+05	-0.18	0.0	75.0	-1.762e+04	1435.16	2.029e+04	1.424e+05	2.412e+06	3.086e+04
137	54	-2.046e+05	-1.207e+06	-0.09	0.0	0.0	-2.817e+04	6.68	-368.93	-2.126e+05	-1.207e+06	-2.320e+05
		-2.320e+05	-1.235e+06	0.18	0.0	75.0	-2.778e+04	6.68	-368.93	-2.126e+05	-1.235e+06	-2.046e+05
137	55	2.298e+05	2.433e+06	0.09	0.0	0.0	-1.795e+04	-9.59	2.042e+04	2.098e+05	9.013e+05	2.298e+05
		2.022e+05	9.013e+05	-0.18	0.0	75.0	-1.756e+04	-9.59	2.042e+04	2.098e+05	2.433e+06	2.022e+05
137	56	4.747e+04	-1.196e+06	0.52	0.0	0.0	-2.811e+04	-1438.07	-233.43	-1.451e+05	-1.196e+06	4.747e+04
		-3.329e+04	-1.213e+06	0.18	0.0	75.0	-2.771e+04	-1438.07	-233.43	-1.451e+05	-1.213e+06	-3.329e+04
137	57	4.348e+04	2.027e+06	1.31	0.0	0.0	-1.904e+04	1174.46	1.806e+04	7.469e+04	6.723e+05	-3.905e+04
		-3.905e+04	6.723e+05	-0.14	0.0	75.0	-1.865e+04	1174.46	1.806e+04	7.469e+04	2.027e+06	4.348e+04
137	58	-2.167e+05	-8.095e+05	-1.93	0.0	0.0	-2.703e+04	326.64	2096.85	-1.333e+05	-9.667e+05	-2.466e+05
		-2.466e+05	-9.667e+05	0.14	0.0	75.0	-2.664e+04	326.64	2096.85	-1.333e+05	-8.095e+05	-2.167e+05
137	59	2.444e+05	2.008e+06	1.93	0.0	0.0	-1.909e+04	-329.55	1.796e+04	1.306e+05	6.609e+05	2.444e+05
		2.142e+05	6.609e+05	-0.14	0.0	75.0	-1.870e+04	-329.55	1.796e+04	1.306e+05	2.008e+06	2.142e+05
137	60	3.684e+04	-8.282e+05	-1.31	0.0	0.0	-2.708e+04	-1177.37	1995.82	-7.743e+04	-9.782e+05	3.684e+04
		-4.590e+04	-9.782e+05	0.14	0.0	75.0	-2.669e+04	-1177.37	1995.82	-7.743e+04	-8.282e+05	-4.590e+04
137	61	4.321e+04	2.007e+06	1.32	0.0	0.0	-1.910e+04	1144.83	1.794e+04	6.891e+04	6.610e+05	-3.707e+04
		-3.707e+04	6.610e+05	-0.14	0.0	75.0	-1.871e+04	1144.83	1.794e+04	6.891e+04	2.007e+06	4.321e+04
137	62	-2.169e+05	-8.295e+05	-1.92	0.0	0.0	-2.709e+04	297.00	1978.58	-1.391e+05	-9.780e+05	-2.446e+05
		-2.446e+05	-9.780e+05	0.14	0.0	75.0	-2.670e+04	297.00	1978.58	-1.391e+05	-8.295e+05	-2.169e+05
137	63	2.424e+05	2.028e+06	1.92	0.0	0.0	-1.903e+04	-299.91	1.808e+04	1.364e+05	6.722e+05	2.424e+05
		2.145e+05	6.722e+05	-0.14	0.0	75.0	-1.864e+04	-299.91	1.808e+04	1.364e+05	2.028e+06	2.145e+05
137	64	3.486e+04	-8.083e+05	-1.32	0.0	0.0	-2.702e+04	-1147.74	2114.08	-7.165e+04	-9.668e+05	3.486e+04
		-4.564e+04	-9.668e+05	0.14	0.0	75.0	-2.663e+04	-1147.74	2114.08	-7.165e+04	-8.083e+05	-4.564e+04
137	65	-1003.88	5.431e+05	-3.01e-04	0.0	0.0	-2.098e+04	-1.31	9091.88	-1242.82	-1.387e+05	-1003.88
		-1102.44	-1.387e+05	-3.63e-03	0.0	75.0	-2.058e+04	-1.31	9091.88	-1242.82	5.431e+05	-1102.44
137	66	-1103.66	5.992e+05	-3.29e-04	0.0	0.0	-2.306e+04	-1.46	1.003e+04	-1368.13	-1.529e+05	-1103.66
		-1212.79	-1.529e+05	-3.99e-03	0.0	75.0	-2.267e+04	-1.46	1.003e+04	-1368.13	5.992e+05	-1212.79
138	1	-1.753e+05	5.842e+05	-1.36	0.0	0.0	-6879.03	4394.14	-7789.86	-5.725e+04	5.842e+05	-5.287e+05
		-5.287e+05	-0.01	-0.06	0.0	75.0	-6485.91	4394.14	-7789.86	-5.725e+04	-0.01	-1.753e+05
138	2	-2.118e+05	3.013e+05	-1.07	0.0	0.0	-6975.34	2821.73	-4017.97	2.458e+04	3.013e+05	-3.989e+05
		-3.989e+05	-0.62	0.20	0.0	75.0	-6582.22	2821.73	-4017.97	2.458e+04	-0.62	-2.118e+05
138	3	4.077e+05	5.593e+05	1.07	0.0	0.0	-6948.06	-2909.90	-7456.84	-2.143e+04	5.593e+05	4.077e+05
		2.139e+05	-0.05	-0.05	0.0	75.0	-6554.94	-2909.90	-7456.84	-2.143e+04	-0.05	2.139e+05
138	4	5.374e+05	2.764e+05	1.36	0.0	0.0	-7044.37	-4482.30	-3684.95	6.040e+04	2.764e+05	5.374e+05

## VERIFICHE S.L. ELEMENTI IN LEGNO

### LEGENDA TABELLA VERIFICHE S.L. ELEMENTI IN LEGNO

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

Le verifiche sono condotte in ottemperanza alle NTC 14 Gennaio 2008 seguendo anche le indicazioni analitiche riportate nella norma tecnica UNI EN 1995-1-1:2005 "Eurocodice 5 - Progettazione delle strutture di legno - Parte 1-1: Regole generali - Regole comuni e regole per gli edifici" ; in particolare le verifiche effettuate sono riconducibili ai punti:

- 4.4.8 Stati limite ultimi
- 4.4.8.1.7 Tensoflessione
- 4.4.8.1.8 Pressoflessione
- 4.4.8.1.11 Taglio e torsione
- 4.4.8.2.1 Elementi inflessi
- 4.4.8.2.2 Elementi compressi

Le verifiche effettuate sono dettagliatamente riportate come da tabella seguente:

<b>Elem.</b>	Numero dell'elemento
<b>Tipo</b>	Codice di individuazione del tipo di elemento: trave (T)                                      pilastro (P)                                      asta (A)
<b>Stato</b>	Codice della verifica: ok verificato, NV non verificato
<b>Note</b>	Numero della sezione (s) e del materiale (m) dell'archivio
<b>Ver N+/M</b>	Verifica come da formule 4.4.6a e 4.4.6b per tensoflessione I valori di Km utilizzati nelle formule sono definiti dal paragrafo 4.4.8.1.6 (0,7 per sezioni trasversali rettangolari; 1 per altre sezioni trasversali)
<b>Ver N-/M</b>	Verifica come da formule 4.4.7a e 4.4.7b per pressoflessione I valori di Km utilizzati nelle formule sono definiti dal paragrafo 4.4.8.1.6 (0,7 per sezioni trasversali rettangolari; 1 per altre sezioni trasversali)
<b>Ver V/T</b>	Verifica come da formula 4.4.10 (taglio torsione) con interazione ottenuta per quadratura del termine di taglio
<b>Ver N(s)</b>	Verifica instabilità come da formula 4.4.13
<b>Kcy(z)</b>	Fattore di instabilità utilizzato nella formula 4.4.13. Per elementi con snellezza relativa $\leq 0,3$ Kcy(z) è posto = 1, altrimenti Kcy(z) viene definito dalla 4.4.15
<b>Ver M(s)</b>	Verifica come da formula 4.4.11 (effettuata in entrambi i piani principali) per instabilità laterale
<b>Kcrit (y) / (z)</b>	Fattore di instabilità laterale utilizzato nella formula 4.4.11 rispettivamente per la flessione y e z. Kcrit (y) / (z) viene definito dalla 4.4.12
<b>w<sub>net</sub> R</b>	Massima deformazione in combinazione rara (F frequente, P quasi permanente)
<b>w<sub>net</sub> Ri</b>	Massima deformazione in combinazione rara (F frequente, P quasi permanente) valutata a tempo infinito
<b>kdef</b>	Fattore di deformazione dell'elemento
<b>Rif. cmb</b>	Numero della combinazione in cui si è attinto il valore riportato per le verifiche

Si sottolinea che le cinque verifiche sono espresse dal rapporto tra domanda e capacità, affinché la verifica sia positiva il rapporto deve essere inferiore o uguale a 1. La capacità è affetta dal termine **kmod**, espressione della classe di servizio e della durata dei carichi (si considera a livello di combinazione il caso di carico di minor durata).

Le deformazioni dell'elemento espresse in rapporto ad un millesimo di lunghezza sono rappresentate dal valore istantaneo e dal valore a tempo infinito. Il valore della deformazione a tempo infinito per una combinazione di carichi è ottenuta sommando per ogni caso di carico sia il valore istantaneo che il valore ottenuto dall' aliquota quasi-permanente amplificata del fattore kdef (formula 2.2 e 2.3).

In termini analitici il contributo del caso di carico con coefficiente di combinazione **Psi** (diverso da 0) è **Psi + kdef \* Psi2**

Con riferimento al **Documento di Affidabilità** "Test di validazione del software di calcolo PRO\_SAP e dei moduli aggiuntivi PRO\_SAP Modulo Geotecnico, PRO\_CAD nodi acciaio e PRO\_MST" - versione Settembre 2014, disponibile per il download sul sito [www.2si.it](http://www.2si.it), si segnalano i seguenti esempi applicativi:

Test N°	Titolo
<b>97</b>	FATTORE DI STRUTTURA
<b>98</b>	VERIFICA ALLO SLU DI STRUTTURE IN LEGNO SECONDO EC5
<b>99</b>	VERIFICA ALLO SLE DI STRUTTURE IN LEGNO SECONDO EC5
<b>101</b>	VERIFICHE EC5
<b>102</b>	SNELLEZZE EC5

Elem.	Note	Pos.	Ver N+/M	Ver N-/M	Ver V/T	Rif. cmb	Ver N(s)	Kcy	Kcz	Ver M(s)	Kcrit(y)	Kcrit(z)	Rif. cmb
1 ok	A,s=6,m=43	0.0	5.54e-02	1.89e-03	1.42e-04	25,28,1	0.1	0.5	0.4				28,0
		807.2	5.54e-02	1.89e-03	1.42e-04	25,28,1	0.1	0.5	0.4				28,0
2 ok	A,s=6,m=43	0.0	5.55e-02	1.91e-03	1.42e-04	30,31,1	0.1	0.5	0.4				31,0
		807.2	5.55e-02	1.91e-03	1.42e-04	30,31,1	0.1	0.5	0.4				31,0
3 ok	A,s=6,m=43	0.0	0.1	7.80e-03	1.42e-04	24,21,1	0.2	0.5	0.4				21,0
		807.2	0.1	7.80e-03	1.42e-04	24,21,1	0.2	0.5	0.4				21,0
4 ok	A,s=6,m=43	0.0	6.93e-02	3.13e-03	1.67e-04	21,24,1	0.2	0.4	0.3				24,0
		873.5	6.93e-02	3.13e-03	1.67e-04	21,24,1	0.2	0.4	0.3				24,0
5 ok	A,s=6,m=43	0.0	9.63e-02	5.77e-03	1.67e-04	24,21,1	0.2	0.4	0.3				21,0
		873.5	9.63e-02	5.77e-03	1.67e-04	24,21,1	0.2	0.4	0.3				21,0
6 ok	A,s=6,m=43	0.0	0.1	9.05e-03	1.42e-04	18,19,1	0.2	0.5	0.4				19,0
		807.2	0.1	9.05e-03	1.42e-04	18,19,1	0.2	0.5	0.4				19,0
7 ok	A,s=6,m=43	0.0	0.1	6.80e-03	1.42e-04	19,18,1	0.2	0.5	0.4				18,0
		807.2	0.1	6.80e-03	1.42e-04	19,18,1	0.2	0.5	0.4				18,0
8 ok	A,s=6,m=43	0.0	6.67e-02	2.78e-03	1.67e-04	19,18,1	0.2	0.4	0.3				18,0
		873.5	6.67e-02	2.78e-03	1.67e-04	19,18,1	0.2	0.4	0.3				18,0
9 ok	A,s=6,m=43	0.0	5.31e-02	1.86e-03	1.67e-04	5,8,1	0.1	0.4	0.3				8,0
		873.5	5.31e-02	1.86e-03	1.67e-04	5,8,1	0.1	0.4	0.3				8,0
10 ok	A,s=6,m=43	0.0	0.1	6.78e-03	1.42e-04	24,21,1	0.2	0.5	0.4				21,0
		807.2	0.1	6.78e-03	1.42e-04	24,21,1	0.2	0.5	0.4				21,0
11 ok	A,s=6,m=43	0.0	5.28e-02	1.84e-03	1.67e-04	14,15,1	0.1	0.4	0.3				15,0
		873.5	5.28e-02	1.84e-03	1.67e-04	14,15,1	0.1	0.4	0.3				15,0
12 ok	A,s=6,m=43	0.0	6.65e-02	2.76e-03	1.67e-04	24,21,1	0.2	0.4	0.3				21,0
		873.5	6.65e-02	2.76e-03	1.67e-04	24,21,1	0.2	0.4	0.3				21,0
13 ok	A,s=6,m=43	0.0	7.15e-02	3.31e-03	1.42e-04	21,24,1	0.1	0.5	0.4				24,0
		807.2	7.15e-02	3.31e-03	1.42e-04	21,24,1	0.1	0.5	0.4				24,0
14 ok	A,s=6,m=43	0.0	7.16e-02	3.32e-03	1.42e-04	18,19,1	0.1	0.5	0.4				19,0
		807.2	7.16e-02	3.32e-03	1.42e-04	18,19,1	0.1	0.5	0.4				19,0
15 ok	A,s=6,m=43	0.0	0.1	9.05e-03	1.42e-04	21,24,1	0.2	0.5	0.4				24,0
		807.2	0.1	9.05e-03	1.42e-04	21,24,1	0.2	0.5	0.4				24,0
16 ok	A,s=6,m=43	0.0	0.1	7.83e-03	1.42e-04	19,18,1	0.2	0.5	0.4				18,0
		807.2	0.1	7.83e-03	1.42e-04	19,18,1	0.2	0.5	0.4				18,0
17 ok	A,s=6,m=43	0.0	9.65e-02	5.79e-03	1.67e-04	19,18,1	0.2	0.4	0.3				18,0
		873.5	9.65e-02	5.79e-03	1.67e-04	19,18,1	0.2	0.4	0.3				18,0
18 ok	A,s=6,m=43	0.0	6.95e-02	3.15e-03	1.67e-04	18,19,1	0.2	0.4	0.3				19,0
		873.5	6.95e-02	3.15e-03	1.67e-04	18,19,1	0.2	0.4	0.3				19,0
19 ok	T,s=6,m=43	0.0	2.01e-02	2.81e-04	0.1	17,20,18	5.66e-02	0.4	0.3	5.66e-02	1.0	1.0	20,20
		750.0	2.01e-02	2.81e-04	0.1	17,20,18	5.66e-02	0.4	0.3	5.66e-02	1.0	1.0	20,20
20 ok	T,s=6,m=43	0.0	5.37e-02	2.39e-03	8.54e-03	19,18,17	0.2	0.4	0.3	0.2	1.0	1.0	18,18
		750.0	5.37e-02	2.39e-03	8.54e-03	19,18,17	0.2	0.4	0.3	0.2	1.0	1.0	18,18
21 ok	T,s=6,m=43	0.0	3.87e-02	9.88e-04	7.80e-03	19,18,22	0.1	0.4	0.3	0.1	1.0	1.0	18,18
		750.0	3.87e-02	9.88e-04	7.80e-03	19,18,22	0.1	0.4	0.3	0.1	1.0	1.0	18,18
22 ok	T,s=6,m=43	0.0	2.00e-02	2.80e-04	0.1	22,23,21	5.65e-02	0.4	0.3	5.65e-02	1.0	1.0	23,23
		750.0	2.00e-02	2.80e-04	0.1	22,23,21	5.65e-02	0.4	0.3	5.65e-02	1.0	1.0	23,23

23	ok	T,s=6,m=43	0.0	0.1	2.58e-04	2.90e-02	17,20,10	0.5	0.43.06e-02	0.5	1.0	1.0	20,20	
			796.0	0.1	2.58e-04	2.90e-02	17,20,10	0.5	0.43.06e-02	0.5	1.0	1.0	20,20	
24	NV	T,s=6,m=43	0.0	0.2	2.07e-03	2.69e-02	27,26,11	1.5	0.43.06e-02	1.5	1.0	1.0	26,26	
			796.0	0.2	2.07e-03	2.69e-02	27,26,11	1.5	0.43.06e-02	1.5	1.0	1.0	26,26	
25	ok	T,s=6,m=43	0.0	0.1	2.63e-04	2.86e-02	22,23,1	0.5	0.43.06e-02	0.5	1.0	1.0	23,23	
			796.0	0.1	2.63e-04	2.86e-02	22,23,1	0.5	0.43.06e-02	0.5	1.0	1.0	23,23	
26	NV	T,s=6,m=43	0.0	0.2	2.04e-03	2.67e-02	32,29,4	1.5	0.43.06e-02	1.5	1.0	1.0	29,29	
			796.0	0.2	2.04e-03	2.67e-02	32,29,4	1.5	0.43.06e-02	1.5	1.0	1.0	29,29	
27	NV	T,s=6,m=43	0.0		9.83e-04	3.64e-02	0,11,17	1.0	0.43.06e-02	1.0	1.0	1.0	11,11	
			796.0		9.83e-04	3.64e-02	0,11,17	1.0	0.43.06e-02	1.0	1.0	1.0	11,11	
28	NV	T,s=6,m=43	0.0		1.12e-03	3.77e-02	0,9,17	1.1	0.43.06e-02	1.1	1.0	1.0	9,9	
			796.0		1.12e-03	3.77e-02	0,9,17	1.1	0.43.06e-02	1.1	1.0	1.0	9,9	
30	NV	T,s=6,m=43	0.0	8.85e-03	4.49e-05	0.1	31,30,2	2.26e-02	0.4	0.3	2.26e-02	1.0	1.0	30,30
			750.0	8.85e-03	4.49e-05	0.1	31,30,2	2.26e-02	0.4	0.3	2.26e-02	1.0	1.0	30,30
31	NV	T,s=6,m=43	0.0	4.69e-03	1.30e-05	0.1	31,30,25	1.22e-02	0.4	0.3	1.22e-02	1.0	1.0	30,30
			750.0	4.69e-03	1.30e-05	0.1	31,30,25	1.22e-02	0.4	0.3	1.22e-02	1.0	1.0	30,30
32	NV	T,s=5,m=43	0.0	4.62e-04	0.0	0.2	30,31,10	2.59e-03	0.6	0.1	2.59e-03	1.0	1.0	31,31
			750.0	4.62e-04	0.0	0.2	30,31,10	2.59e-03	0.6	0.1	2.59e-03	1.0	1.0	31,31
33	ok	T,s=5,m=43	0.0	4.49e-02	1.24e-03	3.40e-02	24,21,17	0.3	0.6	0.1	0.3	1.0	1.0	21,21
			750.0	4.49e-02	1.24e-03	3.40e-02	24,21,17	0.3	0.6	0.1	0.3	1.0	1.0	21,21
34	ok	T,s=6,m=43	0.0	2.77e-04	0.0	7.25e-02	9,12,19	1.37e-03	0.4	0.3	1.37e-03	1.0	1.0	12,12
			750.0	2.77e-04	0.0	7.25e-02	9,12,19	1.37e-03	0.4	0.3	1.37e-03	1.0	1.0	12,12
35	NV	T,s=5,m=43	0.0	8.72e-03	4.61e-05	0.2	24,21,20	5.02e-02	0.6	0.1	5.02e-02	1.0	1.0	21,21
			750.0	8.72e-03	4.61e-05	0.2	24,21,20	5.02e-02	0.6	0.1	5.02e-02	1.0	1.0	21,21
36	NV	T,s=5,m=43	0.0	4.94e-03	1.45e-05	0.2	31,30,20	2.82e-02	0.6	0.1	2.82e-02	1.0	1.0	30,30
			750.0	4.94e-03	1.45e-05	0.2	31,30,20	2.82e-02	0.6	0.1	2.82e-02	1.0	1.0	30,30
37	NV	T,s=5,m=43	0.0	8.79e-04	0.0	0.2	22,23,26	4.98e-03	0.6	0.1	4.98e-03	1.0	1.0	23,23
			750.0	8.79e-04	0.0	0.2	22,23,26	4.98e-03	0.6	0.1	4.98e-03	1.0	1.0	23,23
38	NV	T,s=5,m=43	0.0	1.29e-03	1.14e-06	0.2	23,22,20	7.91e-03	0.6	0.1	7.91e-03	1.0	1.0	22,22
			750.0	1.29e-03	1.14e-06	0.2	23,22,20	7.91e-03	0.6	0.1	7.91e-03	1.0	1.0	22,22
40	NV	T,s=6,m=43	0.0	8.83e-03	4.47e-05	0.1	28,25,23	2.26e-02	0.4	0.3	2.26e-02	1.0	1.0	25,25
			750.0	8.83e-03	4.47e-05	0.1	28,25,23	2.26e-02	0.4	0.3	2.26e-02	1.0	1.0	25,25
41	NV	T,s=6,m=43	0.0	4.47e-03	1.18e-05	0.1	28,25,15	1.16e-02	0.4	0.3	1.16e-02	1.0	1.0	25,25
			750.0	4.47e-03	1.18e-05	0.1	28,25,15	1.16e-02	0.4	0.3	1.16e-02	1.0	1.0	25,25
42	NV	T,s=5,m=43	0.0	4.34e-04	0.0	0.2	31,30,1	2.42e-03	0.6	0.1	2.42e-03	1.0	1.0	30,30
			750.0	4.34e-04	0.0	0.2	31,30,1	2.42e-03	0.6	0.1	2.42e-03	1.0	1.0	30,30
43	ok	T,s=5,m=43	0.0	4.50e-02	1.24e-03	3.40e-02	19,18,22	0.3	0.6	0.1	0.3	1.0	1.0	18,18
			750.0	4.50e-02	1.24e-03	3.40e-02	19,18,22	0.3	0.6	0.1	0.3	1.0	1.0	18,18
44	NV	T,s=5,m=43	0.0	1.32e-03	1.20e-06	0.2	20,17,23	8.12e-03	0.6	0.1	8.12e-03	1.0	1.0	17,17
			750.0	1.32e-03	1.20e-06	0.2	20,17,23	8.12e-03	0.6	0.1	8.12e-03	1.0	1.0	17,17
45	NV	T,s=5,m=43	0.0	8.72e-03	4.61e-05	0.2	19,18,8	5.02e-02	0.6	0.1	5.02e-02	1.0	1.0	18,18
			750.0	8.72e-03	4.61e-05	0.2	19,18,8	5.02e-02	0.6	0.1	5.02e-02	1.0	1.0	18,18
46	NV	T,s=5,m=43	0.0	4.93e-03	1.45e-05	0.2	28,25,23	2.81e-02	0.6	0.1	2.81e-02	1.0	1.0	25,25
			750.0	4.93e-03	1.45e-05	0.2	28,25,23	2.81e-02	0.6	0.1	2.81e-02	1.0	1.0	25,25
47	NV	T,s=5,m=43	0.0	7.46e-04	0.0	0.2	17,20,28	4.20e-03	0.6	0.1	4.20e-03	1.0	1.0	20,20
			750.0	7.46e-04	0.0	0.2	17,20,28	4.20e-03	0.6	0.1	4.20e-03	1.0	1.0	20,20
53	ok	T,s=6,m=43	0.0	4.82e-02	1.51e-03	8.88e-03	18,19,22	0.1	0.4	0.3	0.1	1.0	1.0	19,19
			750.0	4.82e-02	1.51e-03	8.88e-03	18,19,22	0.1	0.4	0.3	0.1	1.0	1.0	19,19
54	ok	T,s=6,m=43	0.0	4.81e-02	1.50e-03	8.89e-03	21,24,17	0.1	0.4	0.3	0.1	1.0	1.0	24,24
			750.0	4.81e-02	1.50e-03	8.89e-03	21,24,17	0.1	0.4	0.3	0.1	1.0	1.0	24,24
64	ok	T,s=6,m=43	0.0	5.18e-02	2.35e-03	0.1	19,18,19	0.2	0.4	0.3	0.2	1.0	1.0	18,18
			750.0	5.18e-02	2.35e-03	0.1	19,18,19	0.2	0.4	0.3	0.2	1.0	1.0	18,18
65	ok	T,s=6,m=43	0.0	5.18e-02	2.35e-03	0.1	24,21,24	0.2	0.4	0.3	0.2	1.0	1.0	21,21
			750.0	5.18e-02	2.35e-03	0.1	24,21,24	0.2	0.4	0.3	0.2	1.0	1.0	21,21
66	ok	T,s=6,m=43	0.0	5.36e-02	2.39e-03	8.54e-03	24,21,20	0.2	0.4	0.3	0.2	1.0	1.0	21,21
			750.0	5.36e-02	2.39e-03	8.54e-03	24,21,20	0.2	0.4	0.3	0.2	1.0	1.0	21,21
67	ok	T,s=6,m=43	0.0	3.86e-02	9.85e-04	7.81e-03	24,21,17	0.1	0.4	0.3	0.1	1.0	1.0	21,21
			750.0	3.86e-02	9.85e-04	7.81e-03	24,21,17	0.1	0.4	0.3	0.1	1.0	1.0	21,21
68	NV	T,s=6,m=43	0.0	1.23e-02	8.05e-05	0.1	25,28,2	3.03e-02	0.4	0.3	3.03e-02	1.0	1.0	28,28
			750.0	1.23e-02	8.05e-05	0.1	25,28,2	3.03e-02	0.4	0.3	3.03e-02	1.0	1.0	28,28
69	NV	T,s=6,m=43	0.0	5.95e-03	2.16e-05	0.1	21,24,5	1.57e-02	0.4	0.3	1.57e-02	1.0	1.0	24,24
			750.0	5.95e-03	2.16e-05	0.1	21,24,5	1.57e-02	0.4	0.3	1.57e-02	1.0	1.0	24,24
70	NV	T,s=5,m=43	0.0	1.12e-03	0.0	0.2	2,3,10	7.28e-03	0.6	0.1	7.28e-03	1.0	1.0	3,3
			750.0	1.12e-03	0.0	0.2	2,3,10	7.28e-03	0.6	0.1	7.28e-03	1.0	1.0	3,3
71	ok	T,s=5,m=43	0.0	7.05e-02	4.03e-03	3.44e-02	18,19,20	0.5	0.6	0.1	0.5	1.0	1.0	19,19
			750.0	7.05e-02	4.03e-03	3.44e-02	18,19,20	0.5	0.6	0.1	0.5	1.0	1.0	19,19
72	ok	T,s=6,m=43	0.0	4.76e-03	1.56e-05	7.25e-02	1,4,19	1.34e-02	0.4	0.3	1.34e-02	1.0	1.0	4,4
			750.0	4.76e-03	1.56e-05	7.25e-02	1,4,19	1.34e-02	0.4	0.3	1.34e-02	1.0	1.0	4,4
73	NV	T,s=5,m=43	0.0	1.41e-02	1.32e-04	0.2	18,19,20	8.50e-02	0.6	0.1	8.50e-02	1.0	1.0	19,19
			750.0	1.41e-02	1.32e-04	0.2	18,19,20	8.50e-02	0.6	0.1	8.50e-02	1.0	1.0	19,19
74	NV	T,s=5,m=43	0.0	4.23e-03	9.95e-06	0.2	23,22,22	2.33e-02	0.6	0.1	2.33e-02	1.0	1.0	22,22
			750.0	4.23e-03	9.95e-06	0.2	23,22,22	2.33e-02	0.6	0.1	2.33e-02	1.0	1.0	22,22
75	NV	T,s=5,m=43	0.0	2.92e-03	5.21e-06	0.2	20,17,25	1.69e-02	0.6	0.1	1.69e-02	1.0	1.0	17,17
			750.0	2.92e-03	5.21e-06	0.2	20,17,25	1.69e-02	0.6	0.1	1.69e-02	1.0	1.0	17,17
76	NV	T,s=5,m=43	0.0	4.73e-03	1.48e-05	0.2	9,12,23	2.84e-02	0.6	0.1	2.84e-02	1.0	1.0	12,12
			750.0	4.73e-03	1.48e-05	0.2	9,12,23	2.84e-02	0.6	0.1	2.84e-02	1.0	1.0	12,12
77	NV	T,s=6,m=43	0.0	1.23e-02	8.05e-05	0.1	30,31,11	3.03e-02	0.4	0.3	3.03e-02	1.0	1.0	31,31

78 NV	T,s=6,m=43	750.0	1.23e-02	8.05e-05	0.1	30,31,11	3.03e-02	0.4	0.3	3.03e-02	1.0	1.0	31,31
		0.0	5.70e-03	1.98e-05	0.1	18,19,11	1.50e-02	0.4	0.3	1.50e-02	1.0	1.0	19,19
79 NV	T,s=5,m=43	750.0	5.70e-03	1.98e-05	0.1	18,19,11	1.50e-02	0.4	0.3	1.50e-02	1.0	1.0	19,19
		0.0	1.21e-03	1.12e-06	0.2	9,12,1	7.83e-03	0.6	0.1	7.83e-03	1.0	1.0	12,12
80 ok	T,s=5,m=43	750.0	1.21e-03	1.12e-06	0.2	9,12,1	7.83e-03	0.6	0.1	7.83e-03	1.0	1.0	12,12
		0.0	7.03e-02	4.01e-03	3.44e-02	21,24,17	0.5	0.6	0.1	0.5	1.0	1.0	24,24
81 NV	T,s=5,m=43	750.0	7.03e-02	4.01e-03	3.44e-02	21,24,17	0.5	0.6	0.1	0.5	1.0	1.0	24,24
		0.0	4.60e-03	1.40e-05	0.2	2,3,20	2.77e-02	0.6	0.1	2.77e-02	1.0	1.0	3,3
82 NV	T,s=5,m=43	750.0	4.60e-03	1.40e-05	0.2	2,3,20	2.77e-02	0.6	0.1	2.77e-02	1.0	1.0	3,3
		0.0	1.41e-02	1.32e-04	0.2	21,24,12	8.49e-02	0.6	0.1	8.49e-02	1.0	1.0	24,24
83 NV	T,s=5,m=43	750.0	1.41e-02	1.32e-04	0.2	21,24,12	8.49e-02	0.6	0.1	8.49e-02	1.0	1.0	24,24
		0.0	4.30e-03	1.03e-05	0.2	20,17,17	2.37e-02	0.6	0.1	2.37e-02	1.0	1.0	17,17
84 NV	T,s=5,m=43	750.0	4.30e-03	1.03e-05	0.2	20,17,17	2.37e-02	0.6	0.1	2.37e-02	1.0	1.0	17,17
		0.0	3.14e-03	6.03e-06	0.2	23,22,30	1.82e-02	0.6	0.1	1.82e-02	1.0	1.0	22,22
85 NV	T,s=6,m=43	750.0	3.14e-03	6.03e-06	0.2	23,22,30	1.82e-02	0.6	0.1	1.82e-02	1.0	1.0	22,22
		0.0	7.48e-03	3.75e-05	0.1	19,18,2	2.07e-02	0.4	0.3	2.07e-02	1.0	1.0	18,18
86 NV	T,s=6,m=43	750.0	7.48e-03	3.75e-05	0.1	19,18,2	2.07e-02	0.4	0.3	2.07e-02	1.0	1.0	18,18
		0.0	1.27e-02	1.02e-04	0.1	9,12,1	3.41e-02	0.4	0.3	3.41e-02	1.0	1.0	12,12
87 NV	T,s=5,m=43	750.0	1.27e-02	1.02e-04	0.1	9,12,1	3.41e-02	0.4	0.3	3.41e-02	1.0	1.0	12,12
		0.0	4.10e-03	1.00e-05	0.2	12,9,22	2.34e-02	0.6	0.1	2.34e-02	1.0	1.0	9,9
88 ok	T,s=5,m=43	750.0	4.10e-03	1.00e-05	0.2	12,9,22	2.34e-02	0.6	0.1	2.34e-02	1.0	1.0	9,9
		0.0	7.93e-02	4.93e-03	2.95e-02	18,19,29	0.5	0.6	0.1	0.5	1.0	1.0	19,19
89 ok	T,s=6,m=43	750.0	7.93e-02	4.93e-03	2.95e-02	18,19,29	0.5	0.6	0.1	0.5	1.0	1.0	19,19
		0.0	8.89e-03	5.05e-05	7.25e-02	9,12,21	2.40e-02	0.4	0.3	2.40e-02	1.0	1.0	12,12
90 NV	T,s=5,m=43	750.0	8.89e-03	5.05e-05	7.25e-02	9,12,21	2.40e-02	0.4	0.3	2.40e-02	1.0	1.0	12,12
		0.0	2.15e-03	4.33e-06	0.2	18,19,20	1.54e-02	0.6	0.1	1.54e-02	1.0	1.0	19,19
91 NV	T,s=5,m=43	750.0	2.15e-03	4.33e-06	0.2	18,19,20	1.54e-02	0.6	0.1	1.54e-02	1.0	1.0	19,19
		0.0	2.99e-03	5.70e-06	0.3	3,2,32	1.77e-02	0.6	0.1	1.77e-02	1.0	1.0	2,2
92 NV	T,s=5,m=43	750.0	2.99e-03	5.70e-06	0.3	3,2,32	1.77e-02	0.6	0.1	1.77e-02	1.0	1.0	2,2
		0.0	3.38e-03	7.36e-06	0.2	1,4,25	2.01e-02	0.6	0.1	2.01e-02	1.0	1.0	4,4
93 NV	T,s=5,m=43	750.0	3.38e-03	7.36e-06	0.2	1,4,25	2.01e-02	0.6	0.1	2.01e-02	1.0	1.0	4,4
		0.0	1.28e-02	1.04e-04	0.2	1,4,26	7.54e-02	0.6	0.1	7.54e-02	1.0	1.0	4,4
94 NV	T,s=6,m=43	750.0	1.28e-02	1.04e-04	0.2	1,4,26	7.54e-02	0.6	0.1	7.54e-02	1.0	1.0	4,4
		0.0	7.51e-03	3.78e-05	0.1	24,21,11	2.08e-02	0.4	0.3	2.08e-02	1.0	1.0	21,21
95 NV	T,s=6,m=43	750.0	7.51e-03	3.78e-05	0.1	24,21,11	2.08e-02	0.4	0.3	2.08e-02	1.0	1.0	21,21
		0.0	1.24e-02	9.71e-05	0.1	2,3,3	3.33e-02	0.4	0.3	3.33e-02	1.0	1.0	3,3
96 NV	T,s=5,m=43	750.0	1.24e-02	9.71e-05	0.1	2,3,3	3.33e-02	0.4	0.3	3.33e-02	1.0	1.0	3,3
		0.0	3.82e-03	8.68e-06	0.2	8,5,17	2.18e-02	0.6	0.1	2.18e-02	1.0	1.0	5,5
97 ok	T,s=5,m=43	750.0	3.82e-03	8.68e-06	0.2	8,5,17	2.18e-02	0.6	0.1	2.18e-02	1.0	1.0	5,5
		0.0	7.91e-02	4.91e-03	2.95e-02	21,24,26	0.5	0.6	0.1	0.5	1.0	1.0	24,24
98 NV	T,s=5,m=43	750.0	7.91e-02	4.91e-03	2.95e-02	21,24,26	0.5	0.6	0.1	0.5	1.0	1.0	24,24
		0.0	1.25e-02	9.83e-05	0.2	10,11,29	7.34e-02	0.6	0.1	7.34e-02	1.0	1.0	11,11
99 NV	T,s=5,m=43	750.0	1.25e-02	9.83e-05	0.2	10,11,29	7.34e-02	0.6	0.1	7.34e-02	1.0	1.0	11,11
		0.0	2.13e-03	4.27e-06	0.2	21,24,12	1.53e-02	0.6	0.1	1.53e-02	1.0	1.0	24,24
100 NV	T,s=5,m=43	750.0	2.13e-03	4.27e-06	0.2	21,24,12	1.53e-02	0.6	0.1	1.53e-02	1.0	1.0	24,24
		0.0	2.71e-03	4.69e-06	0.3	12,9,27	1.60e-02	0.6	0.1	1.60e-02	1.0	1.0	9,9
101 NV	T,s=5,m=43	750.0	2.71e-03	4.69e-06	0.3	12,9,27	1.60e-02	0.6	0.1	1.60e-02	1.0	1.0	9,9
		0.0	3.29e-03	6.98e-06	0.2	10,11,30	1.96e-02	0.6	0.1	1.96e-02	1.0	1.0	11,11
102 NV	T,s=6,m=43	750.0	3.29e-03	6.98e-06	0.2	10,11,30	1.96e-02	0.6	0.1	1.96e-02	1.0	1.0	11,11
		0.0	2.31e-02	3.29e-04	0.1	17,20,2	6.13e-02	0.4	0.3	6.13e-02	1.0	1.0	20,20
103 NV	T,s=6,m=43	750.0	2.31e-02	3.29e-04	0.1	17,20,2	6.13e-02	0.4	0.3	6.13e-02	1.0	1.0	20,20
		0.0	1.25e-02	9.81e-05	0.1	7,6,27	3.35e-02	0.4	0.3	3.35e-02	1.0	1.0	6,6
104 NV	T,s=5,m=43	750.0	1.25e-02	9.81e-05	0.1	7,6,27	3.35e-02	0.4	0.3	3.35e-02	1.0	1.0	6,6
		0.0	4.00e-03	1.08e-05	0.2	14,15,11	2.44e-02	0.6	0.1	2.44e-02	1.0	1.0	15,15
105 ok	T,s=5,m=43	750.0	4.00e-03	1.08e-05	0.2	14,15,11	2.44e-02	0.6	0.1	2.44e-02	1.0	1.0	15,15
		0.0	4.14e-02	1.04e-03	3.46e-02	24,21,22	0.2	0.6	0.1	0.2	1.0	1.0	21,21
106 ok	T,s=6,m=43	750.0	4.14e-02	1.04e-03	3.46e-02	24,21,22	0.2	0.6	0.1	0.2	1.0	1.0	21,21
		0.0	2.74e-03	5.18e-06	7.25e-02	11,10,23	7.69e-03	0.4	0.3	7.69e-03	1.0	1.0	10,10
107 NV	T,s=5,m=43	750.0	2.74e-03	5.18e-06	7.25e-02	11,10,23	7.69e-03	0.4	0.3	7.69e-03	1.0	1.0	10,10
		0.0	1.75e-02	1.90e-04	0.2	23,22,19	0.1	0.6	0.1	0.1	1.0	1.0	22,22
108 NV	T,s=5,m=43	750.0	1.75e-02	1.90e-04	0.2	23,22,19	0.1	0.6	0.1	0.1	1.0	1.0	22,22
		0.0	7.76e-03	3.69e-05	0.2	17,20,23	4.49e-02	0.6	0.1	4.49e-02	1.0	1.0	20,20
109 NV	T,s=5,m=43	750.0	7.76e-03	3.69e-05	0.2	17,20,23	4.49e-02	0.6	0.1	4.49e-02	1.0	1.0	20,20
		0.0	6.41e-03	2.51e-05	0.2	20,17,31	3.71e-02	0.6	0.1	3.71e-02	1.0	1.0	17,17
110 NV	T,s=5,m=43	750.0	6.41e-03	2.51e-05	0.2	20,17,31	3.71e-02	0.6	0.1	3.71e-02	1.0	1.0	17,17
		0.0	7.79e-03	3.93e-05	0.2	3,2,23	4.64e-02	0.6	0.1	4.64e-02	1.0	1.0	2,2
111 NV	T,s=6,m=43	750.0	7.79e-03	3.93e-05	0.2	3,2,23	4.64e-02	0.6	0.1	4.64e-02	1.0	1.0	2,2
		0.0	2.31e-02	3.30e-04	0.1	22,23,23	6.14e-02	0.4	0.3	6.14e-02	1.0	1.0	23,23
112 NV	T,s=6,m=43	750.0	2.31e-02	3.30e-04	0.1	22,23,23	6.14e-02	0.4	0.3	6.14e-02	1.0	1.0	23,23
		0.0	1.21e-02	9.31e-05	0.1	16,13,30	3.26e-02	0.4	0.3	3.26e-02	1.0	1.0	13,13
113 NV	T,s=5,m=43	750.0	1.21e-02	9.31e-05	0.1	16,13,30	3.26e-02	0.4	0.3	3.26e-02	1.0	1.0	13,13
		0.0	3.84e-03	9.98e-06	0.2	5,8,4	2.34e-02	0.6	0.1	2.34e-02	1.0	1.0	8,8
114 ok	T,s=5,m=43	750.0	3.84e-03	9.98e-06	0.2	5,8,4	2.34e-02	0.6	0.1	2.34e-02	1.0	1.0	8,8
		0.0	4.15e-02	1.04e-03	3.46e-02	19,18,17	0.2	0.6	0.1	0.2	1.0	1.0	18,18
115 NV	T,s=5,m=43	750.0	4.15e-02	1.04e-03	3.46e-02	19,18,17	0.2	0.6	0.1	0.2	1.0	1.0	18,18
		0.0	7.68e-03	3.82e-05	0.2	12,9,20	4.57e-02	0.6	0.1	4.57e-02	1.0	1.0	9,9
		750.0	7.68e-03	3.82e-05	0.2	12,9,20	4.57e-02	0.6	0.1	4.57e-02	1.0	1.0	9,9

# Z U P E L L I   D E S I G N   A R C H I T E T T U R A

116 NV	T,s=5,m=43	0.0	1.75e-02	1.90e-04	0.2	20,17,28	0.1	0.6	0.1	0.1	1.0	1.0	17,17
		750.0	1.75e-02	1.90e-04	0.2	20,17,28	0.1	0.6	0.1	0.1	1.0	1.0	17,17
117 NV	T,s=5,m=43	0.0	7.65e-03	3.58e-05	0.2	22,23,20	4.43e-02	0.6	0.1	4.43e-02	1.0	1.0	23,23
		750.0	7.65e-03	3.58e-05	0.2	22,23,20	4.43e-02	0.6	0.1	4.43e-02	1.0	1.0	23,23
118 NV	T,s=5,m=43	0.0	6.00e-03	2.20e-05	0.2	23,22,28	3.47e-02	0.6	0.1	3.47e-02	1.0	1.0	22,22
		750.0	6.00e-03	2.20e-05	0.2	23,22,28	3.47e-02	0.6	0.1	3.47e-02	1.0	1.0	22,22
119 NV	T,s=6,m=43	0.0	1.80e-02	2.06e-04	0.1	23,22,20	4.85e-02	0.4	0.3	4.85e-02	1.0	1.0	22,22
		750.0	1.80e-02	2.06e-04	0.1	23,22,20	4.85e-02	0.4	0.3	4.85e-02	1.0	1.0	22,22
120 NV	T,s=6,m=43	0.0	1.94e-02	2.42e-04	0.1	11,10,30	5.26e-02	0.4	0.3	5.26e-02	1.0	1.0	10,10
		750.0	1.94e-02	2.42e-04	0.1	11,10,30	5.26e-02	0.4	0.3	5.26e-02	1.0	1.0	10,10
121 NV	T,s=5,m=43	0.0	4.61e-03	1.40e-05	0.2	14,15,11	2.77e-02	0.6	0.1	2.77e-02	1.0	1.0	15,15
		750.0	4.61e-03	1.40e-05	0.2	14,15,11	2.77e-02	0.6	0.1	2.77e-02	1.0	1.0	15,15
122 ok	T,s=5,m=43	0.0	4.99e-02	1.54e-03	2.95e-02	4,1,25	0.3	0.6	0.1	0.3	1.0	1.0	1,1
		750.0	4.99e-02	1.54e-03	2.95e-02	4,1,25	0.3	0.6	0.1	0.3	1.0	1.0	1,1
123 ok	T,s=6,m=43	0.0	8.57e-03	4.59e-05	7.25e-02	15,14,3	2.29e-02	0.4	0.3	2.29e-02	1.0	1.0	14,14
		750.0	8.57e-03	4.59e-05	7.25e-02	15,14,3	2.29e-02	0.4	0.3	2.29e-02	1.0	1.0	14,14
124 NV	T,s=5,m=43	0.0	1.38e-02	1.21e-04	0.2	23,22,3	8.14e-02	0.6	0.1	8.14e-02	1.0	1.0	22,22
		750.0	1.38e-02	1.21e-04	0.2	23,22,3	8.14e-02	0.6	0.1	8.14e-02	1.0	1.0	22,22
125 NV	T,s=5,m=43	0.0	8.26e-03	4.31e-05	0.3	31,30,20	4.86e-02	0.6	0.1	4.86e-02	1.0	1.0	30,30
		750.0	8.26e-03	4.31e-05	0.3	31,30,20	4.86e-02	0.6	0.1	4.86e-02	1.0	1.0	30,30
126 NV	T,s=5,m=43	0.0	6.47e-03	2.56e-05	0.2	20,17,31	3.75e-02	0.6	0.1	3.75e-02	1.0	1.0	17,17
		750.0	6.47e-03	2.56e-05	0.2	20,17,31	3.75e-02	0.6	0.1	3.75e-02	1.0	1.0	17,17
127 NV	T,s=5,m=43	0.0	1.27e-02	1.04e-04	0.2	3,2,30	7.53e-02	0.6	0.1	7.53e-02	1.0	1.0	2,2
		750.0	1.27e-02	1.04e-04	0.2	3,2,30	7.53e-02	0.6	0.1	7.53e-02	1.0	1.0	2,2
128 NV	T,s=6,m=43	0.0	1.80e-02	2.09e-04	0.1	20,17,1	4.88e-02	0.4	0.3	4.88e-02	1.0	1.0	17,17
		750.0	1.80e-02	2.09e-04	0.1	20,17,1	4.88e-02	0.4	0.3	4.88e-02	1.0	1.0	17,17
129 NV	T,s=6,m=43	0.0	1.86e-02	2.23e-04	0.1	8,5,28	5.05e-02	0.4	0.3	5.05e-02	1.0	1.0	5,5
		750.0	1.86e-02	2.23e-04	0.1	8,5,28	5.05e-02	0.4	0.3	5.05e-02	1.0	1.0	5,5
130 NV	T,s=5,m=43	0.0	4.27e-03	1.21e-05	0.2	5,8,12	2.57e-02	0.6	0.1	2.57e-02	1.0	1.0	8,8
		750.0	4.27e-03	1.21e-05	0.2	5,8,12	2.57e-02	0.6	0.1	2.57e-02	1.0	1.0	8,8
131 ok	T,s=5,m=43	0.0	4.98e-02	1.53e-03	2.95e-02	11,10,28	0.3	0.6	0.1	0.3	1.0	1.0	10,10
		750.0	4.98e-02	1.53e-03	2.95e-02	11,10,28	0.3	0.6	0.1	0.3	1.0	1.0	10,10
132 NV	T,s=5,m=43	0.0	1.25e-02	9.95e-05	0.2	12,9,25	7.38e-02	0.6	0.1	7.38e-02	1.0	1.0	9,9
		750.0	1.25e-02	9.95e-05	0.2	12,9,25	7.38e-02	0.6	0.1	7.38e-02	1.0	1.0	9,9
133 NV	T,s=5,m=43	0.0	1.37e-02	1.20e-04	0.2	20,17,25	8.09e-02	0.6	0.1	8.09e-02	1.0	1.0	17,17
		750.0	1.37e-02	1.20e-04	0.2	20,17,25	8.09e-02	0.6	0.1	8.09e-02	1.0	1.0	17,17
134 NV	T,s=5,m=43	0.0	8.12e-03	4.17e-05	0.3	28,25,23	4.78e-02	0.6	0.1	4.78e-02	1.0	1.0	25,25
		750.0	8.12e-03	4.17e-05	0.3	28,25,23	4.78e-02	0.6	0.1	4.78e-02	1.0	1.0	25,25
135 NV	T,s=5,m=43	0.0	5.53e-03	1.86e-05	0.2	23,22,28	3.20e-02	0.6	0.1	3.20e-02	1.0	1.0	22,22
		750.0	5.53e-03	1.86e-05	0.2	23,22,28	3.20e-02	0.6	0.1	3.20e-02	1.0	1.0	22,22

Elem.	Ver N+/M	Ver N-/M	Ver V/T	Ver N(s)	Kcy	Kcz	Ver M(s)	Kcrit(y)	Kcrit(z)
	0.18	9.05e-03	0.26	1.49	0.35	0.03	1.49	1.00	1.00

## DIMENSIONAMENTO INTERVENTO DI CONSOLIDAMENTO PANNELLI DI FACCIATA

### Verifiche allo stato limite di perdita di appoggio

Questo paragrafo contiene la valutazione degli spostamenti relativi che possono essere indotti dalle azioni sismiche tra le sommità dei pilastri e possono causare la perdita di appoggio. Si tratta di una metodologia che si basa sulla stima di due sorgenti di spostamento:

- la prima è associata agli spostamenti differenziali che il suolo può indurre alla base delle colonne per effetto dell'asincronia del moto generata dal fenomeno di propagazione delle azioni sismiche, della disomogeneità e discontinuità eventualmente presenti e della diversa risposta sismica locale del terreno di fondazione:  $d_{ij}(x)$
- la seconda è associata alla domanda sismica cui le colonne sono soggette e quindi in definitiva agli spostamenti di natura elastica e anelastica che si sviluppano in sommità alle colonne:  $d_{Ed}$

La somma degli spostamenti  $[\Delta(Tr)]$  deve risultare inferiore al franco minimo del pilastro.

Per la geometria in esame si ha:

$$d_{ij}(x) = 1,29 \text{ cm}$$

$$d_{Ed} = 7,781 \text{ cm}$$

$$\Delta(Tr) = 16,852 \text{ cm}$$

## DIMENSIONAMENTO, CANTIERIZZAZIONE ED ESECUZIONE DEGLI INTERVENTI LOCALI

### 4.2 Interventi per evitare il collasso di elementi di tamponatura prefabbricati non adeguatamente ancorati alle strutture principali

#### **N.ID. PO-2 Collegamento pannelli orizzontali con inserimento di cavi anticaduta- staffe di ancoraggio**

##### **Obiettivi**

- L'intervento crea un collegamento di sicurezza nel caso in cui il collegamento esistente venga meno, si evita così l'eventuale caduta del pannello di tamponamento.

##### **Casi di applicazione**

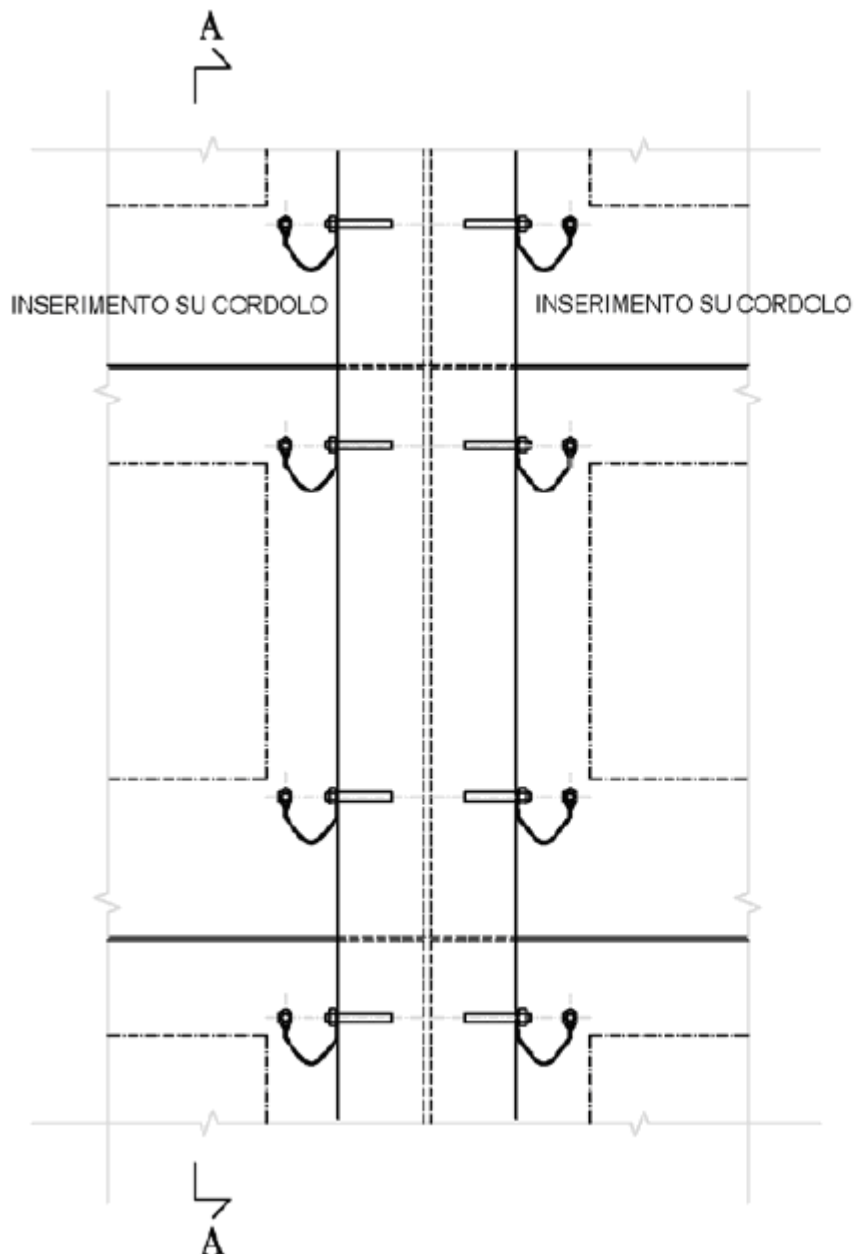
- Il collegamento del pannello alla struttura è danneggiato o collassato.
- Il collegamento del pannello alla struttura non è adeguato.

##### **Fasi realizzative**

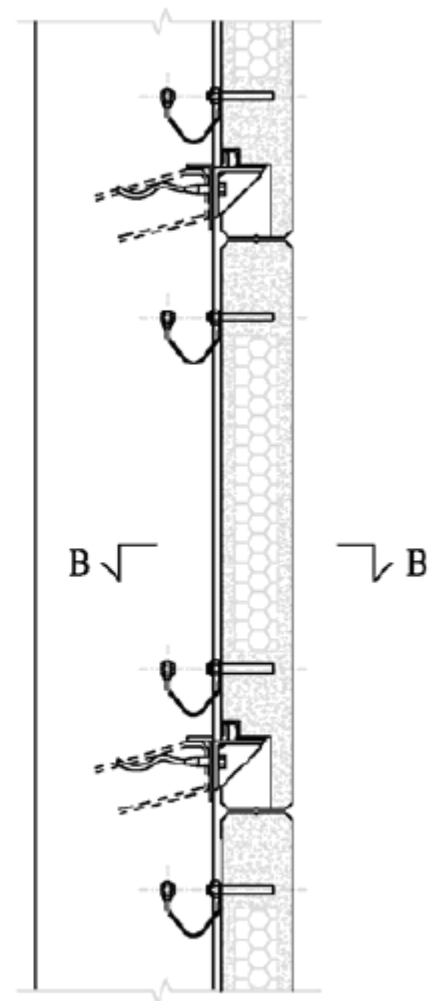
1. Foratura del pilastro con inserimento di un tassello all'interno delle barre longitudinali esistenti.
2. Fissaggio di un cavetto di acciaio/piastra in acciaio avente sezione opportuna e redance forate interne agli occhielli, sormontate da una rondella di opportune dimensioni allo scopo di fissare il cavo sotto la testa del bullone.
3. Fissaggio dell'altra estremità del cavetto al cordolo del pannello, da fissare con le stesse modalità seguite lato pilastro, con l'avvertenza di lasciare al cavo un lasco non superiore a 4/5 cm.

##### **Note**

Inserire un minimo di 4 cavetti per ogni pannello e fissare ad ogni tassello un solo occhiello.



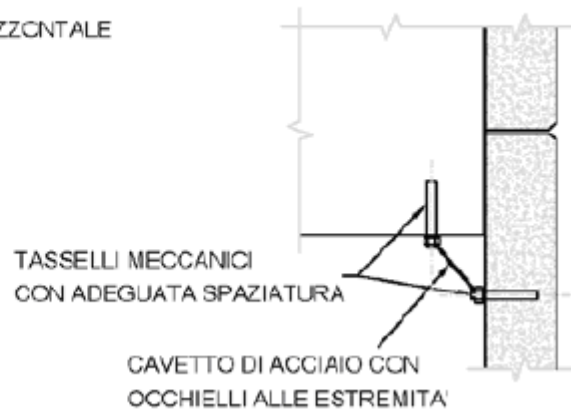
SEZIONE A-A



**PRESCRIZIONI:**

- QUATTRO TASSELLI PER OGNI PANNELLO ORIZZONTALE
- UN TASSELLO PER OGNI OCCHIELLO

SEZIONE B-B



**Vantaggi**

- Semplicità esecutiva.
- Velocità di messa in opera.

- Mantenimento dello schema statico originale.
- Utilizzabile come soluzione di pronto intervento.

### **Svantaggi**

- È necessario prestare attenzione alla disposizione dei cavi anti-caduta per evitare di forare la sezione trasversale del pannello in corrispondenza dello strato di materiale isolante (generalmente polistirolo).
- Può essere effettuato solo se il supporto del pannello risulta integro. L'integrità del supporto può essere verificata controllando che le distanze verticali tra pannelli si siano mantenute invariate.
- Può causare martellamenti fra il pannello e gli altri pannelli, e fra il pannello e le strutture retrostanti.
- La sollecitazione nei cavi può avere carattere impulsivo il cui valore, molto alto, è di complessa determinazione.

### **Dimensionamento**

Per cedimento delle mensole il pannello perde l'appoggio e dunque i cavetti debbono tenerlo appeso; in questo caso la portanza  $P$  di ciascun cavetto deve essere dimensionata in modo tale che

$$P \geq \gamma W_p / n^\circ \text{ cavetti}$$

con  $W_p$  peso del singolo pannello  $\gamma$  coefficiente amplificativo dinamico che tenga conto degli effetti dinamici (mi pare lo si possa prendere analogo a quello che le vecchie norme sui prefabbricati indicavano per le verifiche a sollevamento: ora non ho con me le norme, domani controllo).

Il tassello, tanto quello inserito nel pilastro quanto quello inserito nel cordolo del pannello va dimensionato per una forza pari alla portanza massima del cavetto, amplificata per un opportuno coefficiente di sovra resistenza  $\gamma_{Rd}$ .

Vedo meno probabile un ribaltamento del pannello con rotazione attorno agli appoggi inferiori; l'azione di ritenzione è in questo caso effettuata dai soli cavetti disposti superiormente al pannello (ragionevolmente in numero  $n^\circ$  cavetti/2) se ciò dovesse accadere, ipotizzando che la fune per esplicare la sua azione di ritenzione deve essere tesa alla sua massima lunghezza, la portanza del singolo cavetto dovrà garantire che

$$P \geq \gamma W_p l / (h n^\circ \text{ cavetti})$$

con  $W_p$  peso del singolo pannello,  $\gamma$  coefficiente di amplificazione dinamica come sopra,  $l$  lunghezza massima del cavetto ed  $h$  distanza fra l'appoggio inferiore del pannello e la posizione del tassello di ancoraggio nel pannello del cavetto superiore.

Vale quanto detto sopra per il dimensionamento dei tasselli.

### **Caratteristiche geometriche del rinforzo**

#### Pannello

- Peso specifico  $\gamma_P = 1600 \text{ daN/m}^3$
- Larghezza  $L = 750 \text{ cm}$
- Altezza  $H = 250 \text{ cm}$
- Spessore  $t = 20 \text{ cm}$
- Coefficiente di amplificazione dinamica  $\gamma = 1,4$

#### Cavo anticaduta

- Acciaio S 275
- Tensione caratteristica di snervamento  $f_{yk} = 2750 \text{ daN/cm}^2$
- Tensione caratteristica di rottura  $f_{tk} = 4300 \text{ daN/cm}^2$
- Modulo elastico  $E = 2100000 \text{ daN/cm}^2$
- Diametro  $\phi = 8 \text{ mm}$
- Area resistente  $A_{res} = 50,265 \text{ mm}^2$
- Lunghezza massima  $l = 30 \text{ cm}$

Tasselli

- Acciaio S 275
- Tensione caratteristica di snervamento  $f_{yk} = 2750 \text{ daN/cm}^2$
- Tensione caratteristica di rottura  $f_{tk} = 4300 \text{ daN/cm}^2$
- Diametro  $\phi = 8 \text{ mm}$
- Area resistente  $A_{res} = 50,3 \text{ mm}^2$
- Distanza appoggio inferiore pannello - posizione tassello superiore pannello  $h = 300 \text{ cm}$
- Coefficiente di sovraresistenza  $\gamma_{Rd} = 1,25$

**Definizione forza di progetto**

La forza di progetto risulta  $F_{Ed} = \gamma \cdot Wp = 8400,000 \text{ daN}$

**Calcolo numero cavi anticaduta**

- Resistenza a trazione  $N_{t,Rd} = 1316,477 \text{ daN}$

Sono necessari complessivamente **8 cavi-staffe**, pertanto, devono essere posizionati **4 cavi-staffe per ogni lato**.

Considerando l'altezza del pannello (250 cm) l'interasse dei cavi risulta 62 cm

**Verifiche intervento**Verifica cavi superiori (2) per rotazione del pannello

Forza prodotta dalla rotazione del pannello in entrambi i cavi superiori  $F_{r,Ed} = \gamma \cdot Wp \cdot l / (2 \cdot h) = 420,000 \text{ daN}$

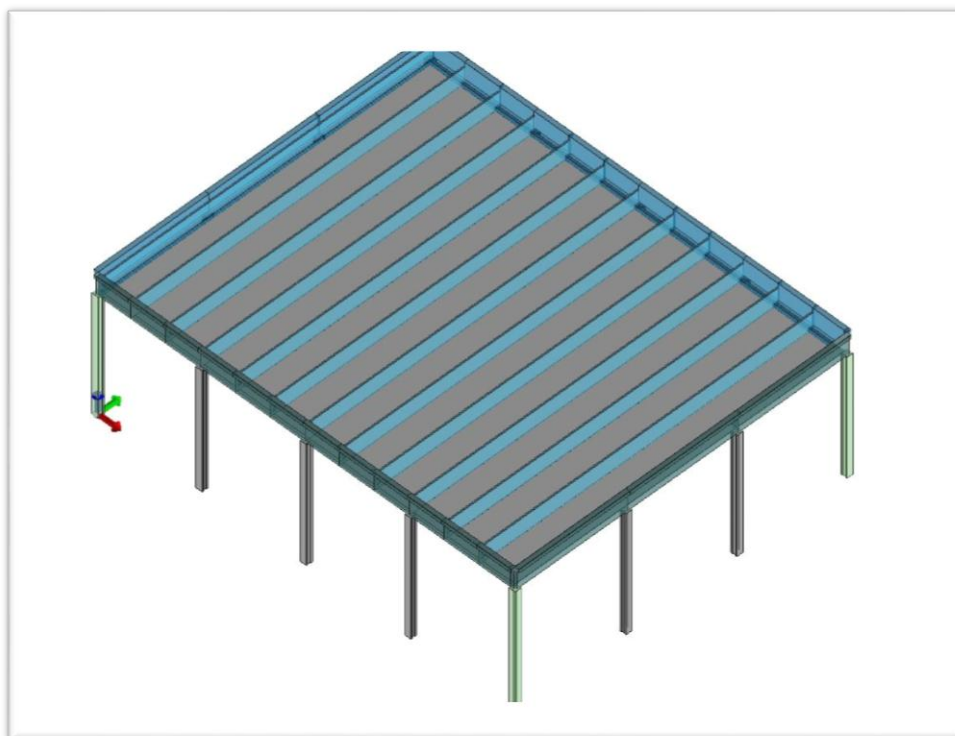
$$F_{r,Ed} \leq N_{t,Rd} \quad \text{OK}$$

Portanza tasselli

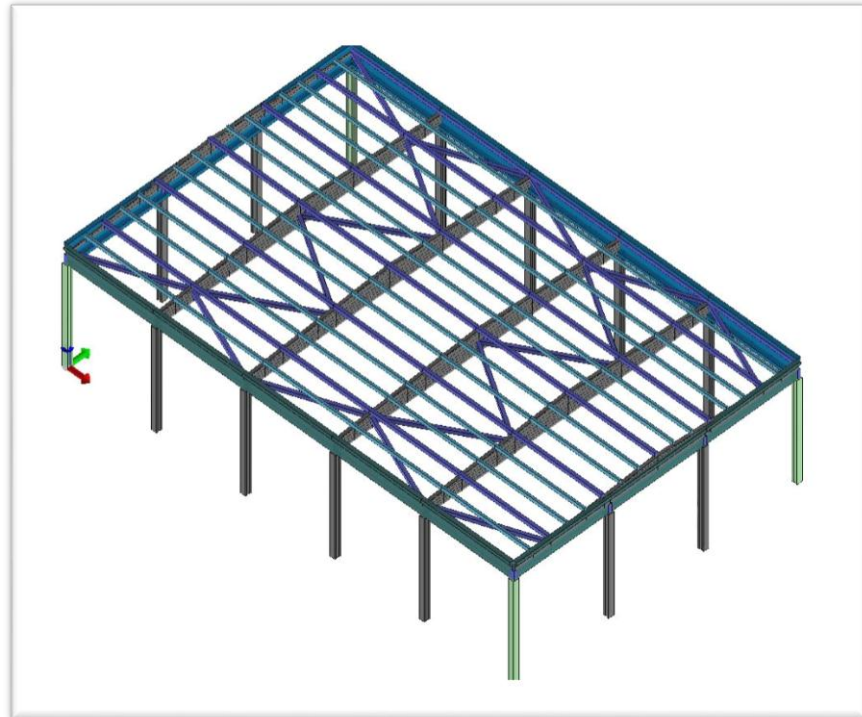
I tasselli devono sopportare una forza pari a  $N_{t,Rd} \cdot \gamma_{Rd} = 1645,596 \text{ daN}$

## IMMAGINI MODELLI DI CALCOLO E VISUALIZZAZIONE RISULTATI

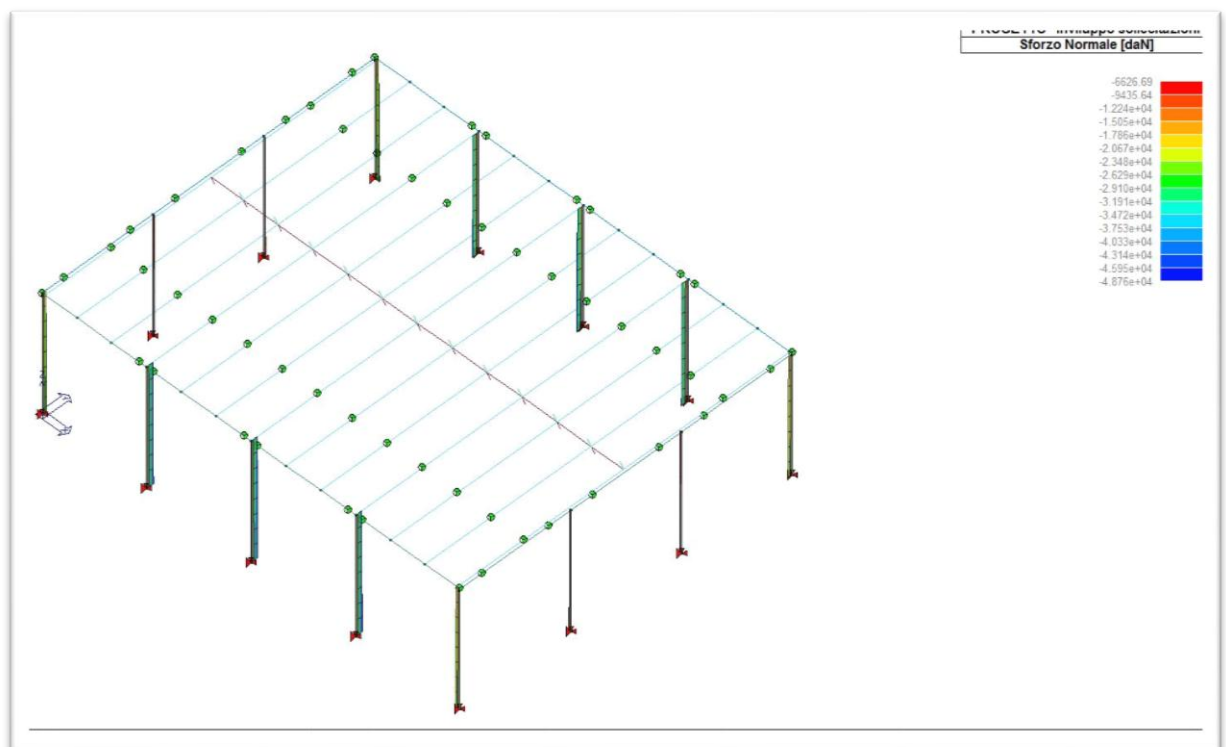
Di seguito si riportano alcune immagini dei modelli di calcolo agli elementi finiti realizzati sia in configurazione “stato di fatto” che “di progetto” (come precedentemente accennato per l’edificio di progetto sono state definiti due mudelli numerici: il primo considerando la reale geometria esecutiva della nuova copertura in legno lamellare, la seconda in configurazione con “piano rigido di copertura” per correttamente simulare i vincoli strutturali realizzati al nodo trave- pilastro, al fine di non variare gli schemi di carico dell’edificio originale).



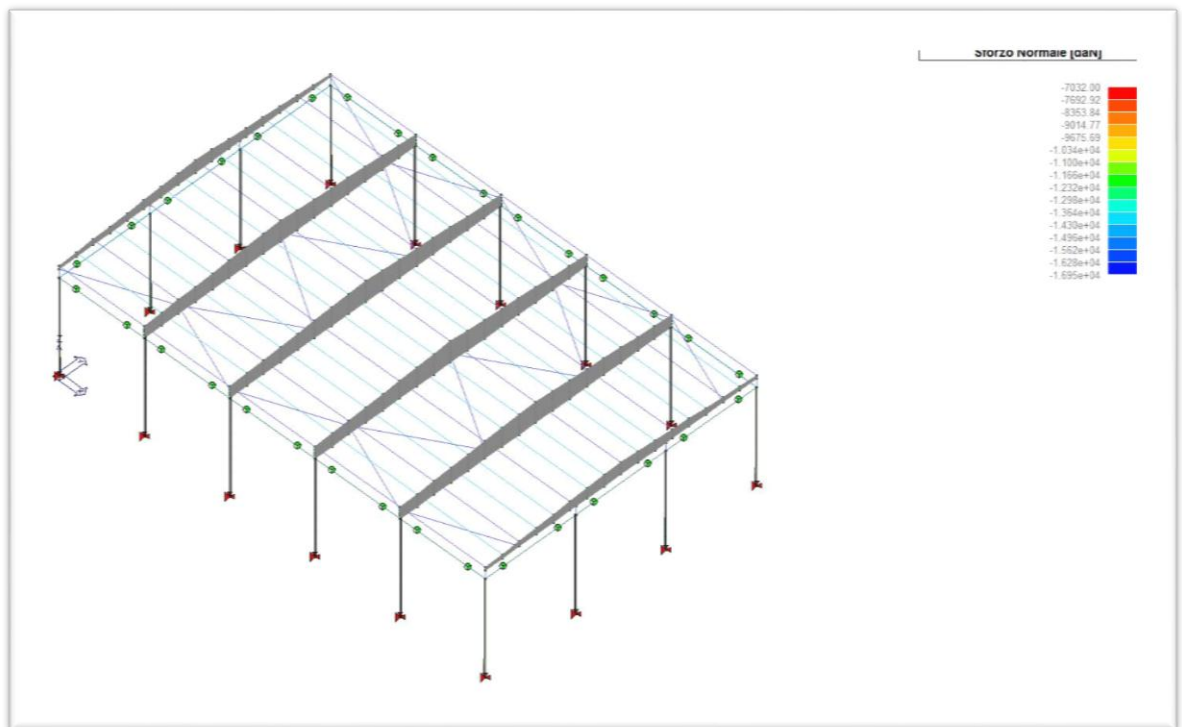
1: Stato di fatto: modello di calcolo



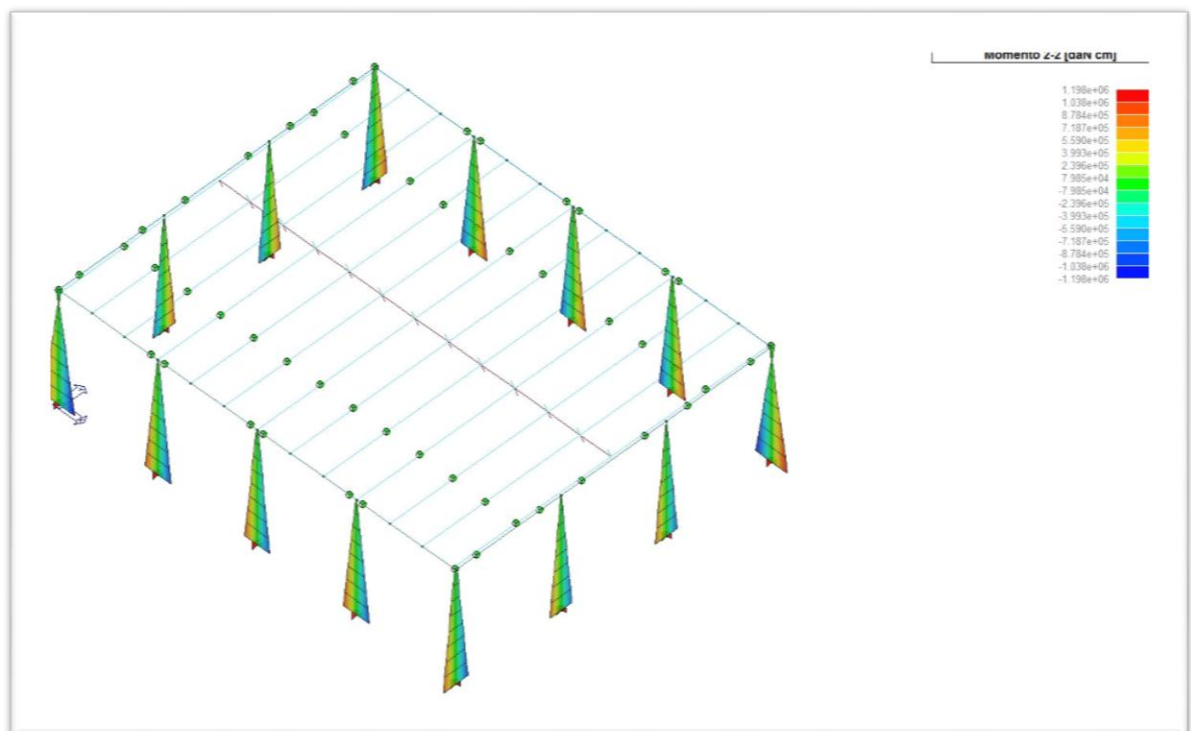
2: Stato di progetto: modello di calcolo copertura in legno lamellare



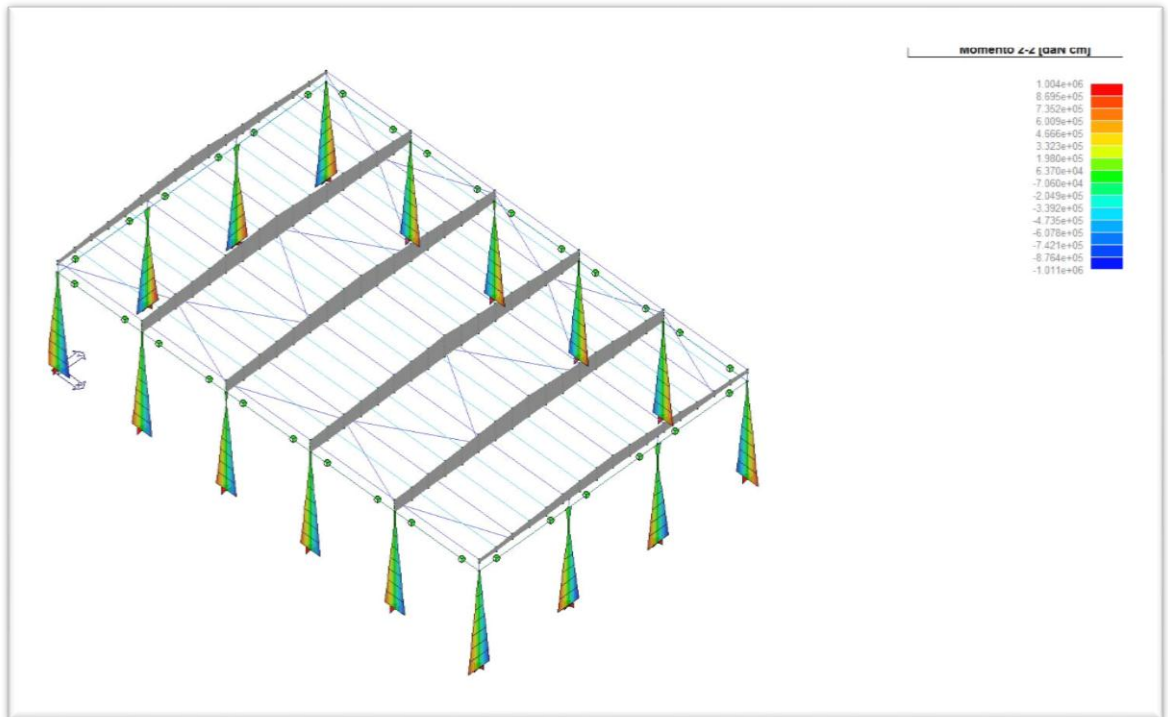
3: Stato di fatto: azione assiale sui pilastri perimetrali



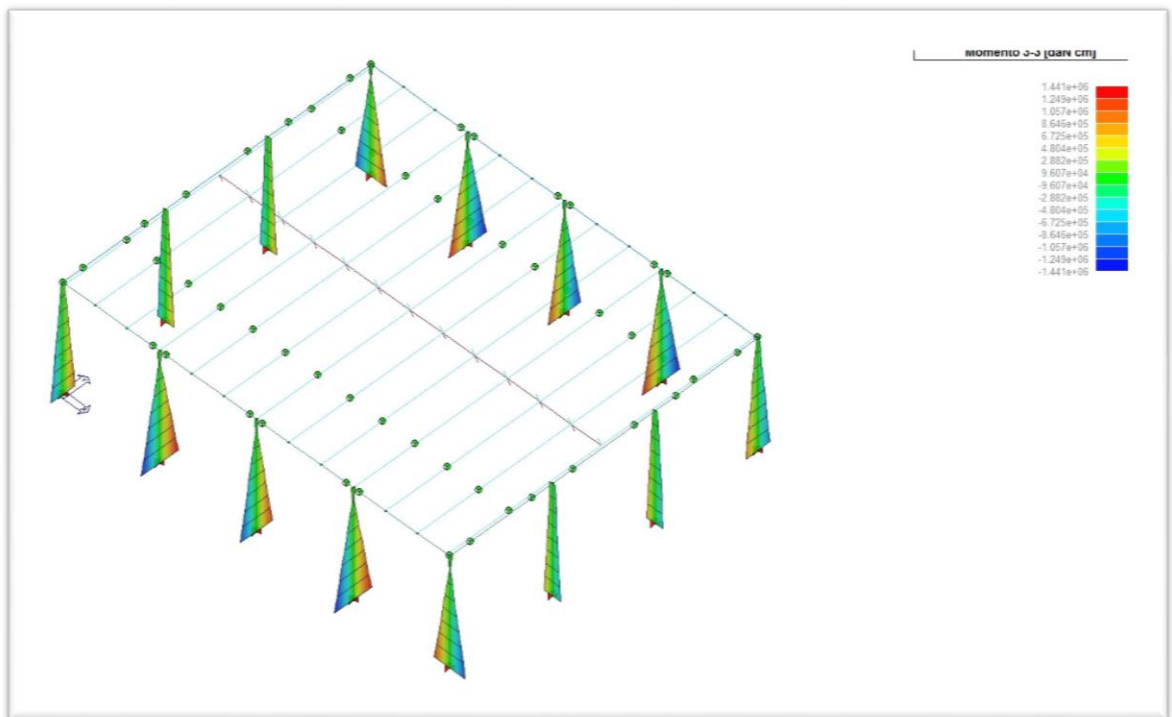
4: Stato di progetto: azione assiale sui pilastri perimetrali



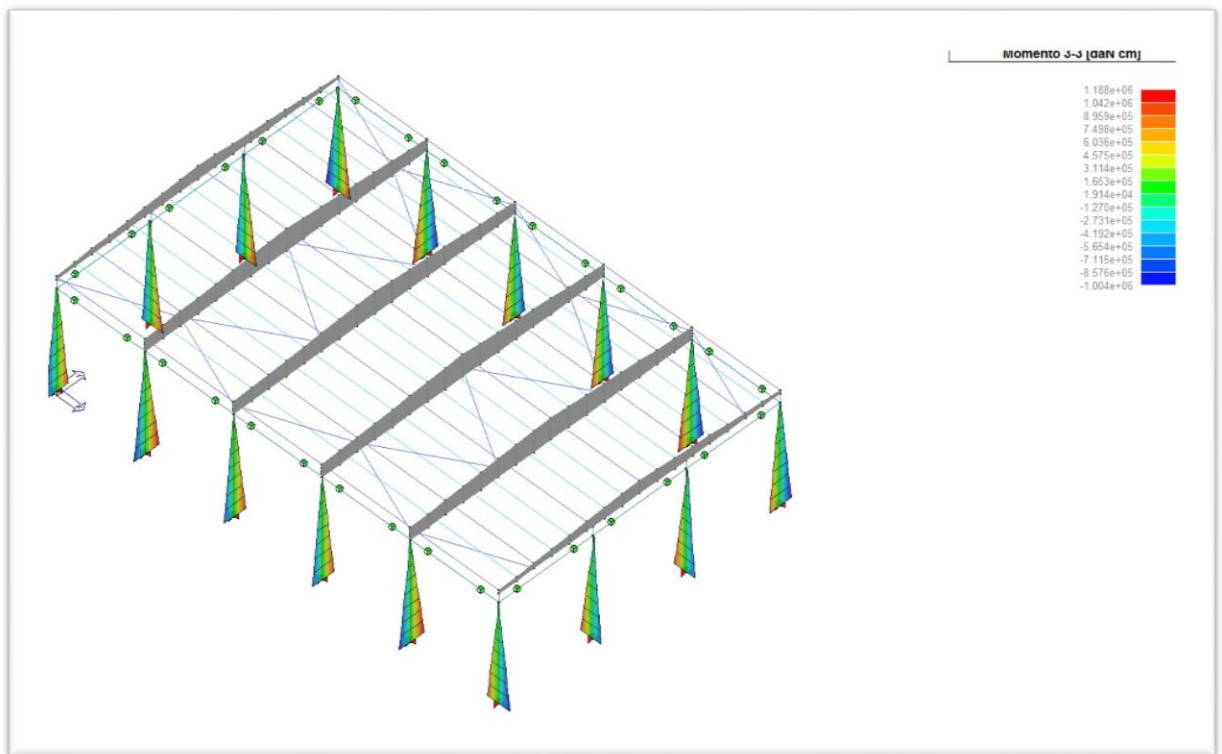
5: Stato di fatto: M22 sui pilastri perimetrali



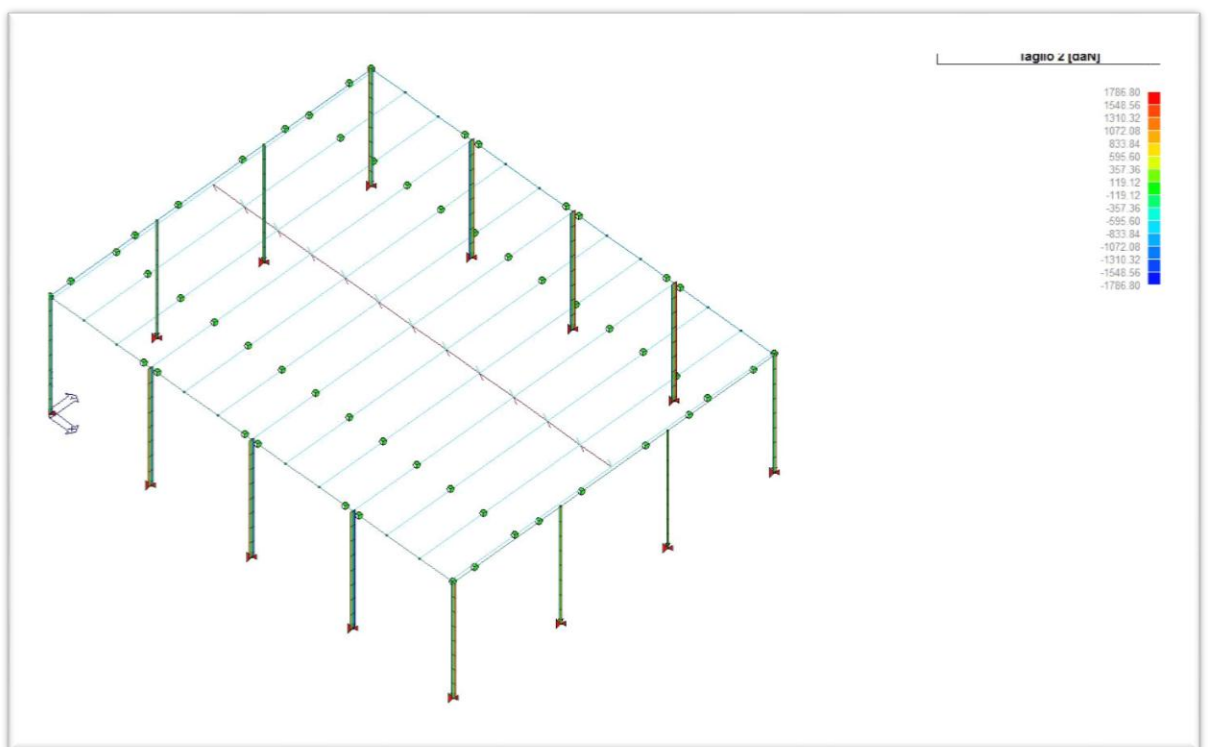
6: Stato di progetto: M22 sui pilastri perimetrali



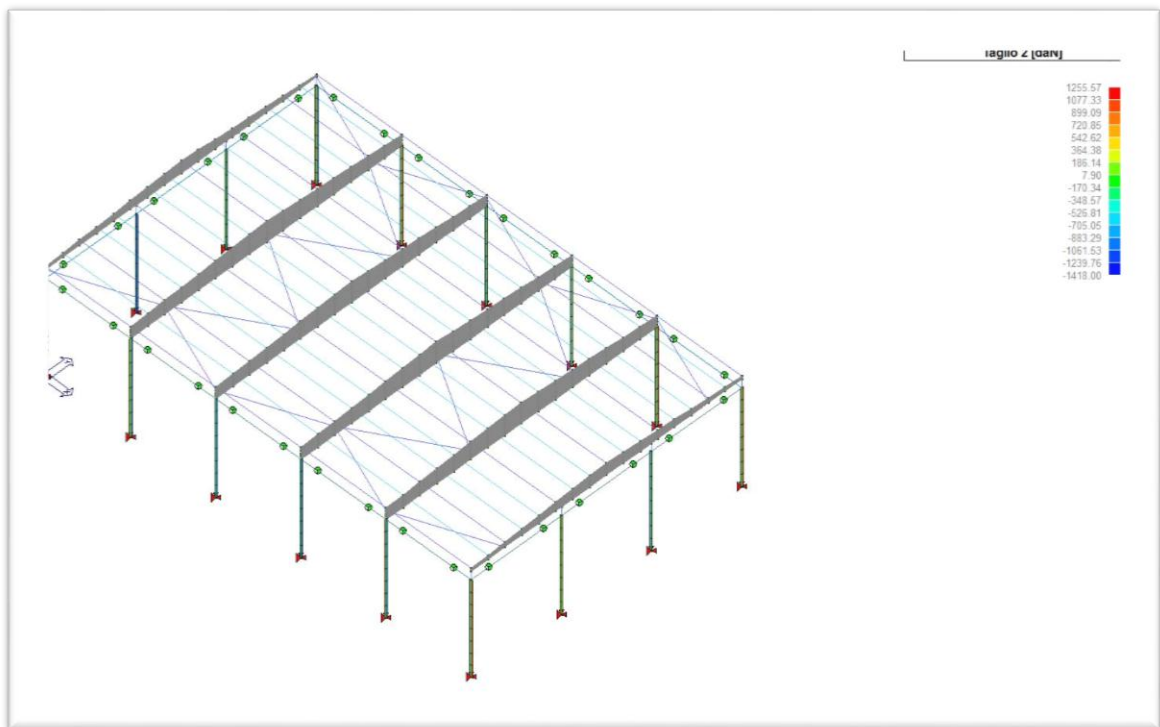
7: Stato di fatto: M33 sui pilastri perimetrali



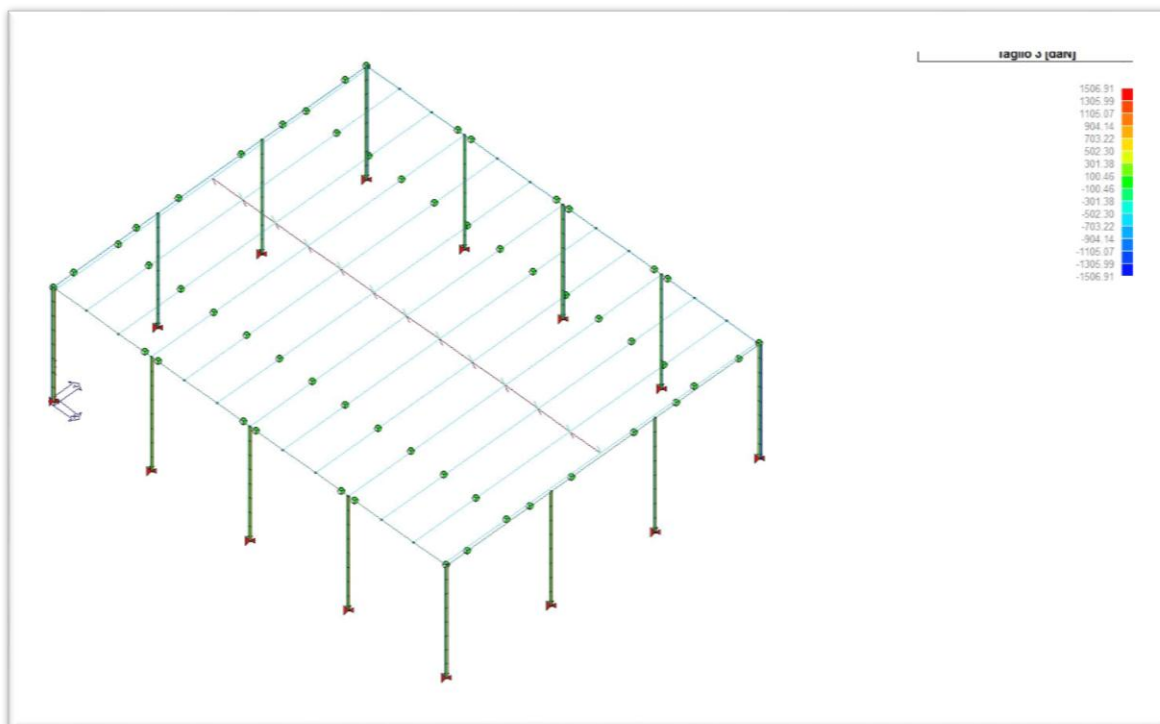
8: Stato di progetto: M33 sui pilastri perimetrali



9: Stato di fatto: T2 sui pilastri perimetrali



10: Stato di progetto: T2 sui pilastri perimetrali



11: Stato di fatto: T3 sui pilastri perimetrali

