

A catalogue of 5000 aseismic slip events from the San Andreas, Anatolian, Dead Sea and Chaman fault systems

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Supplementary Tables

Fault	Creepmeter full name	Creepmeter Abbreviation	Latitude	Longitude	Start Time	End Time	Sampling Rates
Hayward Fault	Pt Pinole	CPP1	37.99	-122.356	1995-08-25 19:59:59	*	1 min, 10 min
Hayward Fault	Temescal	CTM1	37.844	-122.227	1997-03-06 00:00:00	*	1 min, 10 min, 60 min
Hayward Fault	Oakland Zoo	COZ1	37.753	-122.15	1996-11-06 09:00:00	*	1 min, 10 min, 60 min
Hayward Fault	Hayward Palisades St #2	CHP1	37.663	-122.074	1994-04-02 01:20:00	*	1 min, 10 min
Hayward Fault	Fremont Winery	CFW1	37.532	-121.952	1993-12-15 01:00:00	*	1 min, 10 min, 60 min

*Still operational as of 2024-01-01 00:00:00

Table S1 Summary table of creepmeters that operated on the Hayward fault (Figure 2a) during this study.

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Fault	Creepmeter full name	Creepmeter Abbreviation	Latitude	Longitude	Start Time	End Time	Sampling Rates
Calaveras Fault	Shore Rd #1	XSH1	36.943	-121.445	2020-10-15 17:01:59	*	1 min
San Andreas Fault - San Juan Bautista	San Juan Bautista, Nylund	SJN1	36.8546	-121.54673	2004-03-11 07:59:59	*	1 min, 10 min, 30 min
San Andreas Fault - San Juan Bautista	San Juan Bautista #2	XSJ2	36.836	-121.521	1991-02-15 00:00:00	2006-07-05 01:30:00	10 min
San Andreas Fault - San Juan Bautista	San Juan Bautista #3	XSJ3	36.836	-121.521	2007-02-15 20:19:59	2016-12-08 18:09:59	10 min
San Andreas Fault - San Juan Bautista	Harris Ranch	XHR1	36.772	-121.422	1981-09-15 00:00:00	1986-12-05 23:50:00	10 min
San Andreas Fault - San Juan Bautista	Harris Ranch	XHR2	36.772	-121.422	1991-11-24 00:00:00	2005-06-27 04:50:00	10 min
San Andreas Fault - San Juan Bautista	Harris Ranch	XHR3	36.772	-121.422	2009-08-21 00:20:00	*	1 min, 10 min
San Andreas Fault - San Juan Bautista	Cienega Winery Central	CWC3	36.75	-121.385	1991-11-24 00:00:00	2000-12-11 00:00:00	10 min
San Andreas Fault - San Juan Bautista	Cienega Winery North	CWN1	36.75	-121.385	1991-11-24 00:00:00	2023-12-15 13:00:00	1 min, 2 min, 10 min
San Andreas Fault - San Juan Bautista	Fox Creek	FCR1	36.6925	-121.3061	2022-06-06 00:01:00	*	1 min
San Andreas Fault - San Juan Bautista	Melendy Ranch	XMR1	36.595	-121.187	1980-01-30 00:00:00	*	1 min, 10 min

*Still operational as of 2024-01-01 00:00:00

Table S2 Summary table of creepmeters that operated in the San Juan Bautista Region (Figure 2b) during this study.

Fault	Creepmeter full name	Creepmeter Abbreviation	Latitude	Longitude	Start Time	End Time	Sampling Rates
San Andreas Fault - Parkfield	Slacks Canyon	XSC1	36.065	-120.628	1985-04-12 00:00:00	*	10 min
San Andreas Fault - Parkfield	Middle Mtn	XMM1	35.958	-120.502	1984-09-26 00:00:00	*	10 min
San Andreas Fault - Parkfield	Middle Ridge	XMD1	35.943	-120.485	1986-09-22 00:00:00	*	10 min
San Andreas Fault - Parkfield	Varian	XVA1	35.922	-120.462	1987-05-29 00:00:00	2017-10-23 22:10:00	10 min
San Andreas Fault - South West Trace	Roberson, SW trace	XRSW	35.907	-120.46	1987-06-12 00:00:00	2005-09-23 00:00:00	10 min
San Andreas Fault - Parkfield	Parkfield #1	XPk1	35.902	-120.442	1985-08-25 00:09:59	2004-09-28 17:09:59	10 min
San Andreas Fault - Parkfield	Parkfield #2	XPk2	35.902	-120.442	2004-10-01 00:00:00	*	10 min
San Andreas Fault - Parkfield	Taylor Ranch	XTA1	35.89	-120.427	1985-12-18 00:00:00	*	10 min
San Andreas Fault - South West Trace	Hearst, SW trace	XHSW	35.862	-120.42	1987-07-09 00:00:00	2010-05-18 17:10:00	10 min
San Andreas Fault - Parkfield	Work Ranch	WKR1	35.858	-120.392	1985-11-21 00:00:00	*	10 min
San Andreas Fault - Parkfield	Carr Ranch	CRR1	35.835	-120.363	1989-03-04 00:00:00	2017-03-27 09:50:00	10 min
San Andreas Fault - Parkfield	Gold Hill	XGH1	35.82	-120.348	1985-04-03 00:00:00	2022-06-28 09:10:00	10 min
San Andreas Fault - Parkfield	Highway 46, C	C461	35.724	-120.282	2004-09-29 02:20:00	2022-06-20 12:40:00	10 min
San Andreas Fault - Parkfield	Highway 46, C	C462	35.724	-120.282	2021-08-19 19:10:11	*	1 min
San Andreas Fault - Parkfield	Highway 46, X	X461	35.723	-120.278	1986-11-01 00:00:00	2017-03-27 09:50:00	10 min

*Still operational as of 2024-01-01 00:00:00

Table S3 Summary table of creepmeters that operated in the Parkfield Region (Figure 2c) during this study.

Fault	Creepmeter full name	Creepmeter Abbreviation	Latitude	Longitude	Start Time	End Time	Sampling Rates
San Jacinto Fault	Mystic Lake	COML	33.8965	-117.0866	2010-08-15 00:30:00	2011-02-03 16:55:05	30 min
San Andreas Fault - Southern Section	W. Quarry SSA Mecca Hills	QW30	33.6526	-116.0846	2019-03-28 20:32:00	2019-10-27 16:29:00	1 min
San Andreas Fault - Southern Section	E. Quarry SSA Mecca Hills	QE30	33.6473	-116.078	2018-10-29 17:11:52	*	1 min
San Andreas Fault - Southern Section	Indian Ring SSA North Shore	IR30	33.57	-115.9785	2018-03-04 23:07:31	*	1 min, 5 min
San Andreas Fault - Southern Section	North Shore SSA North Shore	NS45	33.5307	-115.9388	2010-08-12 16:00:00	2022-06-15 12:51:06	1 min, 5 min, 10 min, 30 min
San Andreas Fault - Southern Section	Ferrum SSA Durmid Hill	FE30	33.4572	-115.8539	2004-03-05 05:00:00	2019-08-12 19:00:00	5 min, 10 min, 15 min, 30 min
San Andreas Fault - Southern Section	Salt Creek SSA oblique	SC30	33.4485	-115.8437	2004-04-16 20:00:00	*	1 min, 2 min, 5 min, 60 min
San Andreas Fault - Southern Section	Pipeline SSA Durmid Hill	DU30	33.412	-115.795	2004-04-16 21:50:00	*	1 min, 5 min, 10 min, 30 min
North Shoreline Fault	North Shoreline oblique	SH30	33.3713	-115.7808	2016-12-30 19:47:39	*	1 min, 5 min
East Shoreline Fault	East Shoreline Normal	EASH	33.371	-115.7801	2016-12-30 19:47:39	*	1 min, 5 min, 10 min
Superstition Hills-Fault	Superstition Hills	SU30	32.9303	-115.7009	2004-03-24 11:59:23	*	1 min, 2 min, 5 min, 10 min, 15 min
Imperial Fault	Ross Road, Imperial	RR45	32.7812	-115.4485	2010-08-08 20:25:22	*	1 min, 5 min, 10 min, 30 min
Laguna Fault	Salada Yuha East	COLE	32.6643	-115.879	2010-08-10 07:01:56	2011-02-20 20:31:56	30 min
Laguna Fault	Salada Yuha West	COLW	32.6483	-115.848	2010-04-10 00:10:00	2011-02-20 20:30:00	5 min, 30 min

*Still operational as of 2024-01-01 00:00:00

Table S4 Summary table of creepmeters that operated in the Salton Trough (Figure 2d) during this study.

Fault	Creepmeter full name	Creepmeter Abbreviation	Latitude	Longitude	Start Time	End Time	Sampling Rates
2019 Ridgecrest rupture	RA Ridgecrest	RA	35.6189	-117.5722	2019-07-22 13:47:41	2019-09-05 15:19:20	10 s, 1 min
2019 Ridgecrest rupture	RB Ridgecrest	RB	35.6189	-117.5722	2019-07-09 02:11:18	2019-09-05 15:35:18	10 s, 1 min
2019 Ridgecrest rupture	R7 Ridgecrest	R7	35.596	-117.4019	2019-07-19 15:25:27	2019-09-05 14:37:27	10 s, 1 min
Garlock Fault	GB Ridgecrest	GB	35.5239	-117.3731	2019-07-22 17:47:08	2019-09-06 07:40:00	10 s, 10 min
Garlock Fault	GS Ridgecrest	GS	35.5022	-117.4678	2019-07-20 16:31:03	2019-10-01 07:20:00	10 s, 1 min, 10 min
Garlock Fault	GD Ridgecrest	GD	35.4434	-117.6832	2019-07-30 04:10:22	*	1 min, 5 min
Southern Imperial Valley Fault - Utah	Canyonlands	CAN1	38.0198	-110.0374	2012-06-12 15:33:00	2017-06-15 08:33:00	30 min
Dead Sea Fault	Dead Sea	DS30	31.23655	35.36525	2021-02-22 00:00:00	*	60 min
Chaman Fault	Chaman	CHA1	30.8925	66.5334	2019-02-17 15:37:23	2020-11-21 13:37:23	10 min

*Still operational as of 2024-01-01 00:00:00

Table S5 Summary table of creepmeters that operated across the faults shown in Figure 3 during this study.

Fault		Creepmeter full name	Creepmeter Abbreviation	Latitude	Longitude	Start Time	End Time	Sampling Rates
North Fault	Anatolian	Seller	SEL1	40.7209	29.972	2019-10-08 05:13:39	2020-02-11 10:05:09	30 s
North Fault	Anatolian	Tepetarla	TEP1	40.721	30.0784	2019-10-08 06:21:27	2020-02-11 09:12:27	30 s
North Fault	Anatolian	Petrol	PET1	40.8657	32.5976	2017-09-26 11:23:57	2019-10-09 10:15:45	1 min, 30 min
North Fault	Anatolian	West Sazlik	WSZ1	40.8692	32.6194	2017-12-04 09:08:27	2023-06-07 12:20:26	1 min, 5 min
North Fault	Anatolian	East Sazlik	ESZ1	40.8697	32.6209	2017-12-04 09:08:27	2022-04-19 19:31:26	1 min, 5 min
North Fault	Anatolian	Ismetpasa North Wall	INW1	40.8698	32.6258	2014-05-22 00:00:00	2023-09-16 10:12:00	1 min, 30 min
North Fault	Anatolian	Ismetpasa South Wall	ISW1	40.8697	32.6258	2018-10-05 13:17:55	*	1 min
North Fault	Anatolian	Cherry	CHE1	40.8701	32.6285	2017-05-28 16:12:00	2020-05-01 17:52:26	30 s, 1 min, 5 min
North Fault	Anatolian	Hamamli	HAM1	40.8729	32.6603	2019-08-23 05:29:42	2020-01-20 14:39:42	1 min
North Fault	Anatolian	Cerkes	CER1	40.8947	32.7773	2018-11-15 14:35:41	*	30 s, 1 min

*Still operational as of 2024-01-01 00:00:00

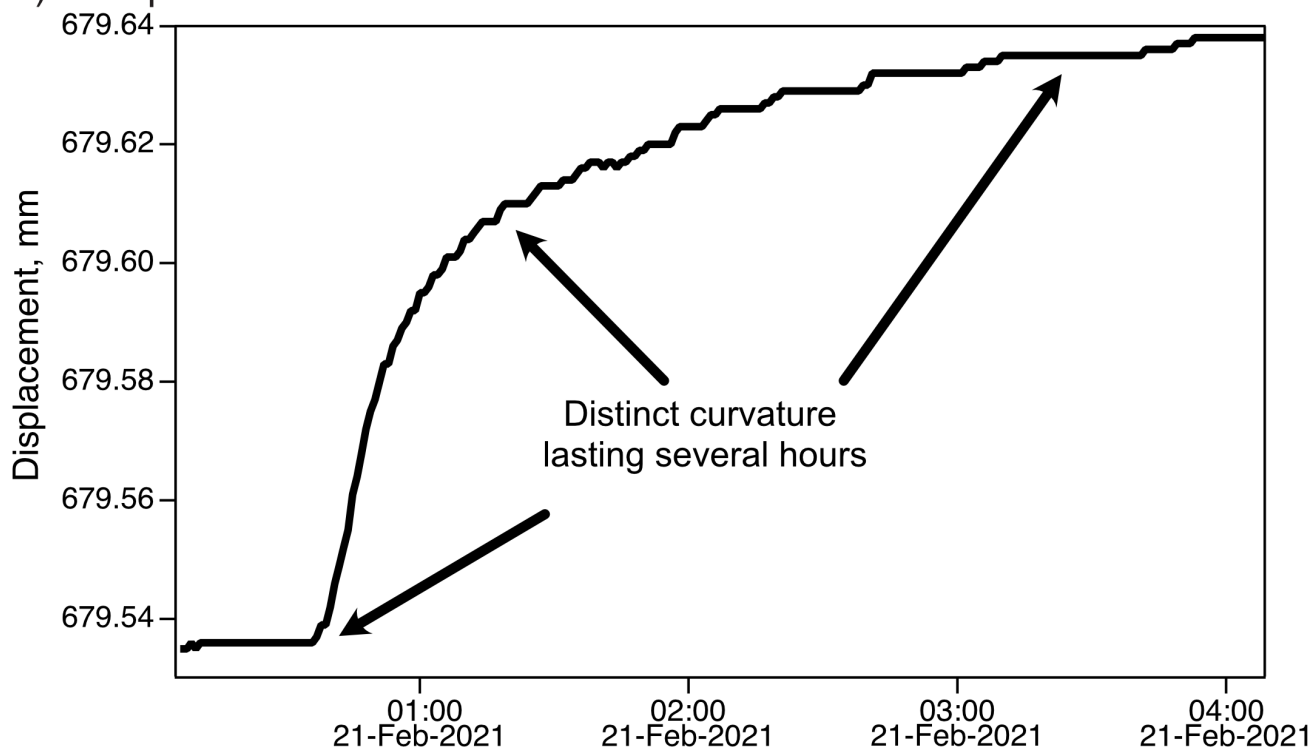
Table S6 Summary table of creepmeters that operated on the North Anatolian Fault (Figure 4a&b) during this study.

Fault		Creepmeter full name	Creepmeter Abbreviation	Latitude	Longitude	Start Time	End Time	Sampling Rates
Sariz Fault		Hatay	HAT1	38.387	36.2803	2023-03-06 14:49:00	2023-10-20 22:35:00	1 min
East Fault	Anatolian	Kirikhan	KIR1	36.4791	36.3339	2023-03-06 14:49:00	*	1 min
East Fault	Anatolian	Hassa	HAS1	36.8006	36.5185	2023-03-07 15:54:00	2023-08-22 11:03:00	1 min
Elbistan Fault		Goksun	GOK1	38.006	36.5267	2023-04-02 19:30:00	*	1 min
East Fault	Anatolian	Gozene	GOZ1	38.1759	38.0103	2023-03-14 15:00:00	*	1 min
East Fault	Anatolian	Balikburnu	BAL1	37.9903	38.199	2023-03-12 10:47:55	2023-09-5 13:15:16	1 min
East Fault	Anatolian	Karakose	KAR1	38.0697	38.4983	2023-06-05 05:38:00	*	1 min
East Fault	Anatolian	Yazica West	YZW1	38.1086	38.7361	2023-03-22 10:59:37	*	1 min
East Fault	Anatolian	Yazica East	YZE1	38.1791	38.7526	2023-09-07 10:36:07	*	1 min
East Fault	Anatolian	Ormanice	ORM1	38.2113	38.7732	2023-03-20 13:38:00	2023-12-02 08:37:01	1 min
East Fault	Anatolian	Tasmis	TAS1	38.2049	38.7872	2023-06-01 10:55:00	*	1 min, 10 min
East Fault	Anatolian	Sivrice	SIV1	38.388	39.1873	2020-02-05 11:47:51	*	10 s, 1 min
East Fault	Anatolian	Palu North	PAN1	38.699	39.9537	2017-07-24 07:00:44	*	1 min, 5 min
East Fault	Anatolian	Palu South	PAS1	38.699	39.9537	2017-07-24 07:00:44	2021-11-26 19:31:44	1 min, 5 min

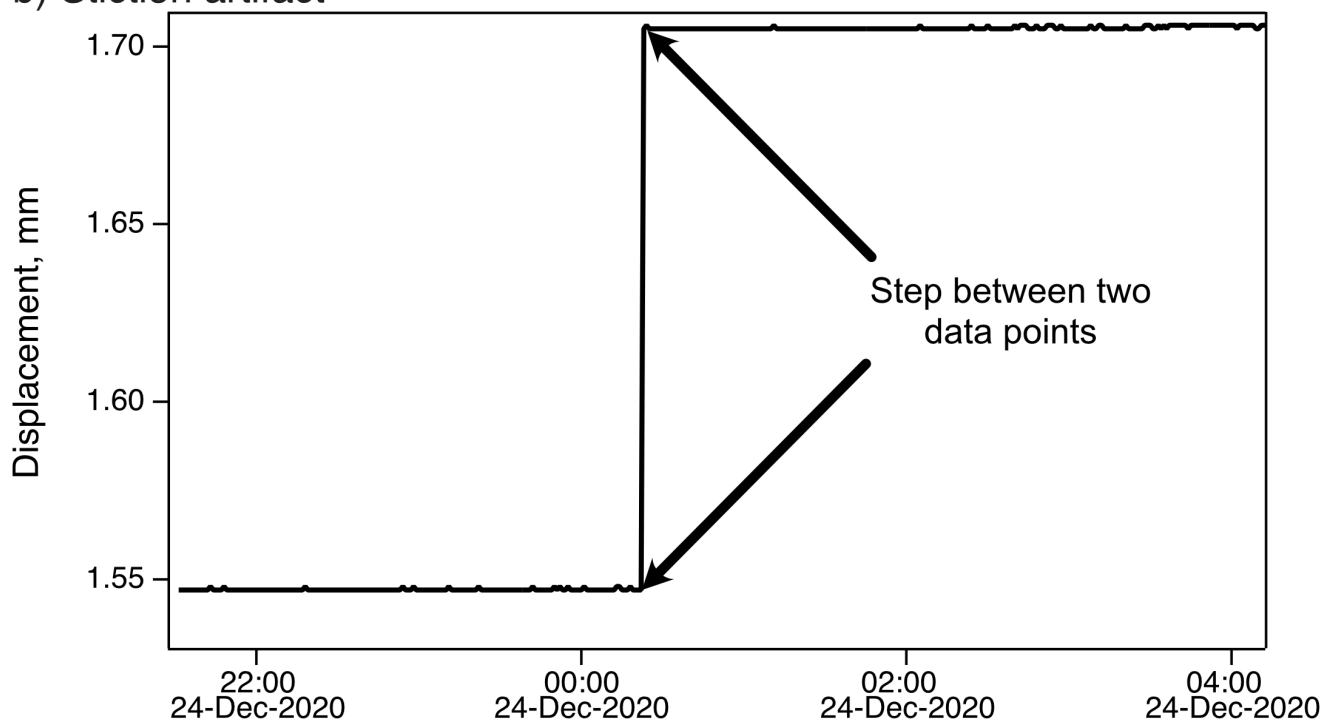
*Still operational as of 2024-01-01 00:00:00

Table S7 Summary table of creepmeters that operated in the East Anatolian region (Figure 4c) during this study.

a) Creeplet



b) Stiction artifact

**Figure S1** Examples of a creeplet and a stiction artifact. a) Creeplet (XMR1). b) Stiction artifact (SJN1).