

Supplementary Material for the manuscript

Persistent Deformation in a Post-Collisional Stable Continental Region: Insights from 20 Years of cGPS in Romania

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Introduction

This Supplementary Material presents detailed maps of Romanian seismicity, which are referenced throughout the main manuscript. It also includes time-series plots of GPS displacement at selected stations, showcasing representative examples of high-quality, accepted data as well as a few anomalous observations that highlight data variability and potential measurement challenges.

Additionally, several comprehensive datasets are provided in Tables S1–S4. Table S1 contains horizontal velocity solutions, while Table S2 lists vertical velocity solutions for all stations analyzed in this study. Table S3 presents the spatially averaged horizontal velocity field across Romania, derived through a gridding and outlier-rejection process. Finally, Table S4 summarizes the derived strain-rate parameters calculated from the velocity data.

Figure S1: Seismic activity in Romania from 984 to 2024 for events with moment magnitude ($M_w > 2.5$), as recorded in the ROMPLUS catalog (Popa et al., 2022, Armeanu et al, 2024). Red symbols represent crustal events ($H < 60$ km), while in black are show intermediate-depth earthquakes ($H > 60$ km). Symbol size is scaled according to earthquake magnitude. Abbreviations are: FB-Focsani Basin

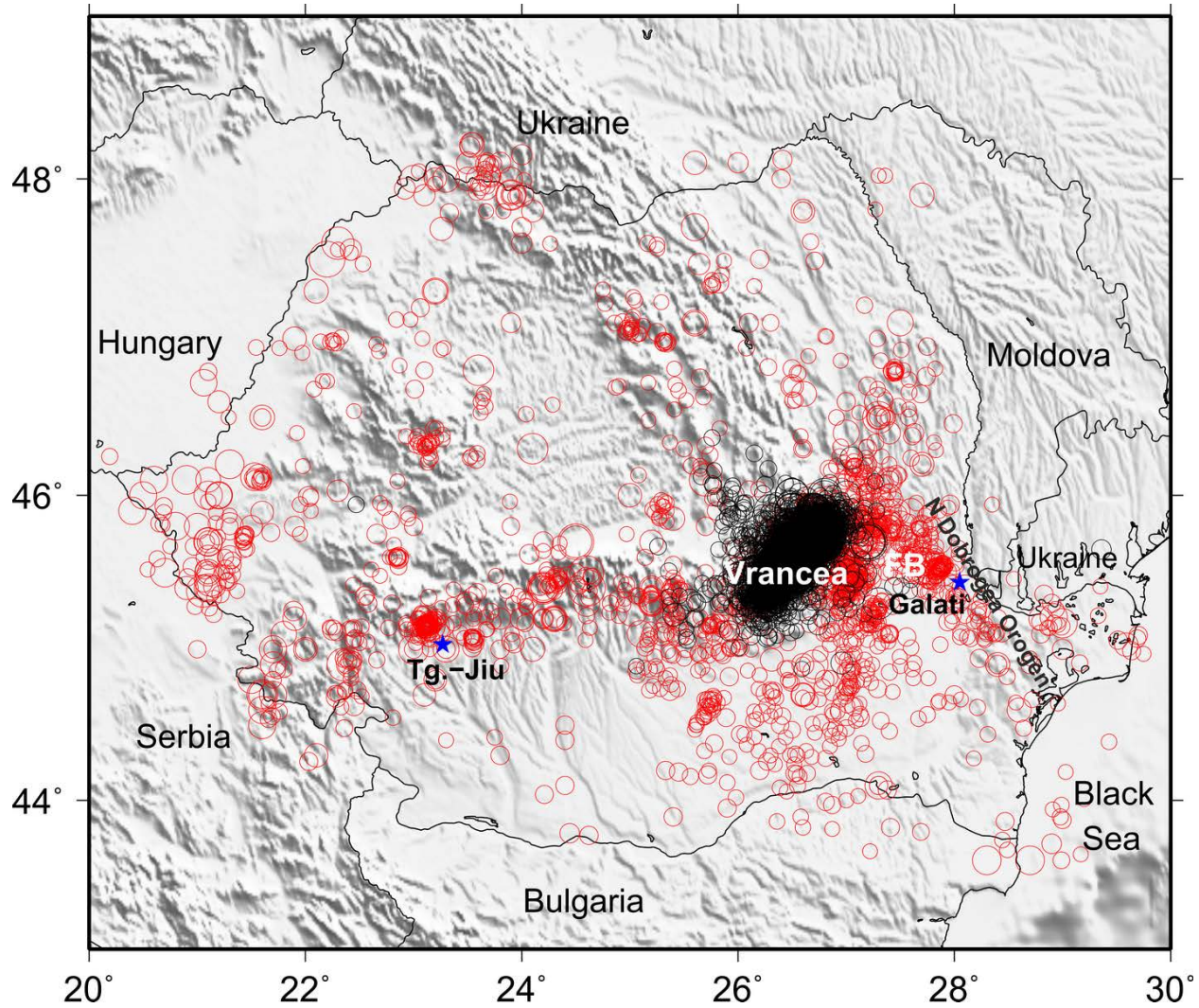


Figure S2: Examples of well-behaved sites ROSP and BICA, the red curve represents the estimated yearly and half-yearly function, the blue line indicates the estimated linear trend, the green curve corresponds to the predicted values following the first jump and the vertical red lines represents position jumps (a) and residuals (b).

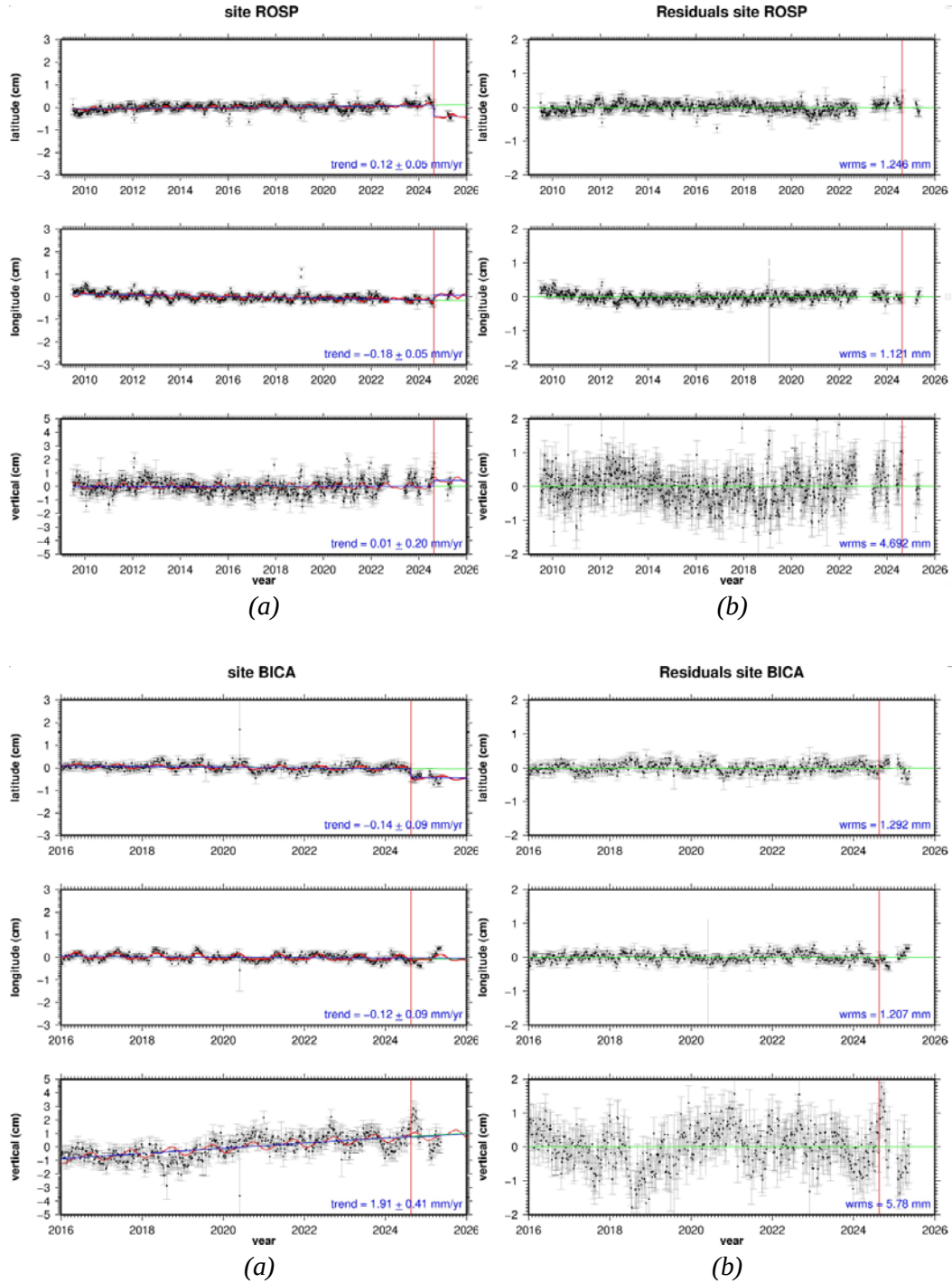


Figure S3: Examples of problematic sites such as BRAI and STOL the red curve represents the estimated yearly and half-yearly function, the blue line indicates the estimated linear trend, the green curve corresponds to the predicted values following the first jump and the vertical red lines represents position jumps (a) and residuals (b)

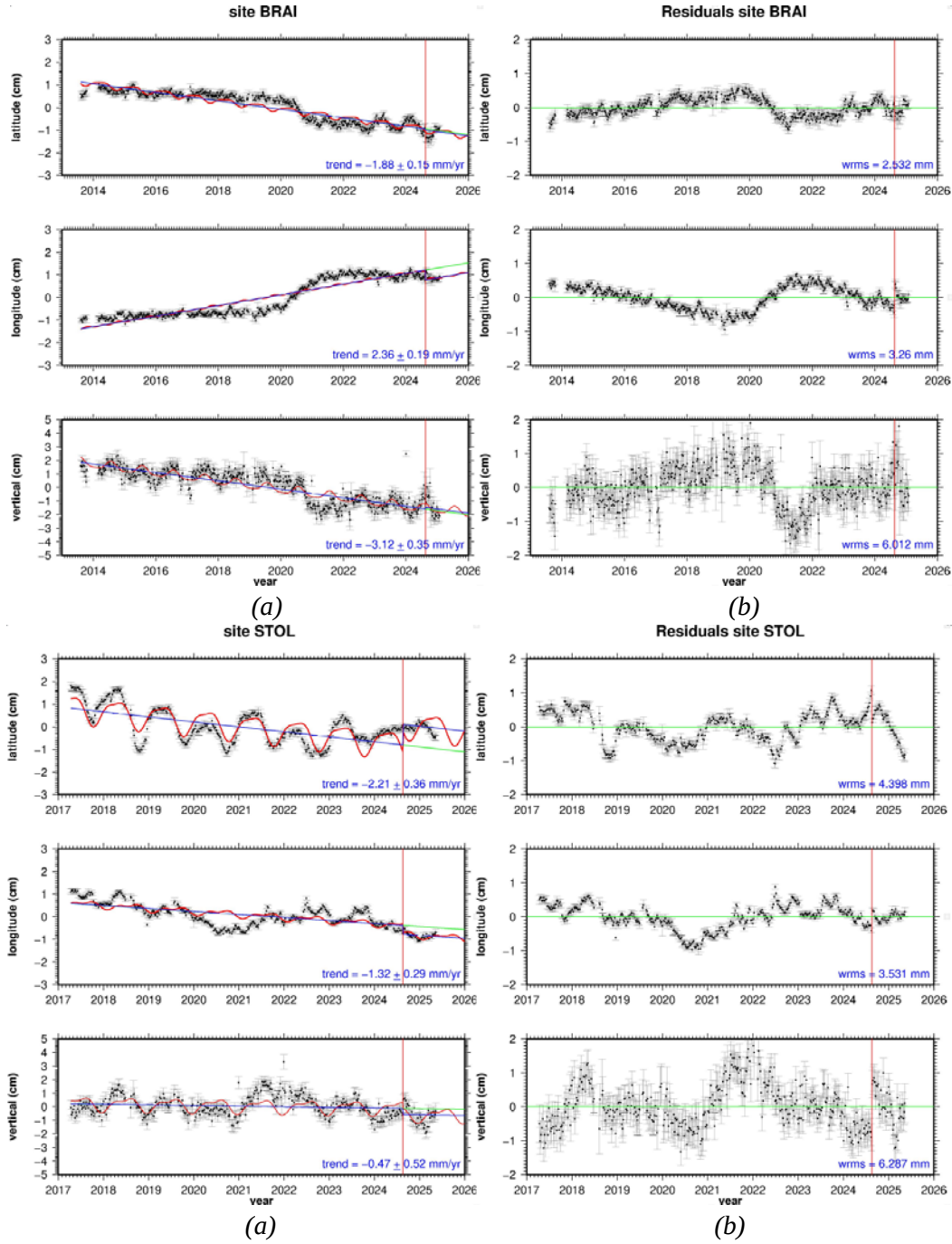


Table S1: Horizontal velocities in the Eurasia reference frame

Station code	Lat (°N)	Lon(°E)	Vlat mm/yr	Vlon mm/yr	Sigmat mm/yr	Siglon mm/yr	Tstart date	Tspan Years	Network
ABIU	46.0777	23.5663	0.27	-0.15	0.07	0.06	13-Feb-21	11.94	NACLR
ADCS	44.0882	27.9657	0.91	-0.40	0.17	0.13	19-May-16	5.80	NIEP
ADJU	46.0954	27.1893	0.14	-0.38	0.06	0.06	13-Jan-03	12.07	NACLR
AEGY	45.1864	28.8151	0.23	-0.10	0.07	0.06	13-Nov-29	11.08	GeoPontica
AGIG	44.0866	28.6419	0.16	-0.01	0.07	0.07	13-Jun-13	11.55	GeoPontica
ALXR	43.9699	25.3266	-0.79	0.44	0.07	0.07	13-Jan-04	12.07	NACLR
ARAD	46.1732	21.3446	0.42	-0.16	0.07	0.06	13-Jan-02	12.07	NACLR
ARYB	47.6180	25.2110	0.38	-0.41	0.14	0.14	16-Jun-24	8.69	NIEP
BABA	44.8841	28.7351	0.10	0.02	0.07	0.07	13-Jun-13	11.55	GeoPontica
BACA	46.5621	26.9122	0.10	-0.48	0.04	0.04	06-Jan-20	19.02	NACLR
BAES	44.0292	23.3311	-0.86	-0.41	0.09	0.09	17-Apr-20	7.87	NIEP
BAIA	47.6518	23.5577	-0.11	-0.02	0.04	0.04	06-Jan-20	19.02	NACLR
BAIS	44.0223	23.3405	-0.78	0.03	0.07	0.07	13-Jan-03	12.07	NACLR
BANL	45.3828	21.1367	-0.09	0.64	0.19	0.16	17-Apr-28	7.85	NIEP
BEIU	46.6694	22.3514	-0.23	-0.38	0.09	0.10	13-Aug-07	10.48	NACLR

BICA	46.8242	25.8514	-0.14	-0.12	0.09	0.09	16-Jan-01	9.17	NIEP
BIST	47.1289	24.4940	-0.24	-0.07	0.08	0.06	13-Jan-05	12.06	NACLR
BORS	47.0903	21.7858	0.42	0.41	0.14	0.13	15-Nov-19	9.29	NIEP
BRLD	46.2330	27.6443	-1.04	-1.35	0.15	0.15	19-Mar-14	5.93	NIEP
BUCE	45.4132	25.4703	0.00	0.31	0.06	0.07	02-May-15	22.38	NIEP
BUCU	44.4639	26.1257	-1.04	-0.07	0.07	0.07	14-Jan-02	11.07	NACLR
BUZE	45.6191	21.6394	-0.14	0.28	0.05	0.06	07-Jul-18	17.63	NIEP
CALR	44.2051	27.3134	-0.22	0.09	0.07	0.06	13-Apr-11	11.80	NACLR
CHIE	45.4245	29.2890	0.00	-0.06	0.08	0.06	13-Jun-14	11.55	GeoPontica
CHIT	44.4941	28.8385	0.08	-0.22	0.07	0.06	13-May-23	11.61	GeoPontica
CIUC	46.3610	25.8015	-0.21	-0.18	0.07	0.07	13-Jan-03	12.07	NACLR
CLU2	46.7725	23.6248	0.99	0.51	0.15	0.13	19-Oct-03	5.32	NACLR
CONB	44.2138	28.6453	0.18	0.08	0.09	0.11	16-Jun-24	8.69	NIEP
CORA	43.7748	24.5022	-0.29	-0.12	0.08	0.07	13-Aug-07	11.48	NACLR
COST	44.1615	28.6575	-0.09	-0.05	0.05	0.04	06-Jan-04	19.07	NACLR
CRAI	44.3380	23.7645	-1.00	-0.03	0.07	0.06	13-Jan-25	12.01	NACLR
CRCL	45.1781	28.1363	0.57	0.16	0.07	0.07	14-Jan-04	11.16	NIEP

CRNV	44.3421	28.0312	0.20	-0.17	0.07	0.07	13-Aug-06	11.48	NACLR
DEVA	45.8784	22.9135	-0.93	0.09	0.07	0.04	09-Jan-02	16.07	NACLR
DRMN	46.3685	26.4905	-0.04	-0.16	0.08	0.06	14-Jan-09	11.05	NACLR
DRTS	44.6272	22.6345	-0.17	0.30	0.07	0.08	13-Aug-07	10.46	NACLR
DUNA	45.0184	29.2738	0.08	-0.14	0.09	0.06	13-Jun-14	11.16	GeoPontica
FAGA	45.8462	24.9687	-1.25	-0.68	0.08	0.07	13-Aug-07	11.48	NACLR
FAGE	45.8546	22.1772	0.02	-0.50	0.07	0.06	13-Aug-03	11.49	NACLR
FOCS	45.7083	27.1946	0.30	0.04	0.08	0.07	13-Jan-03	12.07	NACLR
GHE1	46.7248	25.5984	0.25	-0.39	0.07	0.06	13-Aug-07	11.48	NACLR
GIUR	43.8863	25.9617	-1.40	1.32	0.07	0.06	13-Jan-25	12.01	NACLR
GPOR	44.6754	28.9872	0.22	0.30	0.07	0.08	13-May-16	11.56	GeoPontica
GURA	46.2665	22.3378	0.30	0.58	0.10	0.07	13-Aug-07	11.48	NACLR
HIST	44.5471	28.7702	-0.03	-0.14	0.03	0.03	03-Sep-08	21.49	NIEP
HORE	45.1456	23.9891	0.45	-0.52	0.09	0.07	14-Nov-27	10.17	NACLR
HUED	46.8653	23.0322	0.36	0.03	0.07	0.06	13-Feb-01	11.99	NACLR
INSU	44.9112	27.6032	0.13	-0.10	0.08	0.06	13-Jan-03	12.07	NACLR
ISTR	44.5724	28.7113	0.43	-0.35	0.07	0.06	13-Aug-07	11.48	NACLR

LACP	45.8233	26.3753	1.47	-0.15	0.17	0.10	04-Aug-11	20.56	NIEP
LEHL	44.4422	26.8511	-0.34	0.86	0.14	0.15	13-Aug-07	11.48	NACLR
MAJA	47.0545	27.253	0.67	-0.17	0.15	0.19	13-Sep-06	11.49	NIEP
MEDS	46.1627	24.3469	0.22	-0.47	0.10	0.07	13-Jan-26	12.01	NACLR
MIDI	44.3462	28.6829	-0.04	0.08	0.07	0.06	13-May-23	11.60	GeoPontica
MNG2	43.8011	28.5953	-0.42	-0.25	0.07	0.06	13-Oct-24	11.30	NIEP
MNGA	43.8106	28.5586	-0.08	0.00	0.07	0.08	13-May-22	11.61	GeoPontica
MNGL	43.8093	28.5801	0.08	0.00	0.07	0.06	13-Feb-23	11.93	NACLR
NEHU	45.4172	26.3023	-1.14	0.63	0.10	0.08	13-Jan-26	12.01	NACLR
ODO1	46.307	25.2942	-0.16	-0.07	0.06	0.06	13-Aug-07	11.48	NACLR
ORAD	47.0592	21.9416	-1.25	-0.31	0.09	0.07	13-Aug-07	11.48	NACLR
PASC	47.2491	26.7387	0.39	-0.59	0.06	0.07	13-Aug-07	11.48	NACLR
PERI	44.8010	29.2745	0.30	-0.46	0.07	0.07	13-May-17	11.62	GeoPontica
PET2	45.4164	23.3702	0.16	-0.26	0.15	0.14	19-Aug-02	5.49	NACLR
PGNL	44.9196	26.9768	-1.28	-0.12	0.15	0.14	20-Jan-17	5.13	NIEP
PITE	44.8541	24.8787	-0.61	-0.39	0.08	0.07	14-Feb-27	10.92	NACLR
PLOI	44.9338	25.9899	-0.45	-0.31	0.10	0.06	13-Jul-17	11.53	NACLR

PTNT	46.9264	26.3664	0.14	-0.27	0.07	0.07	13-Aug-01	11.49	NACLR
ROSP	46.3169	23.1385	0.12	-0.18	0.05	0.05	09-Jul-03	15.15	NIEP
ROSU	45.4905	25.9439	-0.20	0.66	0.07	0.08	12-Jun-28	12.68	NIEP
SATU	47.7904	22.8693	0.09	-0.12	0.07	0.06	13-Aug-07	11.48	NACLR
SFGH	45.8664	25.7883	0.24	0.55	0.06	0.07	13-Jan-03	12.07	NACLR
SGHE	44.8986	29.6007	0.19	-0.89	0.15	0.16	13-Oct-18	11.20	GeoPontica
SIB1	45.7817	24.1461	-0.01	-0.12	0.06	0.06	13-Aug-07	11.48	NACLR
SLOB	44.5637	27.3657	-0.37	0.13	0.11	0.10	14-Jan-17	11.03	NACLR
SLTN	44.4227	24.3669	-0.81	-0.22	0.06	0.06	13-Aug-07	11.48	NACLR
SUCE	47.6359	26.2370	0.84	0.09	0.07	0.06	13-Aug-07	11.48	NACLR
SULI	45.1563	29.6546	-0.38	-0.16	0.13	0.11	18-Jan-19	7.03	NACLR
SULN	45.1480	29.7588	0.25	-0.13	0.06	0.06	13-Sep-05	11.32	GeoPontica
TAJO	44.3755	25.1740	-0.05	-0.29	0.08	0.08	14-Jan-02	11.07	NACLR
TBUJ	45.8709	27.9127	0.41	-0.40	0.07	0.06	13-Aug-07	11.48	NACLR
TECC	45.8416	27.4089	0.24	-0.31	0.12	0.13	19-Mar-14	5.97	NIEP
TGMS	46.5283	24.5224	0.23	1.60	0.10	0.10	15-Nov-12	9.31	NIEP
TGTS	46.4748	26.4897	-0.91	-0.42	0.07	0.06	09-Dec-16	15.00	TopGeocart

TIM1	45.7799	21.2310	0.23	0.17	0.07	0.08	13-Aug-07	11.48	NACLR
TIMA	45.1206	23.1278	-0.34	0.02	0.08	0.06	13-Nov-22	11.28	NIEP
TIRG	44.4573	28.4123	0.68	-0.40	0.09	0.08	16-Jan-01	9.17	NIEP
TJIU	45.0469	23.2739	-0.86	-0.84	0.07	0.05	13-Jan-05	12.06	NACLR
TPLT	46.9263	25.3598	0.71	-0.27	0.15	0.16	20-Oct-13	4.39	NIEP
TRGV	44.9183	25.4657	-0.60	-0.86	0.07	0.07	13-Jan-03	12.07	NACLR
TUZZ	43.9902	28.6661	0.25	0.15	0.07	0.07	13-May-24	11.60	GeoPontica
VAD2	45.3035	25.7222	0.20	0.55	0.17	0.17	19-Nov-07	5.23	NACLR
VAMO	47.6516	25.5752	0.42	-0.34	0.07	0.08	13-Feb-20	11.94	NACLR
VASL	46.6416	27.7246	0.95	0.15	0.09	0.09	13-Aug-07	11.48	NACLR
VATR	47.3177	25.3388	-0.06	0.06	0.08	0.07	13-Aug-07	11.48	NACLR
WISE	47.7082	24.4317	0.32	-0.62	0.10	0.10	13-Aug-07	11.48	NACLR
VLC2	45.1074	24.3664	-0.10	-0.57	0.17	0.18	19-Aug-02	5.49	NACLR
VRAP	45.8513	26.6498	-0.12	-0.26	0.04	0.04	04-Apr-00	20.93	NIEP
ZALU	47.1777	23.0618	0.17	-0.34	0.06	0.06	13-Aug-07	11.48	NACLR
ZERI	46.6252	21.5174	-0.19	0.01	0.11	0.07	14-Sep-26	10.34	NACLR

Table S2: Vertical velocities in the Eurasia reference frame

Station code	Lat (°N)	Lon(°E)	Vrad mm/yr	Sigrad mm/yr	Tstart date	Tspan years	Network
ABIU	46.0777	23.5663	-0.09	0.24	13-Feb-21	11.94	NACLR
ADJU	46.0954	27.1893	0.66	0.25	13-Jan-03	12.07	NACLR
ALXR	43.9699	25.3266	-1.11	0.31	13-Jan-04	12.07	NACLR
ARAD	46.1732	21.3446	-0.41	0.25	13-Jan-02	12.07	NACLR
BACA	46.5621	26.9122	-0.34	0.16	06-Jan-20	19.02	NACLR
BAIA	47.6518	23.5577	-0.33	0.15	06-Jan-20	19.02	NACLR
BAIS	44.0223	23.3405	-0.13	0.26	13-Jan-03	12.07	NACLR
BEIU	46.6694	22.3514	-0.00	0.30	13-Aug-07	10.48	NACLR
BIST	47.1289	24.4940	0.21	0.22	13-Jan-05	12.06	NACLR
BUCU	44.4639	26.1257	0.45	0.27	14-Jan-02	11.07	NACLR
CALR	44.2051	27.3134	-0.27	0.31	13-Apr-11	11.80	NACLR
CAM1	46.3634	23.0497	-0.43	0.26	13-Aug-07	11.48	NACLR
CIUC	46.3610	25.8015	-0.17	0.28	13-Jan-03	12.07	NACLR
CLU2	46.7725	23.6248	-0.37	0.71	19-Oct-03	5.32	NACLR
CORA	43.7748	24.5022	-0.09	0.33	13-Aug-07	11.48	NACLR
COST	44.1615	28.6575	0.32	0.15	06-Jan-04	19.07	NACLR
CRAI	44.3380	23.7645	0.21	0.28	13-Jan-25	12.01	NACLR
CRNV	44.3421	28.0312	0.90	0.29	13-Aug-06	11.48	NACLR
DEVA	45.8784	22.9135	0.41	0.22	09-Jan-02	16.07	NACLR

DORO	47.9513	26.3944	2.65	0.40	13-Aug-07	11.48	NACLR
DRMN	46.3685	26.4905	2.10	0.36	14-Jan-09	11.05	NACLR
DRTS	44.6272	22.6345	0.71	0.32	13-Aug-07	10.46	NACLR
FAGA	45.8462	24.9687	0.54	0.28	13-Aug-07	11.48	NACLR
FAGE	45.8546	22.1772	2.18	0.28	13-Aug-03	11.49	NACLR
FOCS	45.7083	27.1946	-0.60	0.25	13-Jan-03	12.07	NACLR
GHE1	46.7248	25.5984	-0.03	0.24	13-Aug-07	11.48	NACLR
GIUR	43.8863	25.9617	0.46	0.34	13-Jan-25	12.01	NACLR
GURA	46.2665	22.3378	0.27	0.33	13-Aug-07	11.48	NACLR
HAR1	44.6884	27.9574	1.47	0.49	13-Aug-07	11.48	NACLR
HORE	45.1456	23.9891	2.33	0.30	14-Nov-27	10.17	NACLR
HUED	46.8653	23.0322	0.52	0.26	13-Feb-01	11.99	NACLR
INSU	44.9112	27.6032	0.67	0.29	13-Jan-03	12.07	NACLR
ISTR	44.5724	28.7113	-0.12	0.26	13-Aug-07	11.48	NACLR
LEHL	44.4422	26.8511	-2.13	0.62	13-Aug-07	11.48	NACLR
MEDS	46.1627	24.3469	-1.47	0.27	13-Jan-26	12.01	NACLR
MNGL	43.8093	28.5801	0.46	0.30	13-Feb-23	11.93	NACLR
NEHU	45.4172	26.3023	0.23	0.25	13-Jan-26	12.01	NACLR
ODO1	46.307	25.2942	0.02	0.26	13-Aug-07	11.48	NACLR
ORAD	47.0592	21.9416	-1.49	0.29	13-Aug-07	11.48	NACLR

PASC	47.2491	26.7387	-0.34	0.27	13-Aug-07	11.48	NACLR
PET2	45.4164	23.3702	1.46	0.70	19-Aug-02	5.49	NACLR
PITE	44.8541	24.8787	1.36	0.29	14-Feb-27	10.92	NACLR
PLOI	44.9338	25.9899	-0.30	0.28	13-Jul-17	11.53	NACLR
PTNT	46.9264	26.3664	0.82	0.27	13-Aug-01	11.49	NACLR
SATU	47.7904	22.8693	-0.42	0.27	13-Aug-07	11.48	NACLR
SFGH	45.8664	25.7883	-0.12	0.23	13-Jan-03	12.07	NACLR
SIB1	45.7817	24.1461	0.60	0.27	13-Aug-07	11.48	NACLR
SLOB	44.5637	27.3657	-0.10	0.31	14-Jan-17	11.03	NACLR
SLTN	44.4227	24.3669	0.06	0.30	13-Aug-07	11.48	NACLR
SUCE	47.6359	26.2370	0.37	0.29	13-Aug-07	11.48	NACLR
SULI	45.1563	29.6546	-0.49	0.55	18-Jan-19	7.03	NACLR
TAJO	44.3755	25.1740	0.15	0.28	14-Jan-02	11.07	NACLR
TBUJ	45.8709	27.9127	0.44	0.26	13-Aug-07	11.48	NACLR
TIM1	45.7799	21.2310	-1.40	0.33	13-Aug-07	11.48	NACLR
TJIU	45.0469	23.2739	-0.90	0.25	13-Jan-05	12.06	NACLR
TRGV	44.9183	25.4657	-0.41	0.27	13-Jan-03	12.07	NACLR
VAD2	45.3035	25.7222	1.69	0.62	19-Nov-07	5.23	NACLR
VAMO	47.6516	25.5752	0.72	0.28	13-Feb-20	11.94	NACLR
VASL	46.6416	27.7246	-0.80	0.32	13-Aug-07	11.48	NACLR

VATR	47.3177	25.3388	0.28	0.28	13-Aug-07	11.48	NACLR
VLC2	45.1074	24.3664	0.86	0.51	19-Aug-02	5.49	NACLR
ZALU	47.1777	23.0618	-0.02	0.26	13-Aug-07	11.48	NACLR
ADCS	44.0882	27.9657	0.21	0.46	19-May-16	5.87	NIEP
ARYB	47.6180	25.2110	0.31	0.37	16-Jun-24	8.88	NIEP
BAES	44.0292	23.3311	-0.39	0.32	17-Apr-20	8.06	NIEP
BANL	45.3828	21.1367	0.01	0.33	17-Apr-28	8.04	NIEP
BICA	46.8242	25.8514	1.91	0.41	16-Jan-01	9.36	NIEP
BORS	47.0903	21.7858	-0.15	0.42	15-Nov-19	9.48	NIEP
BRLD	46.2330	27.6443	-0.30	0.46	19-Mar-14	6.16	NIEP
BUCE	45.4132	25.4703	-0.05	0.21	2-May-15	22.38	NIEP
BUZE	45.6191	21.6394	0.01	0.25	07-Jul-18	17.82	NIEP
CONB	44.2138	28.6453	-0.04	0.31	16-Jun-24	8.69	NIEP
CRCL	45.1781	28.1363	-0.61	0.28	14-Jan-04	11.35	NIEP
HIST	44.5471	28.7702	0.40	0.15	03-Sep-08	21.67	NIEP
LACP	45.8233	26.3753	0.28	0.31	04-Aug-11	20.75	NIEP
MAJA	47.0545	27.2530	0.51	0.28	13-Sep-06	11.68	NIEP
MNG2	43.8011	28.5953	-0.22	0.24	13-Oct-24	11.30	NIEP
NEGR	46.8382	27.4420	0.16	0.70	20-Dec-10	4.42	NIEP
RMSR	45.3906	27.0384	0.68	0.51	19-Feb-13	5.66	NIEP
ROSP	46.3169	23.1385	0.01	0.20	09-Jul-03	15.86	NIEP

ROSU	45.4905	25.9439	-0.32	0.29	12-Jun-28	12.87	NIEP
STOL	44.5627	24.7897	-0.47	0.52	17-Apr-13	8.08	NIEP
TECC	45.8416	27.4089	0.52	0.51	19-Mar-14	6.16	NIEP
TGMS	46.5283	24.5224	-0.85	0.34	15-Nov-12	9.50	NIEP
TIMA	45.1206	23.1278	0.00	0.00	13-Nov-22	11.47	NIEP
TIRG	44.4573	28.4123	0.59	0.30	16-Jan-01	9.36	NIEP
TPLT	46.9263	25.3598	1.42	0.77	20-Oct-13	4.58	NIEP
VLDS	45.8443	28.0808	-1.30	0.37	15-Jan-22	9.65	NIEP
VRAP	45.8513	26.6498	0.28	0.16	04-Apr-00	21.11	NIEP
AEGY	45.1864	28.8151	0.45	0.29	13-Nov-29	11.08	GeoPontica
AGIG	44.0866	28.6419	0.56	0.32	13-Jun-13	11.55	GeoPontica
BABA	44.8841	28.7351	0.55	0.28	13-Jun-13	11.55	GeoPontica
CHIE	45.4245	29.2890	0.78	0.27	13-Jun-14	11.55	GeoPontica
CHIT	44.4941	28.8385	-0.17	0.27	13-May-23	11.61	GeoPontica
DUNA	45.0184	29.2738	-2.83	0.29	13-Jun-14	11.16	GeoPontica
GPOR	44.6754	28.9872	0.40	0.30	13-May-16	11.56	GeoPontica
MIDI	44.3462	28.6829	0.61	0.27	13-May-23	11.6	GeoPontica
MNGA	43.8106	28.5586	0.40	0.26	13-May-22	11.61	GeoPontica
PERI	44.8010	29.2745	0.32	0.29	13-May-17	11.62	GeoPontica
SGHE	44.8986	29.6007	2.59	0.58	13-Oct-18	11.20	GeoPontica

TUZZ	43.9902	28.6661	0.11	0.25	13-May-24	11.60	GeoPontica
TGTS	46.4748	26.4897	-0.66	0.21	09-Dec-16	15.00	TopGeocart
TOPG	44.4477	26.1249	-0.01	0.25	8-Aug-01	16.37	TopGeocart

Table S3: Gridded horizontal velocity field based on cGPS time series solutions. The velocities are computed by averaging east (Ve) and north (Vn) components of cGPS stations within square search boxes centered on regularly spaced grid nodes. Outliers exceeding twice the median velocity magnitude in each box were excluded prior to averaging. Each entry lists longitude, latitude, and the resulting east and north velocity components in mm/yr.

Lat(°N)	Lon(°E)	Ve mm/yr	Vn mm/yr
20.5875	43.8125	1.07	-0.56
21.9625	43.8125	0.76	-0.97
23.3375	43.8125	-0.23	-1.06
24.7125	43.8125	-0.21	-0.70
27.4625	43.8125	-0.07	-0.29
28.8375	43.8125	-0.06	-0.01
20.5875	44.4375	0.94	-0.17
21.9625	44.4375	0.43	-0.65
23.3375	44.4375	-0.11	-0.92
24.7125	44.4375	-0.26	-0.57
26.0875	44.4375	-0.13	-0.57
27.4625	44.4375	0.02	-0.35
28.8375	44.4375	-0.09	0.09
20.5875	45.0625	0.75	0.07
21.9625	45.0625	0.28	-0.37
23.3375	45.0625	-0.15	-0.37
24.7125	45.0625	-0.31	-0.21
26.0875	45.0625	0.23	-0.37
27.4625	45.0625	0.04	-0.21
28.8375	45.0625	-0.13	0.07

30.2125	45.0625	-0.17	0.04
20.5875	45.6875	0.08	0.14
21.9625	45.6875	0.05	0.19
23.3375	45.6875	-0.12	-0.16
24.7125	45.6875	-0.16	-0.21
26.0875	45.6875	0.36	-0.23
27.4625	45.6875	-0.39	0.03
28.8375	45.6875	-0.11	-0.04
20.5875	46.3125	0.11	0.25
21.9625	46.3125	-0.11	0.11
23.3375	46.3125	0.03	0.13
24.7125	46.3125	0.10	-0.16
26.0875	46.3125	-0.11	-0.04
27.4625	46.3125	-0.44	0.13
21.9625	46.9375	-0.08	-0.31
23.3375	46.9375	-0.02	0.26
24.7125	46.9375	0.23	-0.03
26.0875	46.9375	-0.27	0.10
27.4625	46.9375	-0.14	0.34
21.9625	47.5625	-0.06	-0.23
23.3375	47.5625	-0.19	-0.02
24.7125	47.5625	-0.26	0.09
26.0875	47.5625	-0.32	0.39
27.4625	47.5625	-0.21	0.23
24.7125	48.1875	-0.48	0.39
26.0875	48.1875	-0.36	0.51

Table S4: Horizontal velocity inversion results and derived strain-rate parameters at selected locations. Each row lists geographic coordinates (latitude and longitude), inverted horizontal velocity components (v_x , v_y) and their uncertainties (dv_x , dv_y) in mm/yr, rotation rate (w) in degrees per Myr, and principal strain-rate components (exx , exy , eyy) with uncertainties in nanostrain/year. Also included are the maximum and minimum principal strain rates ($emax$, $emin$), maximum shear strain rate (shr), azimuth of maximum extension (azi), dilatation rate ($dilat$), and second invariant of the strain-rate tensor, all with associated uncertainties.

Lat($^{\circ}$ N)	Lon($^{\circ}$ E)	v_x mm/yr	dv_x mm/yr	v_y mm/yr	dv_y mm/yr	w deg/Myr	dw deg/Myr	exx nstrain/yr	$dexx$ nstrain/yr	exy nstrain/yr	$dexy$ nstrain/yr	eyy nstrain/yr	$deyy$ nstrain/yr	$emax$ nstrain/yr	$demax$ nstrain/yr	$emin$ nstrain/yr	$demin$ nstrain/yr	shr nstrain/yr	$dshr$ nstrain/yr	azi (deg)	$dazi$ (deg)	$dilat$ nstrain/yr	$ddilat$ nstrain/yr	sec. invariant nstrain/yr	$dsec$ inv nstrain/yr
44.000	20.650	1.0	0.0	-0.5	0.0	0.0	0.0	-3.7	0.4	-2.9	0.3	5.3	0.4	6.2	0.4	-4.6	0.4	5.4	0.3	163.7	0.0	1.6	0.6	7.7	0.4
44.000	21.150	0.9	0.0	-0.6	0.0	0.0	0.0	-3.7	0.3	-3.0	0.3	5.1	0.5	6.1	0.4	-4.6	0.4	5.3	0.3	162.8	0.0	1.4	0.6	7.6	0.4
44.000	21.650	0.7	0.0	-0.8	0.0	-0.0	0.0	-4.5	0.5	-2.9	0.4	5.0	0.7	5.8	0.7	-5.3	0.5	5.6	0.4	164.5	0.0	0.5	0.8	7.9	0.6
44.000	22.150	0.5	0.0	-0.9	0.0	-0.0	0.0	-6.1	0.6	-2.0	0.5	4.9	0.9	5.3	0.9	-6.5	0.6	5.9	0.5	169.9	0.0	-1.2	1.1	8.3	0.7
44.000	22.650	0.2	0.0	-0.9	0.0	-0.0	0.0	-6.9	0.6	-0.9	0.6	4.5	0.9	4.5	0.9	-7.0	0.6	5.8	0.6	175.6	0.0	-2.5	1.1	8.4	0.7
44.000	23.150	0.0	0.1	-0.9	0.1	-0.0	0.0	-4.9	0.8	0.4	0.8	4.2	1.3	4.2	1.3	-4.9	0.8	4.6	0.8	2.2	0.0	-0.7	1.5	6.5	1.0
44.000	23.650	-0.1	0.0	-0.9	0.0	-0.0	0.0	-2.0	0.7	1.3	0.7	3.7	1.1	3.9	1.1	-2.3	0.7	3.1	0.7	12.3	0.1	1.6	1.3	4.6	1.0
44.000	24.150	-0.2	0.0	-0.8	0.0	-0.1	0.0	-0.5	0.5	1.5	0.4	3.0	0.7	3.6	0.7	-1.0	0.5	2.3	0.4	20.0	0.1	2.6	0.8	3.7	0.7
44.000	24.650	-0.2	0.0	-0.7	0.0	-0.0	0.0	0.2	0.5	1.2	0.4	1.9	0.6	2.5	0.6	-0.4	0.5	1.5	0.4	26.4	0.1	2.1	0.8	2.6	0.6
44.000	25.150	-0.2	0.0	-0.6	0.0	-0.0	0.0	0.7	0.3	1.2	0.3	2.0	0.5	2.7	0.4	-0.0	0.4	1.4	0.3	30.7	0.1	2.7	0.6	2.7	0.4
44.000	25.650	-0.1	0.0	-0.6	0.0	-0.0	0.0	0.7	0.2	1.2	0.2	1.6	0.4	2.5	0.4	-0.1	0.3	1.3	0.2	35.1	0.1	2.4	0.5	2.5	0.4
44.000	26.150	-0.1	0.0	-0.5	0.0	-0.0	0.0	0.7	0.2	1.0	0.2	1.3	0.4	2.1	0.4	-0.1	0.3	1.1	0.2	36.7	0.1	1.9	0.5	2.1	0.4
44.000	26.650	-0.1	0.0	-0.4	0.0	-0.0	0.0	0.6	0.2	1.3	0.2	1.0	0.4	2.1	0.4	-0.5	0.3	1.3	0.2	39.9	0.1	1.6	0.5	2.2	0.4
44.000	27.150	-0.1	0.0	-0.3	0.0	-0.0	0.0	0.2	0.3	1.4	0.3	0.8	0.4	2.0	0.4	-1.0	0.3	1.5	0.3	38.3	0.1	1.0	0.5	2.2	0.4
44.000	27.650	-0.1	0.0	-0.2	0.0	-0.1	0.0	-0.1	0.3	1.4	0.2	0.6	0.4	1.7	0.4	-1.2	0.3	1.4	0.2	38.3	0.1	0.6	0.5	2.1	0.3

44.000	28.150	-0.1	0.0	-0.1	0.0	-0.1	0.0	-0.1	0.3	1.3	0.2	0.5	0.3	1.5	0.3	-1.2	0.3	1.3	0.2	38.3	0.1	0.3	0.4	1.9	0.3
44.000	28.650	-0.1	0.0	-0.0	0.0	-0.1	0.0	-0.2	0.3	1.0	0.2	0.2	0.4	1.0	0.3	-1.0	0.4	1.0	0.2	39.6	0.1	-0.1	0.5	1.4	0.3
44.500	20.650	0.9	0.0	-0.2	0.0	0.0	0.0	-4.2	0.5	-3.1	0.3	4.6	0.4	5.6	0.4	-5.2	0.5	5.4	0.3	162.3	0.0	0.4	0.7	7.6	0.5
44.500	21.150	0.7	0.0	-0.4	0.0	0.0	0.0	-4.2	0.4	-3.0	0.3	4.7	0.4	5.6	0.4	-5.1	0.4	5.4	0.3	162.8	0.0	0.5	0.6	7.6	0.4
44.500	21.650	0.5	0.0	-0.5	0.0	-0.0	0.0	-4.5	0.4	-2.7	0.3	4.7	0.5	5.5	0.5	-5.2	0.4	5.3	0.3	164.6	0.0	0.2	0.6	7.6	0.5
44.500	22.150	0.4	0.0	-0.6	0.0	-0.0	0.0	-4.9	0.5	-2.0	0.4	4.8	0.5	5.1	0.5	-5.3	0.5	5.2	0.4	168.9	0.0	-0.2	0.7	7.4	0.5
44.500	22.650	0.2	0.0	-0.6	0.0	-0.0	0.0	-5.0	0.6	-0.9	0.4	4.7	0.6	4.8	0.6	-5.1	0.6	4.9	0.4	174.6	0.0	-0.3	0.8	7.0	0.6
44.500	23.150	-0.0	0.0	-0.7	0.0	-0.0	0.0	-3.8	0.6	0.1	0.5	4.6	0.7	4.6	0.7	-3.8	0.6	4.2	0.5	0.7	0.0	0.8	0.9	6.0	0.6
44.500	23.650	-0.1	0.0	-0.6	0.0	-0.0	0.0	-2.1	0.6	0.8	0.4	4.1	0.6	4.2	0.6	-2.2	0.6	3.2	0.4	7.3	0.0	2.0	0.9	4.8	0.6
44.500	24.150	-0.2	0.0	-0.6	0.0	-0.0	0.0	-0.7	0.5	1.1	0.4	3.4	0.5	3.7	0.5	-1.0	0.5	2.3	0.4	13.8	0.0	2.7	0.7	3.8	0.5
44.500	24.650	-0.2	0.0	-0.6	0.0	-0.0	0.0	0.6	0.5	0.9	0.4	3.1	0.6	3.4	0.6	0.3	0.6	1.6	0.4	18.2	0.1	3.7	0.8	3.4	0.6
44.500	25.150	-0.1	0.0	-0.5	0.0	-0.0	0.0	0.9	0.4	1.0	0.3	2.4	0.4	2.9	0.4	0.4	0.4	1.2	0.3	26.4	0.1	3.3	0.6	2.9	0.4
44.500	25.650	-0.1	0.0	-0.5	0.0	-0.0	0.0	0.8	0.3	1.0	0.3	2.0	0.4	2.6	0.4	0.3	0.4	1.2	0.3	29.6	0.1	2.8	0.5	2.6	0.4
44.500	26.150	-0.1	0.0	-0.5	0.0	-0.0	0.0	0.9	0.5	1.2	0.4	1.9	0.7	2.7	0.6	0.1	0.5	1.3	0.4	34.5	0.2	2.8	0.8	2.7	0.6
44.500	26.650	-0.1	0.0	-0.3	0.0	0.0	0.0	0.3	0.4	1.0	0.3	1.4	0.5	2.0	0.5	-0.3	0.4	1.1	0.3	31.5	0.1	1.7	0.6	2.0	0.5
44.500	27.150	0.0	0.0	-0.3	0.0	0.0	0.0	-0.2	0.4	1.1	0.3	1.1	0.4	1.7	0.4	-0.9	0.4	1.3	0.3	30.0	0.1	0.8	0.6	2.0	0.4
44.500	27.650	0.0	0.0	-0.2	0.0	-0.1	0.0	-0.6	0.4	1.3	0.3	0.8	0.4	1.6	0.4	-1.4	0.4	1.5	0.3	30.9	0.1	0.2	0.6	2.2	0.4
44.500	28.150	-0.1	0.0	-0.1	0.0	-0.1	0.0	-0.5	0.4	1.1	0.3	0.6	0.4	1.3	0.4	-1.3	0.4	1.3	0.3	32.1	0.1	0.1	0.5	1.8	0.4
44.500	28.650	-0.1	0.0	0.0	0.0	-0.1	0.0	-0.5	0.4	0.8	0.3	0.3	0.4	0.8	0.4	-1.0	0.4	0.9	0.3	32.9	0.2	-0.2	0.6	1.3	0.4
44.500	29.150	-0.1	0.0	0.0	0.0	0.0	0.0	-0.4	0.3	0.3	0.2	0.0	0.3	0.1	0.2	-0.6	0.4	0.4	0.2	28.5	0.3	-0.5	0.4	0.6	0.4

45.000	20.650	0.7	0.0	0.0	0.0	0.0	0.0	-4.2	0.9	-3.3	0.5	3.6	0.6	4.8	0.7	-5.4	0.8	5.1	0.5	159.7	0.0	-0.6	1.1	7.3	0.8
45.000	21.150	0.5	0.0	-0.1	0.0	0.0	0.0	-3.8	0.7	-3.1	0.4	3.8	0.6	4.9	0.6	-5.0	0.6	4.9	0.4	160.2	0.0	-0.1	0.9	7.0	0.6
45.000	21.650	0.4	0.0	-0.2	0.0	0.0	0.0	-3.8	0.5	-2.6	0.4	4.1	0.5	4.9	0.5	-4.6	0.5	4.7	0.4	163.4	0.0	0.3	0.8	6.7	0.5
45.000	22.150	0.2	0.0	-0.3	0.0	0.0	0.0	-3.8	0.5	-1.8	0.3	4.6	0.5	4.9	0.5	-4.2	0.5	4.6	0.3	168.2	0.0	0.8	0.7	6.5	0.5
45.000	22.650	0.1	0.0	-0.4	0.0	0.0	0.0	-3.4	0.5	-1.0	0.3	4.4	0.5	4.6	0.5	-3.5	0.5	4.0	0.3	172.6	0.0	1.1	0.7	5.8	0.5
45.000	23.150	0.0	0.0	-0.4	0.0	0.0	0.0	-2.7	0.5	-0.4	0.4	4.3	0.5	4.4	0.5	-2.7	0.5	3.5	0.4	177.2	0.0	1.6	0.7	5.1	0.5
45.000	23.650	-0.1	0.0	-0.4	0.0	0.0	0.0	-1.6	0.5	0.3	0.3	3.9	0.5	3.9	0.5	-1.6	0.5	2.8	0.3	3.5	0.0	2.3	0.7	4.2	0.5
45.000	24.150	-0.1	0.0	-0.4	0.0	0.0	0.0	-0.4	0.5	0.7	0.3	3.4	0.5	3.5	0.5	-0.5	0.5	2.0	0.3	10.1	0.0	3.0	0.6	3.5	0.5
45.000	24.650	-0.1	0.0	-0.4	0.0	0.0	0.0	0.9	0.5	0.8	0.3	3.1	0.5	3.4	0.5	0.6	0.5	1.4	0.3	17.2	0.1	4.0	0.7	3.4	0.5
45.000	25.150	-0.1	0.0	-0.4	0.0	0.0	0.0	1.1	0.4	0.6	0.3	2.7	0.4	2.9	0.4	0.9	0.4	1.0	0.3	19.6	0.1	3.8	0.6	3.0	0.4
45.000	25.650	0.0	0.0	-0.4	0.0	0.0	0.0	1.0	0.5	0.8	0.3	2.5	0.5	2.8	0.5	0.6	0.5	1.1	0.3	23.8	0.1	3.5	0.7	2.9	0.5
45.000	26.150	0.0	0.0	-0.3	0.0	0.0	0.0	0.4	0.6	0.9	0.4	2.3	0.6	2.7	0.6	0.1	0.6	1.3	0.4	21.5	0.1	2.8	0.9	2.7	0.6
45.000	26.650	0.0	0.0	-0.3	0.0	0.0	0.0	-0.4	0.5	0.8	0.4	2.0	0.6	2.3	0.6	-0.7	0.5	1.5	0.4	17.3	0.1	1.6	0.8	2.4	0.5
45.000	27.150	-0.1	0.0	-0.2	0.0	-0.1	0.0	-0.8	0.5	0.7	0.4	1.8	0.5	1.9	0.5	-1.0	0.5	1.5	0.4	15.1	0.1	1.0	0.7	2.2	0.5
45.000	27.650	-0.1	0.0	-0.2	0.0	-0.1	0.0	-0.5	0.5	0.6	0.3	1.3	0.5	1.5	0.5	-0.7	0.5	1.1	0.3	17.8	0.1	0.7	0.7	1.7	0.5
45.000	28.150	-0.1	0.0	-0.1	0.0	-0.1	0.0	-0.5	0.5	0.6	0.3	0.7	0.4	0.9	0.4	-0.7	0.5	0.8	0.3	22.7	0.2	0.2	0.6	1.2	0.4
45.000	28.650	-0.1	0.0	0.0	0.0	-0.1	0.0	-0.2	0.5	0.3	0.3	0.2	0.5	0.4	0.5	-0.4	0.5	0.4	0.3	27.8	0.4	0.0	0.7	0.5	0.5
45.000	29.150	-0.1	0.0	0.0	0.0	0.0	0.0	-0.3	0.3	0.1	0.2	0.0	0.4	0.1	0.3	-0.3	0.3	0.2	0.2	16.5	0.4	-0.3	0.5	0.4	0.3
45.000	29.650	-0.1	0.0	0.0	0.0	0.0	0.0	-0.4	0.3	0.1	0.2	-0.1	0.3	0.0	0.3	-0.5	0.3	0.2	0.2	13.4	0.3	-0.5	0.5	0.5	0.3
45.500	20.650	0.3	0.0	0.1	0.0	-0.1	0.0	-2.4	1.3	-3.7	0.8	2.1	0.9	4.2	1.1	-4.5	1.2	4.4	0.8	150.6	0.1	-0.3	1.6	6.2	1.1

45.500	21.150	0.3	0.0	0.0	0.0	-0.1	0.0	-2.3	0.8	-2.9	0.5	2.3	0.7	3.8	0.7	-3.7	0.8	3.7	0.5	154.1	0.1	0.0	1.1	5.3	0.8
45.500	21.650	0.2	0.0	-0.1	0.0	0.0	0.0	-2.4	0.5	-2.2	0.4	2.9	0.6	3.7	0.6	-3.2	0.5	3.5	0.4	160.0	0.0	0.5	0.8	4.9	0.6
45.500	22.150	0.1	0.0	-0.1	0.0	0.0	0.0	-2.2	0.5	-1.6	0.4	3.6	0.6	4.0	0.6	-2.6	0.5	3.3	0.4	165.9	0.0	1.3	0.8	4.7	0.5
45.500	22.650	0.0	0.0	-0.2	0.0	0.0	0.0	-2.0	0.5	-0.9	0.3	3.5	0.5	3.7	0.5	-2.2	0.5	2.9	0.3	171.0	0.0	1.5	0.7	4.3	0.5
45.500	23.150	0.0	0.0	-0.2	0.0	0.0	0.0	-1.4	0.4	-0.3	0.3	3.1	0.5	3.1	0.5	-1.4	0.4	2.2	0.3	176.6	0.0	1.7	0.6	3.4	0.5
45.500	23.650	-0.1	0.0	-0.2	0.0	0.0	0.0	-0.7	0.4	0.1	0.3	3.0	0.4	3.0	0.4	-0.7	0.4	1.9	0.3	1.7	0.0	2.3	0.6	3.1	0.4
45.500	24.150	-0.1	0.0	-0.2	0.0	0.0	0.0	0.2	0.4	0.5	0.3	2.8	0.4	2.8	0.4	0.1	0.4	1.4	0.3	9.8	0.1	2.9	0.6	2.8	0.4
45.500	24.650	-0.1	0.0	-0.2	0.0	0.0	0.0	0.6	0.4	0.4	0.3	2.5	0.4	2.6	0.4	0.5	0.4	1.1	0.3	11.7	0.1	3.1	0.6	2.7	0.4
45.500	25.150	-0.1	0.0	-0.3	0.0	0.0	0.0	0.8	0.4	0.4	0.3	2.3	0.4	2.4	0.4	0.7	0.4	0.8	0.3	15.4	0.1	3.1	0.6	2.5	0.4
45.500	25.650	0.0	0.0	-0.2	0.0	0.0	0.0	0.4	0.5	0.4	0.3	2.2	0.5	2.3	0.5	0.3	0.5	1.0	0.3	12.8	0.1	2.6	0.7	2.4	0.5
45.500	26.150	0.0	0.0	-0.2	0.0	0.0	0.0	-0.6	0.6	0.4	0.4	2.3	0.6	2.3	0.6	-0.6	0.6	1.5	0.4	6.9	0.1	1.7	0.8	2.4	0.6
45.500	26.650	-0.1	0.0	-0.2	0.0	-0.1	0.0	-1.3	0.6	0.2	0.4	2.3	0.6	2.3	0.6	-1.3	0.6	1.8	0.4	2.9	0.1	1.0	0.8	2.7	0.6
45.500	27.150	-0.2	0.0	-0.1	0.0	-0.1	0.0	-1.2	0.5	0.0	0.4	2.1	0.5	2.1	0.5	-1.2	0.5	1.7	0.4	0.4	0.1	0.9	0.8	2.4	0.5
45.500	27.650	-0.1	0.0	-0.1	0.0	-0.1	0.0	-0.7	0.5	-0.1	0.4	1.6	0.6	1.6	0.5	-0.7	0.5	1.2	0.4	176.8	0.1	0.9	0.7	1.8	0.5
45.500	28.150	-0.1	0.0	0.0	0.0	-0.1	0.0	-0.4	0.5	-0.1	0.4	1.1	0.5	1.1	0.5	-0.4	0.5	0.7	0.4	176.8	0.1	0.7	0.7	1.2	0.5
45.500	28.650	-0.1	0.0	0.0	0.0	0.0	0.0	-0.2	0.5	-0.1	0.4	0.7	0.6	0.7	0.5	-0.2	0.5	0.5	0.4	175.2	0.2	0.6	0.7	0.8	0.5
45.500	29.150	-0.2	0.0	0.0	0.0	0.0	0.0	-0.4	0.3	0.0	0.2	0.8	0.4	0.8	0.4	-0.4	0.3	0.6	0.2	177.8	0.1	0.4	0.4	0.9	0.3
45.500	29.650	-0.2	0.0	0.1	0.0	0.0	0.0	-0.3	0.3	-0.2	0.2	0.6	0.3	0.7	0.3	-0.3	0.3	0.5	0.2	170.8	0.1	0.3	0.4	0.7	0.3
46.000	20.650	0.1	0.0	0.2	0.0	0.0	0.0	-1.1	0.9	-1.3	0.6	1.2	0.8	1.8	0.9	-1.7	0.9	1.8	0.6	156.1	0.1	0.1	1.3	2.5	0.9
46.000	21.150	0.1	0.0	0.1	0.0	0.0	0.0	-1.1	0.8	-1.9	0.5	1.1	0.7	2.2	0.7	-2.2	0.7	2.2	0.5	150.1	0.1	0.0	1.0	3.1	0.7

46.000	21.650	0.1	0.0	0.1	0.0	0.0	0.0	-1.2	0.6	-1.4	0.5	1.1	0.7	1.8	0.7	-1.9	0.6	1.8	0.5	154.1	0.1	-0.1	0.9	2.6	0.6
46.000	22.150	0.0	0.0	0.0	0.0	0.0	0.0	-1.1	0.5	-1.2	0.4	1.5	0.6	2.0	0.6	-1.5	0.5	1.7	0.4	159.3	0.1	0.4	0.8	2.5	0.6
46.000	22.650	0.0	0.0	-0.1	0.0	0.0	0.0	-0.7	0.6	-0.7	0.4	1.6	0.6	1.8	0.6	-0.9	0.6	1.4	0.4	165.6	0.1	0.9	0.8	2.0	0.6
46.000	23.150	0.0	0.0	-0.1	0.0	0.0	0.0	-0.4	0.5	-0.2	0.3	1.8	0.5	1.8	0.5	-0.4	0.5	1.1	0.3	175.7	0.1	1.4	0.7	1.9	0.5
46.000	23.650	0.0	0.0	-0.1	0.0	0.0	0.0	-0.1	0.4	0.0	0.3	2.0	0.4	2.0	0.4	-0.1	0.4	1.1	0.3	0.7	0.1	1.9	0.6	2.0	0.4
46.000	24.150	0.0	0.0	-0.1	0.0	0.0	0.0	+0.3	0.4	0.1	0.3	2.1	0.4	2.1	0.4	0.3	0.4	0.9	0.3	2.2	0.1	2.4	0.5	2.1	0.4
46.000	24.650	0.0	0.0	-0.1	0.0	0.0	0.0	+0.2	0.4	0.0	0.3	2.2	0.4	2.2	0.4	0.2	0.4	1.0	0.3	0.7	0.1	2.4	0.5	2.2	0.4
46.000	25.150	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.4	0.0	0.3	2.0	0.5	2.0	0.5	0.0	0.4	1.0	0.3	0.5	0.1	2.0	0.6	2.0	0.5
46.000	25.650	-0.1	0.0	-0.1	0.0	0.0	0.0	-0.6	0.4	0.2	0.3	2.0	0.5	2.0	0.5	-0.6	0.4	1.3	0.3	3.6	0.1	1.4	0.6	2.1	0.5
46.000	26.150	-0.1	0.0	-0.1	0.0	-0.1	0.0	-1.0	0.5	0.1	0.4	2.1	0.5	2.1	0.5	-1.0	0.5	1.6	0.4	1.4	0.1	1.1	0.7	2.4	0.5
46.000	26.650	-0.1	0.0	0.0	0.0	-0.1	0.0	-1.5	0.5	0.0	0.3	2.3	0.5	2.3	0.5	-1.5	0.5	1.9	0.3	179.8	0.0	0.8	0.7	2.7	0.5
46.000	27.150	-0.2	0.0	0.0	0.0	-0.1	0.0	-1.5	0.5	-0.3	0.4	2.3	0.5	2.3	0.5	-1.6	0.6	1.9	0.4	175.6	0.1	0.7	0.8	2.8	0.5
46.000	27.650	-0.2	0.0	0.0	0.0	-0.1	0.0	-0.8	0.5	-0.2	0.3	1.8	0.5	1.8	0.5	-0.8	0.5	1.3	0.3	176.5	0.1	1.0	0.7	1.9	0.5
46.000	28.150	-0.2	0.0	0.1	0.0	0.0	0.0	-0.5	0.3	0.1	0.2	1.5	0.3	1.5	0.3	-0.5	0.3	1.0	0.2	3.2	0.1	1.1	0.5	1.6	0.3
46.000	28.650	-0.2	0.0	0.1	0.0	0.0	0.0	-0.4	0.3	0.1	0.2	1.5	0.3	1.5	0.3	-0.4	0.3	0.9	0.2	1.7	0.1	1.1	0.5	1.5	0.3
46.000	29.150	-0.2	0.0	0.1	0.0	0.0	0.0	-0.4	0.3	0.0	0.2	1.3	0.3	1.3	0.3	-0.4	0.3	0.8	0.2	1.2	0.1	0.9	0.4	1.3	0.3
46.500	21.150	0.0	0.0	0.1	0.0	0.0	0.0	-0.9	0.6	-1.3	0.4	-0.9	0.6	0.4	0.7	-2.2	0.5	1.3	0.4	135.1	0.2	-1.9	0.9	2.3	0.5
46.500	21.650	0.0	0.0	0.0	0.0	0.0	0.0	-0.9	0.6	-1.0	0.4	-1.2	0.6	-0.1	0.7	-2.0	0.5	1.0	0.4	129.8	0.2	-2.1	0.8	2.0	0.5
46.500	22.150	0.0	0.0	0.0	0.0	0.0	0.0	-0.6	0.6	-0.6	0.4	-1.4	0.6	-0.3	0.6	-1.7	0.6	0.7	0.4	118.7	0.3	-2.1	0.9	1.8	0.6
46.500	22.650	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.6	-0.1	0.4	-0.5	0.6	-0.1	0.6	-0.6	0.6	0.2	0.4	99.6	0.5	-0.6	0.8	0.6	0.6

46.500	23.150	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.0	0.4	0.2	0.5	0.2	0.5	+0.1	0.5	0.1	0.4	163.0	2.0	0.3	0.7	0.2	0.5
46.500	23.650	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	-0.1	0.3	1.0	0.5	1.1	0.5	0.0	0.5	0.6	0.3	173.1	0.2	1.0	0.7	1.1	0.5
46.500	24.150	-0.1	0.0	0.0	0.0	0.0	0.0	-0.1	0.4	-0.3	0.3	1.4	0.4	1.5	0.4	-0.1	0.4	0.8	0.3	168.5	0.1	1.3	0.6	1.5	0.4
46.500	24.650	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.4	-0.3	0.3	1.8	0.5	1.8	0.5	-0.1	0.4	1.0	0.3	170.9	0.1	1.7	0.6	1.8	0.5
46.500	25.150	0.0	0.0	0.0	0.0	0.0	0.0	-0.7	0.4	-0.3	0.3	2.0	0.5	2.0	0.5	-0.7	0.4	1.4	0.3	174.3	0.1	1.3	0.6	2.1	0.5
46.500	25.650	-0.1	0.0	0.0	0.0	-0.1	0.0	-1.0	0.4	-0.2	0.3	2.1	0.4	2.1	0.4	-1.0	0.4	1.6	0.3	176.0	0.0	1.1	0.6	2.3	0.4
46.500	26.150	-0.1	0.0	0.0	0.0	-0.1	0.0	-1.3	0.4	0.3	0.3	1.9	0.4	2.0	0.4	-1.3	0.4	1.6	0.3	5.5	0.0	0.7	0.6	2.4	0.4
46.500	26.650	-0.2	0.0	0.1	0.0	-0.1	0.0	-1.7	0.5	0.4	0.4	2.1	0.5	2.2	0.5	-1.7	0.5	1.9	0.4	5.3	0.1	0.5	0.8	2.8	0.5
46.500	27.150	-0.2	0.0	0.1	0.0	-0.1	0.0	-1.0	0.6	0.3	0.4	2.3	0.5	2.3	0.5	-1.1	0.5	1.7	0.4	4.8	0.1	1.3	0.7	2.6	0.5
46.500	27.650	-0.2	0.0	0.1	0.0	0.0	0.0	-0.3	0.5	0.0	0.3	1.6	0.4	1.6	0.4	-0.3	0.5	0.9	0.3	0.4	0.1	1.3	0.7	1.6	0.4
46.500	28.150	-0.2	0.0	0.1	0.0	0.0	0.0	-0.5	0.4	0.1	0.2	1.5	0.3	1.5	0.3	-0.5	0.4	1.0	0.2	2.9	0.1	1.0	0.5	1.6	0.3
46.500	28.650	-0.2	0.0	0.2	0.0	0.0	0.0	-0.3	0.4	0.1	0.2	1.4	0.3	1.4	0.3	-0.3	0.3	0.9	0.2	2.8	0.1	1.1	0.5	1.5	0.3
47.000	21.650	-0.0	0.0	-0.1	0.0	0.0	0.0	-0.9	0.6	-0.5	0.4	-2.2	0.5	-0.7	0.7	-2.4	0.5	0.8	0.4	109.8	0.2	-3.1	0.8	2.5	0.5
47.000	22.150	-0.1	0.0	-0.2	0.0	-0.1	0.0	-0.3	0.7	0.7	0.5	-1.6	0.6	0.0	0.7	-1.9	0.6	1.0	0.5	65.1	0.2	-1.9	0.9	1.9	0.6
47.000	22.650	-0.1	0.0	-0.1	0.0	-0.1	0.0	-0.2	0.6	0.6	0.4	-1.2	0.6	0.0	0.6	-1.4	0.6	0.7	0.4	65.1	0.2	-1.4	0.8	1.4	0.6
47.000	23.150	-0.1	0.0	0.0	0.0	-0.1	0.0	-0.1	0.5	0.1	0.4	-0.7	0.6	-0.1	0.5	-0.8	0.6	0.3	0.4	79.5	0.4	-0.9	0.8	0.8	0.6
47.000	23.650	-0.1	0.0	0.0	0.0	-0.1	0.0	-0.1	0.5	-0.4	0.4	0.4	0.5	0.6	0.5	-0.3	0.5	0.4	0.4	151.0	0.4	0.2	0.7	0.6	0.5
47.000	24.150	-0.1	0.0	0.0	0.0	-0.1	0.0	-0.2	0.5	-0.6	0.4	1.2	0.5	1.4	0.5	-0.5	0.5	1.0	0.4	159.2	0.1	1.0	0.7	1.5	0.5
47.000	24.650	-0.1	0.0	0.1	0.0	-0.1	0.0	-0.4	0.5	-0.7	0.3	1.7	0.5	1.9	0.5	-0.7	0.5	1.3	0.3	162.8	0.1	1.3	0.7	2.0	0.5
47.000	25.150	-0.1	0.0	0.1	0.0	-0.1	0.0	-0.9	0.4	-0.6	0.3	2.1	0.5	2.2	0.5	-1.0	0.4	1.6	0.3	169.8	0.1	1.2	0.6	2.4	0.5

47.000	25.650	-0.2	0.0	0.1	0.0	-0.1	0.0	-1.0	0.4	-0.3	0.3	2.3	0.4	2.3	0.4	-1.0	0.4	1.6	0.3	175.4	0.0	1.3	0.6	2.5	0.4
47.000	26.150	-0.2	0.0	0.2	0.0	-0.1	0.0	-0.7	0.4	0.0	0.3	2.1	0.4	2.1	0.4	-0.7	0.4	1.4	0.3	0.9	0.1	1.5	0.6	2.2	0.4
47.000	26.650	-0.2	0.0	0.2	0.0	-0.0	0.0	-0.3	0.5	0.1	0.3	1.8	0.5	1.8	0.5	-0.3	0.5	1.1	0.3	2.2	0.1	1.5	0.7	1.9	0.5
47.000	27.150	-0.2	0.0	0.2	0.0	-0.0	0.0	-0.1	0.7	0.2	0.5	1.3	0.6	1.4	0.6	-0.1	0.7	0.7	0.5	8.5	0.2	1.3	0.9	1.4	0.6
47.000	27.650	-0.2	0.0	0.2	0.0	-0.0	0.0	0.0	0.5	0.1	0.3	1.4	0.4	1.4	0.4	+0.0	0.5	0.7	0.3	176.0	0.1	1.4	0.6	1.4	0.4
47.500	22.150	-0.1	0.0	-0.2	0.0	-0.1	0.0	-0.8	0.5	0.5	0.4	-1.8	0.6	-0.6	0.5	-2.0	0.6	0.7	0.4	67.4	0.2	-2.6	0.8	2.1	0.6
47.500	22.650	-0.1	0.0	-0.1	0.0	-0.1	0.0	-0.8	0.4	0.4	0.4	-0.7	0.6	-0.4	0.5	-1.2	0.6	0.4	0.4	41.2	0.5	-1.6	0.8	1.2	0.6
47.500	23.150	-0.1	0.0	0.0	0.0	-0.1	0.0	-0.8	0.4	0.1	0.4	0.1	0.6	0.1	0.6	-0.8	0.4	0.5	0.4	8.7	0.2	-0.7	0.7	0.8	0.4
47.500	23.650	-0.2	0.0	0.1	0.0	-0.1	0.0	-0.3	0.6	-0.6	0.4	0.9	0.7	1.1	0.7	-0.5	0.5	0.8	0.4	156.9	0.2	0.6	0.9	1.3	0.7
47.500	24.150	-0.2	0.0	0.1	0.0	-0.1	0.0	-0.4	0.5	-0.8	0.4	1.8	0.6	2.1	0.6	-0.7	0.5	1.4	0.4	161.2	0.1	1.4	0.8	2.2	0.6
47.500	24.650	-0.2	0.0	0.2	0.0	-0.1	0.0	-0.6	0.5	-1.0	0.4	2.1	0.5	2.4	0.6	-0.9	0.5	1.7	0.4	162.0	0.1	1.6	0.7	2.6	0.6
47.500	25.150	-0.2	0.0	0.2	0.0	-0.1	0.0	-0.6	0.5	-0.7	0.3	2.6	0.5	2.7	0.5	-0.7	0.5	1.7	0.3	168.5	0.1	2.0	0.7	2.8	0.5
47.500	25.650	-0.2	0.0	0.3	0.0	-0.1	0.0	-0.6	0.5	-0.4	0.3	2.7	0.5	2.7	0.5	-0.7	0.5	1.7	0.3	173.6	0.1	2.1	0.7	2.8	0.5
47.500	26.150	-0.3	0.0	0.3	0.0	-0.1	0.0	-0.2	0.5	-0.4	0.4	2.5	0.5	2.6	0.5	-0.3	0.5	1.4	0.4	171.4	0.1	2.3	0.7	2.6	0.5
47.500	26.650	-0.2	0.0	0.3	0.0	-0.0	0.0	0.3	0.5	-0.5	0.4	2.1	0.5	2.2	0.5	0.1	0.5	1.0	0.4	165.5	0.1	2.3	0.7	2.2	0.5
47.500	27.150	-0.2	0.0	0.3	0.0	-0.0	0.0	0.7	0.6	-0.6	0.4	1.2	0.6	1.6	0.5	0.3	0.6	0.6	0.4	147.4	0.3	1.9	0.8	1.6	0.5
48.000	24.150	-0.4	0.0	0.3	0.0	-0.1	0.0	-0.7	0.4	-0.7	0.3	2.0	0.5	2.2	0.5	-0.9	0.3	1.5	0.3	166.4	0.1	1.3	0.6	2.3	0.5
48.000	24.650	-0.4	0.0	0.3	0.0	-0.1	0.0	0.2	0.4	-0.8	0.3	2.5	0.5	2.7	0.5	-0.4	0.4	1.6	0.3	165.0	0.1	2.3	0.6	2.7	0.5
48.000	25.150	-0.4	0.0	0.4	0.0	-0.1	0.0	0.3	0.4	-0.7	0.3	3.0	0.5	3.1	0.5	0.1	0.4	1.5	0.3	166.3	0.1	3.3	0.6	3.1	0.5
48.000	25.650	-0.4	0.0	0.4	0.0	-0.1	0.0	0.4	0.4	-0.5	0.3	2.9	0.5	3.0	0.5	0.3	0.4	1.3	0.3	169.9	0.1	3.3	0.6	3.0	0.5

48.000	26.150	-0.3	0.0	0.4	0.0	-0.1	0.0	0.3	0.4	-0.6	0.3	3.1	0.6	3.2	0.5	0.2	0.4	1.5	0.3	168.7	0.1	3.4	0.7	3.2	0.5
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