Supplementary Material
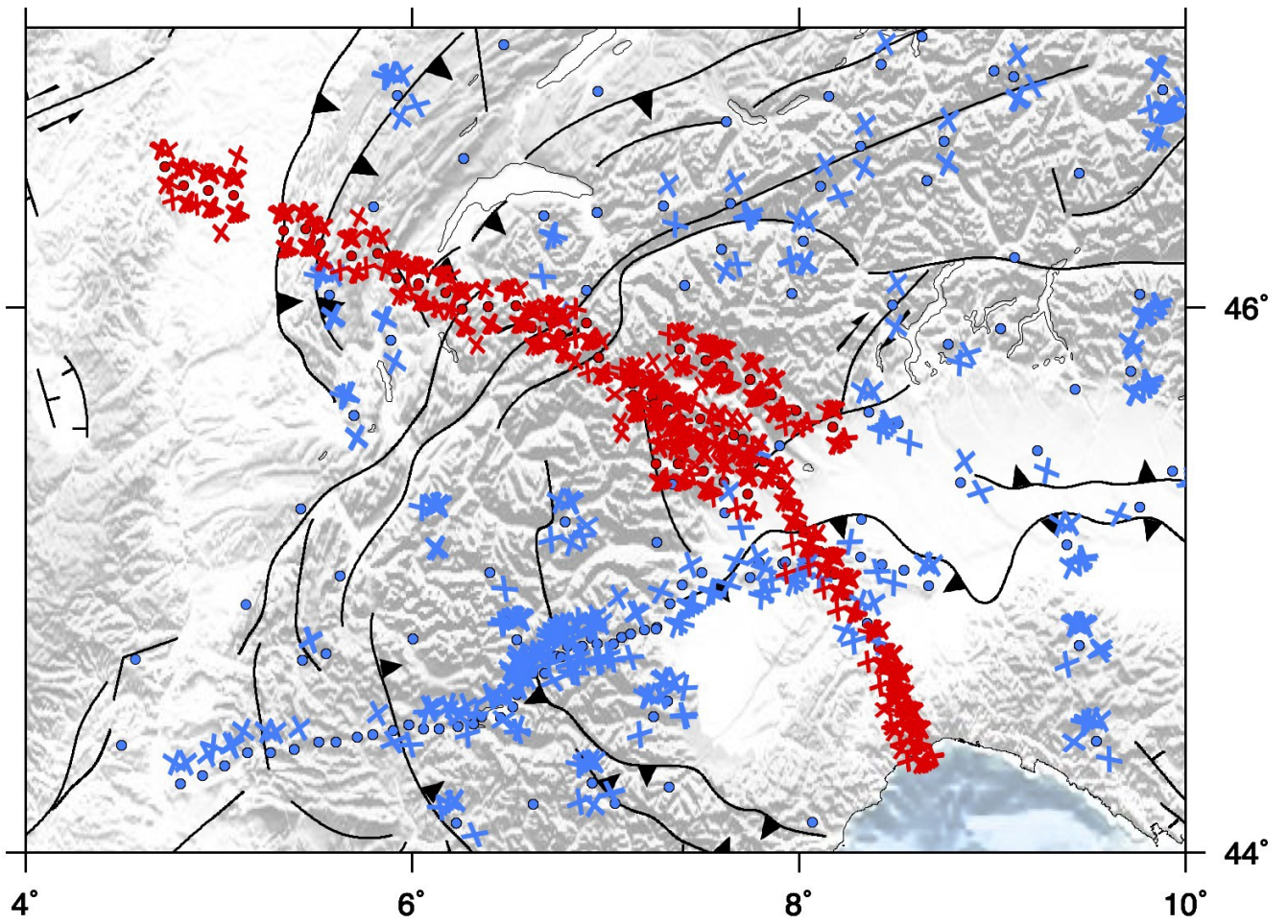
Figure S1 – Map of null measurements plotted at the piercing point of 150 km depth, marked with crosses, rotated in the back azimuth direction; in red from CIFALPS2 stations, in light blue all previous data.
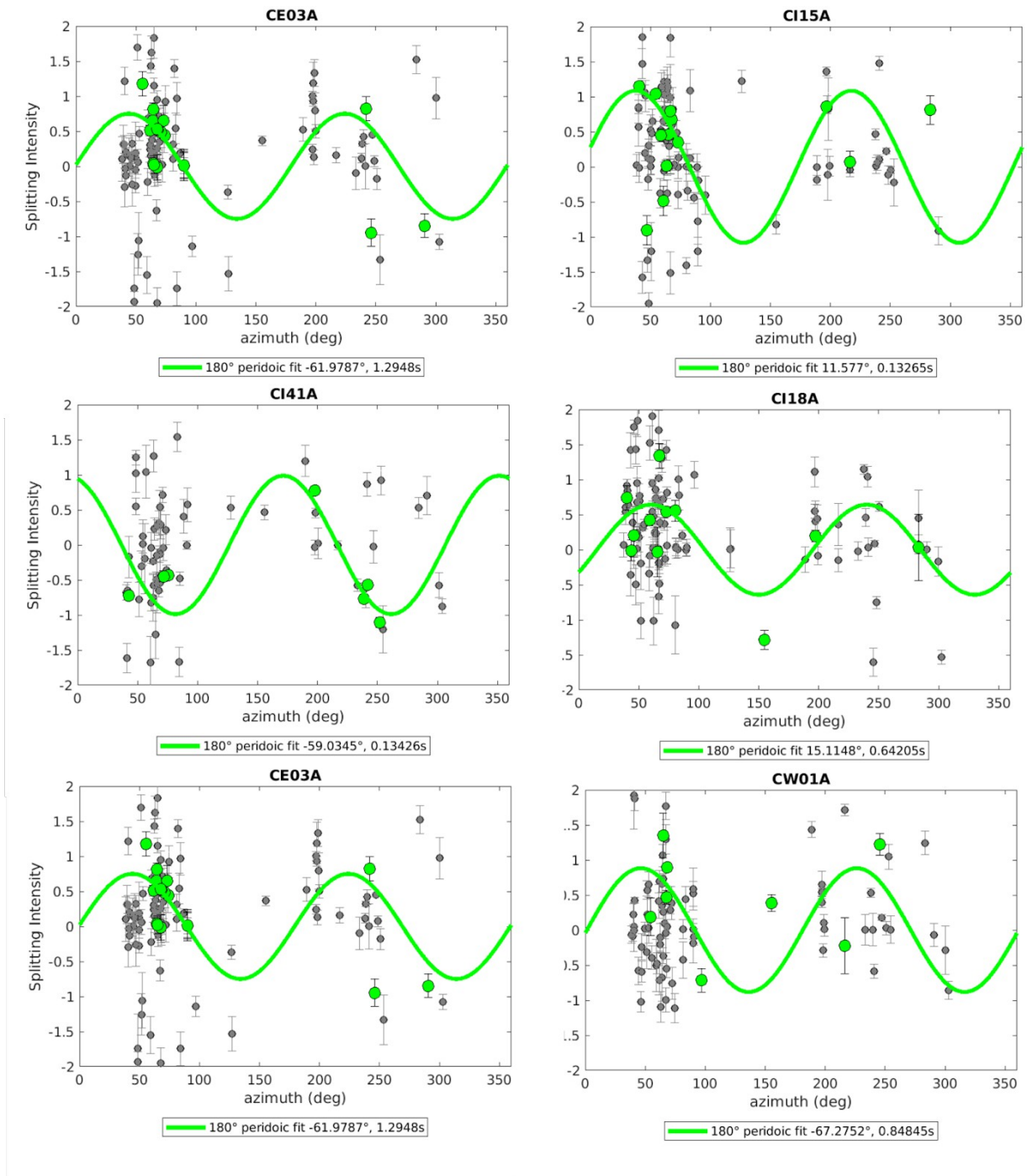
Figure S2 - Splitting intensity measurements for a few example stations. Grey dots: all measurements; green circles: only measurements that fit the criteria and the sinusoidal curve (fast polarisation direction and time delay written below).

Table S1 - Single Splitting Intensity (SI) measurements

STA	STA LAT	STA LON	EV LAT	EV LON	DEP	BAZ	INC	SI	SIerr	EQ_ID (yy,mm,dd,hh,mm)
CE01A	45.850	7.3820	-0.26	119.90	19.5	73.7	7.74	0.5633	0.0405	1809281002
CE01A	45.850	7.3820	5.86	126.89	83.2	64.0	7.74	0.0601	0.0928	1812290339
CE01A	45.850	7.3820	2.27	126.85	66.8	66.5	7.38	0.6501	0.0388	1901061727
CE01A	45.850	7.3820	-3.47	146.07	10.2	52.6	5.52	0.7454	0.2563	1901171506
CE01A	45.850	7.3820	-5.52	133.85	9.8	66.0	6.14	-0.1614	0.1787	1901260812
CE01A	45.850	7.3820	-1.81	122.63	19.5	72.6	7.34	0.4412	0.0684	1904121140
CE01A	45.850	7.3820	11.71	125.30	84.8	61.5	8.53	0.4253	0.0563	1904230537
CE01A	45.850	7.3820	-4.10	152.61	19.5	46.6	5.11	1.2355	0.0936	1905141258
CE01A	45.850	7.3820	6.26	126.61	98.0	64.1	7.80	0.3064	0.1287	1905311012
CE01A	45.850	7.3820	0.49	126.18	19.5	68.1	7.27	0.2399	0.2292	1907071508
CE01A	45.850	7.3820	-3.44	128.44	19.5	69.1	6.72	0.3207	0.1676	1909252346
CE01A	45.850	7.3820	6.80	125.20	19.5	64.9	8.00	1.8302	0.1558	1910290104
CE01A	45.850	7.3820	1.56	126.39	59.0	67.2	7.35	1.1091	0.0626	1911141617
CE02A	45.809	7.5183	-1.06	119.96	10.0	74.3	7.67	1.9190	0.2833	1809281025
CE02A	45.809	7.5183	-10.34	119.05	19.5	81.6	6.89	-0.5372	0.2347	1901212359
CE02A	45.809	7.5183	-1.81	122.63	19.5	72.7	7.35	0.7407	0.3568	1904121140
CE02A	45.809	7.5183	-6.38	129.17	226.4	70.7	6.38	0.8537	0.0250	1906240253
CE02A	45.809	7.5183	-18.05	120.33	9.8	86.9	6.15	0.3457	0.3510	1907140539
CE02A	45.809	7.5183	-7.31	104.81	19.5	89.9	8.50	0.0089	0.1153	1908021203
CE02A	45.809	7.5183	6.80	125.20	19.5	65.0	8.01	1.8607	0.1805	1910290104
CE03A	45.786	7.6024	-0.26	119.90	19.5	73.8	7.75	0.4436	0.0433	1809281002
CE03A	45.786	7.6024	5.86	126.89	83.2	64.1	7.75	0.6473	0.0336	1812290339
CE03A	45.786	7.6024	-2.72	100.20	19.5	90.2	9.54	0.0166	0.1762	1902020927
CE03A	45.786	7.6024	-2.78	100.26	19.5	90.1	9.53	0.0174	0.2243	1902021059
CE03A	45.786	7.6024	-1.81	122.63	19.5	72.8	7.36	0.6455	0.2272	1904121140
CE03A	45.786	7.6024	11.71	125.30	84.8	61.7	8.55	0.5141	0.0685	1904230537
CE03A	45.786	7.6024	-6.94	146.46	139.5	55.4	5.20	1.1786	0.1737	1905062119
CE03A	45.786	7.6024	6.26	126.61	98.0	64.2	7.82	0.0370	0.0817	1905311012

CE03A	45.786	7.6024	-30.00	-72.11	9.8	241.6	7.90	0.8227	0.1711	1906140019
CE03A	45.786	7.6024	-6.38	129.17	226.4	70.8	6.39	0.4875	0.0605	1906240253
CE03A	45.786	7.6024	0.49	126.18	19.5	68.3	7.29	0.5261	0.0354	1907071508
CE03A	45.786	7.6024	-0.92	128.60	9.8	67.4	6.95	-0.0136	0.1784	1909141621
CE03A	45.786	7.6024	5.69	126.66	91.0	64.6	7.75	0.8130	0.0916	1909290202
CE03A	45.786	7.6024	6.80	125.15	19.5	65.1	8.02	0.0234	0.1278	1910161137
CE03A	45.786	7.6024	1.56	126.39	59.0	67.4	7.36	0.5351	0.0624	1911141617
CE04A	45.740	7.7453	-0.26	119.90	19.5	74.0	7.76	0.9002	0.0797	1809281002
CE04A	45.740	7.7453	5.86	126.89	83.2	64.3	7.76	0.4851	0.0445	1812290339
CE04A	45.740	7.7453	2.27	126.85	66.8	66.8	7.41	1.2227	0.1311	1901061727
CE04A	45.740	7.7453	11.71	125.30	84.8	61.8	8.56	0.6598	0.0393	1904230537
CE04A	45.740	7.7453	6.26	126.61	98.0	64.4	7.83	0.6234	0.0394	1905311012
CE04A	45.740	7.7453	-6.38	129.17	226.4	70.9	6.39	0.4874	0.0283	1906240253
CE04A	45.740	7.7453	0.49	126.18	19.5	68.5	7.30	0.8205	0.0843	1907071508
CE04A	45.740	7.7453	5.69	126.66	91.0	64.7	7.76	1.3103	0.1227	1909290202
CE04A	45.740	7.7453	6.80	125.20	19.5	65.2	8.03	0.7340	0.0793	1910290104
CE04A	45.740	7.7453	6.94	125.31	19.9	65.0	8.03	-0.3912	0.2440	1910310111
CE05A	45.685	7.8551	-57.49	-66.29	33.6	216.7	5.99	0.3681	0.1224	1810292017
CE05A	45.685	7.8551	5.86	126.89	83.2	64.4	7.77	0.3449	0.0544	1812290339
CE05A	45.685	7.8551	9.78	126.60	19.5	62.1	8.24	0.4057	0.2107	1902081155
CE05A	45.685	7.8551	1.65	126.44	65.2	67.6	7.39	0.5038	0.3057	1903240437
CE05A	45.685	7.8551	-1.81	122.63	19.5	73.0	7.38	1.0346	0.0606	1904121140
CE05A	45.685	7.8551	11.71	125.30	84.8	61.9	8.56	1.0035	0.0526	1904230537
CE05A	45.685	7.8551	6.26	126.61	98.0	64.5	7.84	0.7699	0.2665	1905311012
CE05A	45.685	7.8551	-6.38	129.17	226.4	71.1	6.40	0.7452	0.0435	1906240253
CE05A	45.685	7.8551	0.49	126.18	19.5	68.6	7.30	1.3720	0.0813	1907071508
CE05A	45.685	7.8551	5.69	126.66	91.0	64.8	7.77	1.5481	0.1440	1909290202
CE05A	45.685	7.8551	6.94	125.31	19.9	65.1	8.04	1.4171	0.0876	1910310111
CE05A	45.685	7.8551	1.56	126.39	59.0	67.6	7.38	0.2845	0.1529	1911141617
CE06A	45.627	7.9818	5.86	126.89	83.2	64.5	7.78	0.5776	0.0807	1812290339
CE06A	45.627	7.9818	-3.47	146.07	10.2	53.3	5.54	1.4210	0.2191	1901171506
CE06A	45.627	7.9818	-14.62	-70.10	258.6	251.3	9.71	1.2115	0.1033	1903010850

CE06A	45.627	7.9818	-6.85	125.03	549.6	74.8	6.62	-0.1637	0.0712	1904062155
CE06A	45.627	7.9818	-1.81	122.63	19.5	73.2	7.39	0.6756	0.0601	1904121140
CE06A	45.627	7.9818	11.71	125.30	84.8	62.0	8.57	0.6584	0.0794	1904230537
CE06A	45.627	7.9818	-6.38	129.17	226.4	71.2	6.41	1.2692	0.0288	1906240253
CE06A	45.627	7.9818	0.49	126.18	19.5	68.7	7.31	1.4828	0.0455	1907071508
CE06A	45.627	7.9818	1.56	126.39	59.0	67.7	7.39	1.2550	0.0529	1911141617
CE07A	45.567	8.1720	-0.26	119.90	19.5	74.3	7.80	0.7674	0.1094	1809281002
CE07A	45.567	8.1720	-58.42	-26.33	164.8	198.1	7.42	-0.2332	0.0613	1812110226
CE07A	45.567	8.1720	5.86	126.89	83.2	64.7	7.79	0.9517	0.0782	1812290339
CE07A	45.567	8.1720	11.71	125.30	84.8	62.2	8.58	0.3496	0.0663	1904230537
CE07A	45.567	8.1720	29.00	139.37	434.8	41.3	9.47	-0.2703	0.1049	1906040439
CE07A	45.567	8.1720	0.49	126.18	19.5	68.9	7.33	0.7826	0.0851	1907071508
CI01A	46.504	4.7212	0.00	119.76	10.0	71.3	7.57	-1.1948	0.1183	1809281014
CI01A	46.504	4.7212	-42.87	42.28	19.5	153.3	9.28	0.6481	0.1108	1901221901
CI01A	46.504	4.7212	-2.72	100.20	19.5	88.0	9.22	0.8975	0.1411	1902020927
CI02A	46.439	4.8174	0.00	119.76	10.0	71.4	7.58	-1.3547	0.0757	1809281014
CI02A	46.439	4.8174	17.29	147.87	10.2	37.1	7.42	1.2665	0.4633	1810260905
CI02A	46.439	4.8174	-7.43	128.75	159.0	69.2	6.16	-0.0045	0.0479	1812011327
CI02A	46.439	4.8174	-6.04	149.90	19.5	47.8	4.99	0.4637	0.1208	1812192137
CI02A	46.439	4.8174	-42.87	42.28	19.5	153.3	9.29	1.1079	0.0936	1901221901
CI03A	46.421	4.9455	-0.26	119.90	19.5	71.6	7.54	0.2770	0.0378	1809281002
CI03A	46.421	4.9455	0.00	119.76	10.0	71.5	7.59	-1.5665	0.2224	1809281014
CI03A	46.421	4.9455	-1.06	119.96	10.0	72.1	7.47	-1.3681	0.1830	1809281025
CI04A	46.402	5.0743	-42.87	42.28	19.5	153.5	9.31	-0.5223	0.1560	1901221901
CI05A	46.277	5.3345	-1.06	119.96	10.0	72.4	7.49	1.2095	0.1553	1809281025
CI05A	46.277	5.3345	1.65	126.44	65.2	65.4	7.21	0.0324	0.1228	1903240437
CI05A	46.277	5.3345	-60.03	-26.63	124.2	196.2	7.22	0.2716	0.0822	1908272355
CI05A	46.277	5.3345	6.87	125.24	34.8	63.1	7.86	-0.0161	0.1148	1910290242
CI05A	46.277	5.3345	1.64	132.86	9.8	60.0	6.74	0.2371	0.1292	1911231211
CI06A	46.282	5.4496	-10.34	119.05	19.5	79.8	6.72	0.3987	0.0763	1901212359
CI06A	46.282	5.4496	29.00	139.37	434.8	39.2	9.36	0.3377	0.0487	1906040439
CI06A	46.282	5.4496	-31.80	-71.45	55.9	238.7	7.92	0.0303	0.1514	1911042153

CI07A	46.231	5.5241	-10.46	120.17	10.0	79.2	6.62	-0.4238	0.1723	1810020016
CI07A	46.231	5.5241	-30.11	-71.58	61.3	240.0	8.07	0.0305	0.3285	1901200132
CI07A	46.231	5.5241	-10.34	119.05	19.5	79.9	6.73	0.0121	0.1786	1901212359
CI07A	46.231	5.5241	-10.37	119.05	19.5	80.0	6.73	0.0144	0.1773	1901220510
CI07A	46.231	5.5241	-42.87	42.28	19.5	153.8	9.36	-0.0046	0.0551	1901221901
CI07A	46.231	5.5241	-5.52	133.85	9.8	64.2	6.03	0.0272	0.3418	1901260812
CI07A	46.231	5.5241	-2.72	100.20	19.5	88.6	9.30	0.0113	0.1311	1902020927
CI07A	46.231	5.5241	-2.78	100.26	19.5	88.6	9.29	0.0097	0.1310	1902021059
CI07A	46.231	5.5241	9.78	126.60	19.5	60.1	8.08	0.0419	0.4250	1902081155
CI07A	46.231	5.5241	-6.85	125.03	549.6	72.6	6.46	0.1952	0.0530	1904062155
CI07A	46.231	5.5241	-31.80	-71.45	55.9	238.7	7.91	1.8757	0.4471	1911042153
CI08A	46.185	5.6842	17.29	147.87	10.2	37.9	7.44	0.4694	0.0833	1810260905
CI08A	46.185	5.6842	-10.37	119.05	19.5	80.2	6.74	-0.6585	0.0788	1901220510
CI08A	46.185	5.6842	-7.00	156.40	384.4	42.1	4.58	0.8294	0.3038	1901260351
CI08A	46.185	5.6842	5.69	126.66	91.0	62.9	7.62	1.2057	0.3176	1909290202
CI09A	46.193	5.8187	12.22	146.24	10.0	42.1	6.97	-0.4719	0.1859	1809230552
CI09A	46.193	5.8187	-7.43	128.75	159.0	70.2	6.22	-0.6023	0.1002	1812011327
CI09A	46.193	5.8187	-10.37	119.05	19.5	80.3	6.75	-0.8538	0.0843	1901220510
CI09A	46.193	5.8187	8.52	127.04	15.6	60.9	7.92	0.6865	0.1300	1903060013
CI09A	46.193	5.8187	-55.76	-27.85	74.2	198.9	7.71	-0.0111	0.1160	1904051614
CI10A	46.105	5.9172	-0.26	119.90	19.5	72.4	7.62	0.1711	0.0390	1809281002
CI10A	46.105	5.9172	-58.42	-26.33	164.8	197.1	7.42	1.3135	0.0682	1812110226
CI10A	46.105	5.9172	-30.11	-71.58	61.3	240.2	8.05	0.0236	0.2471	1901200132
CI11A	46.087	6.0314	-58.42	-26.33	164.8	197.1	7.42	1.0427	0.0921	1812110226
CI11A	46.087	6.0314	-10.34	119.05	19.5	80.3	6.76	0.0942	0.0732	1901212359
CI11A	46.087	6.0314	-2.78	100.26	19.5	89.0	9.35	-0.8960	0.1927	1902021059
CI11A	46.087	6.0314	29.00	139.37	434.8	39.7	9.38	0.6820	0.2361	1906040439
CI11A	46.087	6.0314	0.49	126.18	19.5	67.0	7.17	0.6936	0.0319	1907071508
CI12A	46.053	6.1727	-58.42	-26.33	164.8	197.2	7.42	1.0550	0.1108	1812110226
CI12A	46.053	6.1727	5.86	126.89	83.2	62.9	7.65	0.0273	0.0413	1812290339
CI12A	46.053	6.1727	-7.00	156.40	384.4	42.8	4.59	0.9258	0.1733	1901260351
CI12A	46.053	6.1727	29.00	139.37	434.8	39.8	9.38	0.6696	0.0703	1906040439

CI12A	46.053	6.1727	-6.38	129.17	226.4	69.5	6.29	0.5003	0.0529	1906240253
CI12A	46.053	6.1727	0.49	126.18	19.5	67.1	7.18	0.7010	0.0255	1907071508
CI12A	46.053	6.1727	6.80	125.20	19.5	63.9	7.91	0.4365	0.0629	1910290104
CI12A	46.053	6.1727	6.94	125.31	19.9	63.7	7.92	0.9995	0.1303	1910310111
CI13A	45.994	6.2554	0.00	119.76	10.0	72.6	7.69	1.8037	0.1709	1809281014
CI13A	45.994	6.2554	-4.94	151.71	139.8	46.8	5.02	-0.3421	0.2386	1810102200
CI13A	45.994	6.2554	5.86	126.89	83.2	63.0	7.66	0.0133	0.0877	1812290339
CI13A	45.994	6.2554	-7.00	156.40	384.4	42.9	4.59	0.7991	0.0959	1901260351
CI13A	45.994	6.2554	29.00	139.37	434.8	39.9	9.38	1.0184	0.0821	1906040439
CI14A	46.004	6.3926	-1.06	119.96	10.0	73.3	7.57	1.7214	0.4915	1809281025
CI14A	46.004	6.3926	2.27	126.85	66.8	65.6	7.31	1.0425	0.1084	1901061727
CI14A	46.004	6.3926	-42.87	42.28	19.5	154.4	9.44	-0.7778	0.0786	1901221901
CI14A	46.004	6.3926	-55.76	-27.85	74.2	199.1	7.72	-0.0462	0.2071	1904051614
CI15A	46.005	6.5370	-0.26	119.90	19.5	73.0	7.67	0.3478	0.0340	1809281002
CI15A	46.005	6.5370	-4.94	151.71	139.8	47.2	5.03	-0.9066	0.2099	1810102200
CI15A	46.005	6.5370	-57.30	-66.37	63.3	216.4	6.03	0.0711	0.1547	1810290654
CI15A	46.005	6.5370	5.86	126.89	83.2	63.2	7.68	0.0152	0.0767	1812290339
CI15A	46.005	6.5370	-5.52	133.85	9.8	65.2	6.08	0.4599	0.1246	1901260812
CI15A	46.005	6.5370	9.78	126.60	19.5	61.0	8.15	-0.4844	0.2110	1902081155
CI15A	46.005	6.5370	-6.94	146.46	139.5	54.2	5.15	1.0375	0.0683	1905062119
CI15A	46.005	6.5370	-2.16	138.50	19.5	58.7	6.06	0.4506	0.0900	1906191724
CI15A	46.005	6.5370	19.79	144.47	409.8	40.6	7.87	1.1455	0.0290	1906281551
CI15A	46.005	6.5370	0.49	126.18	19.5	67.4	7.21	0.6778	0.0558	1907071508
CI15A	46.005	6.5370	-60.03	-26.63	124.2	196.7	7.23	0.8547	0.0277	1908272355
CI15A	46.005	6.5370	1.56	126.39	59.0	66.5	7.29	0.7970	0.0410	1911141617
CI16A	45.925	6.6170	-0.26	119.90	19.5	73.0	7.67	0.6229	0.0386	1809281002
CI16A	45.925	6.6170	-1.06	119.96	10.0	73.5	7.59	-0.4874	0.1644	1809281025
CI16A	45.925	6.6170	-35.87	101.03	18	253.1	5.33	-0.0334	0.2491	1812190137
CI16A	45.925	6.6170	-42.87	42.28	19.5	154.6	9.46	-0.0054	0.0569	1901221901
CI16A	45.925	6.6170	-5.52	133.85	9.8	65.3	6.09	0.0277	0.3249	1901260812
CI16A	45.925	6.6170	-2.72	100.20	19.5	89.5	9.43	0.0097	0.1283	1902020927
CI16A	45.925	6.6170	-2.78	100.26	19.5	89.4	9.42	0.0110	0.1277	1902021059

CI16A	45.925	6.6170	9.78	126.60	19.5	61.1	8.15	0.0456	0.4047	1902081155
CI16A	45.925	6.6170	10.35	126.12	62.1	61.2	8.24	1.5484	0.1891	1903081506
CI16A	45.925	6.6170	11.71	125.30	84.8	60.9	8.47	1.0051	0.0516	1904230537
CI16A	45.925	6.6170	-6.94	146.46	139.5	54.3	5.15	0.9850	0.0723	1905062119
CI16A	45.925	6.6170	-4.10	152.61	19.5	45.7	5.08	0.8694	0.1868	1905141258
CI16A	45.925	6.6170	29.00	139.37	434.8	40.1	9.40	0.9680	0.0709	1906040439
CI16A	45.925	6.6170	-2.16	138.50	19.5	58.8	6.06	1.3793	0.1107	1906191724
CI16A	45.925	6.6170	-6.38	129.17	226.4	69.9	6.32	0.5927	0.0624	1906240253
CI16A	45.925	6.6170	19.79	144.47	409.8	40.7	7.87	1.3315	0.0520	1906281551
CI16A	45.925	6.6170	0.49	126.18	19.5	67.5	7.21	0.8738	0.0392	1907071508
CI16A	45.925	6.6170	-0.64	128.02	9.8	66.7	6.95	1.3038	0.1065	1907140910
CI16A	45.925	6.6170	-60.03	-26.63	124.2	196.8	7.23	1.3241	0.0545	1908272355
CI17A	45.947	6.7180	-0.26	119.90	19.5	73.1	7.69	0.4495	0.0705	1809281002
CI17A	45.947	6.7180	-10.46	120.17	10.0	80.3	6.72	1.4507	0.2269	1810020016
CI17A	45.947	6.7180	-7.45	114.43	19.5	82.3	7.48	-0.0878	0.1087	1810101844
CI17A	45.947	6.7180	5.86	126.89	83.2	63.4	7.69	0.0272	0.1362	1812290339
CI17A	45.947	6.7180	-30.11	-71.58	61.3	240.7	7.99	0.3770	0.1061	1901200132
CI17A	45.947	6.7180	-42.87	42.28	19.5	154.6	9.46	-0.9240	0.1025	1901221901
CI17A	45.947	6.7180	10.35	126.12	62.1	61.3	8.25	0.6499	0.0917	1903081506
CI17A	45.947	6.7180	29.00	139.37	434.8	40.2	9.41	0.7326	0.0746	1906040439
CI17A	45.947	6.7180	19.79	144.47	409.8	40.8	7.88	0.8229	0.0342	1906281551
CI17A	45.947	6.7180	0.49	126.18	19.5	67.6	7.22	0.6969	0.0281	1907071508
CI17A	45.947	6.7180	6.80	125.15	19.5	64.4	7.95	0.3724	0.0796	1910161137
CI18A	45.900	6.7699	-0.26	119.90	19.5	73.2	7.69	0.5447	0.0679	1809281002
CI18A	45.900	6.7699	-10.51	120.24	19.5	80.3	6.71	0.5548	0.1480	1810012359
CI18A	45.900	6.7699	-58.42	-26.33	164.8	197.5	7.42	0.1933	0.0836	1812110226
CI18A	45.900	6.7699	-42.87	42.28	19.5	154.7	9.47	-1.2876	0.1389	1901221901
CI18A	45.900	6.7699	-7.00	156.40	384.4	43.6	4.61	-0.0103	0.1471	1901260351
CI18A	45.900	6.7699	-5.52	133.85	9.8	65.5	6.10	-0.0302	0.3543	1901260812
CI18A	45.900	6.7699	-3.35	152.23	358.6	46.0	5.13	0.2036	0.3078	1902171435
CI18A	45.900	6.7699	-2.16	138.50	19.5	59.0	6.07	0.4230	0.0856	1906191724
CI18A	45.900	6.7699	-0.64	128.02	9.8	66.9	6.97	1.3366	0.1783	1907140910

CI19A	45.945	6.8987	-6.04	149.90	19.5	50.3	5.07	-0.8620	0.1875	1812192137
CI19A	45.945	6.8987	-14.62	-70.10	258.6	250.6	9.81	0.5240	0.0502	1903010850
CI19A	45.945	6.8987	-55.76	-27.85	74.2	199.4	7.71	1.1017	0.0813	1904051614
CI19A	45.945	6.8987	-6.85	125.03	549.6	73.8	6.55	1.8740	0.1424	1904062155
CI19A	45.945	6.8987	-1.81	122.63	19.5	72.2	7.31	0.7696	0.0560	1904121140
CI19A	45.945	6.8987	29.00	139.37	434.8	40.3	9.42	1.2433	0.1255	1906040439
CI19A	45.945	6.8987	-2.16	138.50	19.5	59.0	6.08	1.3913	0.0837	1906191724
CI19A	45.945	6.8987	0.49	126.18	19.5	67.7	7.24	0.9356	0.0420	1907071508
CI19A	45.945	6.8987	-60.03	-26.63	124.2	196.9	7.22	0.7249	0.0415	1908272355
CI19A	45.945	6.8987	-35.41	-73.17	13.1	237.9	7.35	0.7925	0.0687	1909291557
CI19A	45.945	6.8987	1.56	126.39	59.0	66.8	7.32	1.5790	0.0520	1911141617
CI21A	45.724	7.1389	-0.26	119.90	19.5	73.5	7.71	1.0832	0.0989	1809281002
CI21A	45.724	7.1389	0.00	119.76	10.0	73.4	7.75	1.5397	0.0906	1809281014
CI21A	45.724	7.1389	5.86	126.89	83.2	63.8	7.72	0.8406	0.0842	1812290339
CI21A	45.724	7.1389	-10.34	119.05	19.5	81.3	6.85	0.1473	0.2306	1901212359
CI21A	45.724	7.1389	-10.37	119.05	19.5	81.5	6.85	0.2566	0.1864	1901220510
CI21A	45.724	7.1389	-7.00	156.40	384.4	44.1	4.62	0.9413	0.2628	1901260351
CI21A	45.724	7.1389	-6.38	129.17	226.4	70.4	6.35	0.9671	0.0372	1906240253
CI21A	45.724	7.1389	0.49	126.18	19.5	68.0	7.25	1.1114	0.0520	1907071508
CI21A	45.724	7.1389	-18.05	120.33	9.8	86.7	6.12	1.1557	0.1200	1907140539
CI21A	45.724	7.1389	-0.92	128.60	9.8	67.1	6.92	-0.0895	0.1605	1909141621
CI22A	45.684	7.1415	-0.26	119.90	19.5	73.5	7.71	0.7957	0.0723	1809281002
CI22A	45.684	7.1415	0.00	119.76	10.0	73.4	7.75	1.9444	0.1960	1809281014
CI22A	45.684	7.1415	0.49	126.18	19.5	68.0	7.24	0.9683	0.0948	1907071508
CI22A	45.684	7.1415	-18.05	120.33	9.8	86.7	6.12	0.9249	0.1636	1907140539
CI23A	45.678	7.2388	-0.26	119.90	19.5	73.6	7.72	1.0696	0.0717	1809281002
CI23A	45.678	7.2388	-10.46	120.17	10.0	80.8	6.75	-0.3726	0.1663	1810020016
CI23A	45.678	7.2388	-23.04	112.66	10.2	96.6	6.36	-0.0229	0.2452	1812161426
CI23A	45.678	7.2388	5.86	126.89	83.2	63.9	7.72	0.3909	0.0632	1812290339
CI23A	45.678	7.2388	2.27	126.85	66.8	66.4	7.36	0.4645	0.0964	1901061727
CI23A	45.678	7.2388	8.52	127.04	15.6	62.2	8.01	0.4764	0.0846	1903060013
CI23A	45.678	7.2388	-55.76	-27.85	74.2	199.6	7.73	0.0351	0.1391	1904051614

CI23A	45.678	7.2388	11.71	125.30	84.8	61.5	8.51	0.8582	0.0591	1904230537
CI23A	45.678	7.2388	-6.91	160.18	19.5	39.6	4.49	1.3872	0.1619	1905030725
CI23A	45.678	7.2388	6.26	126.61	98.0	64.0	7.78	0.5985	0.0725	1905311012
CI23A	45.678	7.2388	-6.38	129.17	226.4	70.5	6.36	0.9549	0.0367	1906240253
CI23A	45.678	7.2388	0.49	126.18	19.5	68.1	7.25	0.8975	0.0462	1907071508
CI23A	45.678	7.2388	6.80	125.20	19.5	64.8	7.98	0.7865	0.0844	1910290104
CI23A	45.678	7.2388	1.56	126.39	59.0	67.1	7.33	1.1949	0.1322	1911141617
CI24A	45.650	7.2530	-0.26	119.90	19.5	73.6	7.72	1.0694	0.0929	1809281002
CI24A	45.650	7.2530	5.86	126.89	83.2	63.9	7.72	0.3099	0.0539	1812290339
CI24A	45.650	7.2530	-6.85	125.03	549.6	74.2	6.57	0.1893	0.0861	1904062155
CI24A	45.650	7.2530	11.71	125.30	84.8	61.5	8.50	0.8582	0.0459	1904230537
CI24A	45.650	7.2530	-6.94	146.46	139.5	55.1	5.17	0.0734	0.2975	1905062119
CI24A	45.650	7.2530	-6.38	129.17	226.4	70.6	6.36	1.0258	0.0482	1906240253
CI24A	45.650	7.2530	0.49	126.18	19.5	68.1	7.25	0.9026	0.0457	1907071508
CI24A	45.650	7.2530	-4.44	101.28	19.5	90.3	9.18	1.0278	0.0605	1910142223
CI24A	45.650	7.2530	6.80	125.20	19.5	64.9	7.98	0.9197	0.0646	1910290104
CI24A	45.650	7.2530	1.64	132.86	9.8	61.8	6.84	0.5526	0.0733	1911231211
CI25A	45.629	7.3243	-0.26	119.90	19.5	73.7	7.73	0.9740	0.0663	1809281002
CI25A	45.629	7.3243	-1.06	119.96	10.0	74.2	7.64	0.6391	0.1449	1809281025
CI25A	45.629	7.3243	5.86	126.89	83.2	64.0	7.72	0.4368	0.0366	1812290339
CI25A	45.629	7.3243	-10.37	119.05	19.5	81.7	6.86	0.9757	0.0780	1901220510
CI25A	45.629	7.3243	11.71	125.30	84.8	61.5	8.51	0.5712	0.0546	1904230537
CI25A	45.629	7.3243	6.26	126.61	98.0	64.1	7.78	-1.7950	0.3814	1905311012
CI25A	45.629	7.3243	-6.38	129.17	226.4	70.6	6.36	1.0434	0.0566	1906240253
CI25A	45.629	7.3243	0.49	126.18	19.5	68.2	7.26	0.9086	0.0999	1907071508
CI25A	45.629	7.3243	6.80	125.20	19.5	64.9	7.98	1.1708	0.1304	1910290104
CI25A	45.629	7.3243	1.56	126.39	59.0	67.2	7.34	0.2650	0.0838	1911141617
CI26A	45.596	7.3907	-10.37	119.05	19.5	81.7	6.87	1.1453	0.2121	1901220510
CI26A	45.596	7.3907	-10.09	152.09	10.2	51.7	4.62	0.7148	0.2772	1903101248
CI26A	45.596	7.3907	0.49	126.18	19.5	68.2	7.26	1.1745	0.0782	1907071508
CI27A	45.596	7.4880	-10.46	120.17	10.0	81.0	6.77	0.3866	0.4755	1810020016
CI28A	45.556	7.5737	11.71	125.30	84.8	61.7	8.53	0.4497	0.1141	1904230537

CI29A	45.538	7.6631	6.26	126.61	98.0	64.4	7.81	0.4439	0.2432	1905311012
CI29A	45.538	7.6631	-6.38	129.17	226.4	71.0	6.38	1.0928	0.1515	1906240253
CI29A	45.538	7.6631	0.49	126.18	19.5	68.5	7.28	0.7900	0.3852	1907071508
CI29A	45.538	7.6631	6.26	126.61	98.0	64.4	7.81	0.4439	0.2432	1905311012
CI29A	45.538	7.6631	-6.38	129.17	226.4	71.0	6.38	1.0928	0.1515	1906240253
CI29A	45.538	7.6631	0.49	126.18	19.5	68.5	7.28	0.7900	0.3852	1907071508
CI30A	45.524	7.7104	-6.04	149.90	19.5	51.5	5.08	-1.1889	0.2453	1812192137
CI30A	45.524	7.7104	0.49	126.18	19.5	68.5	7.28	1.2315	0.1096	1907071508
CI30A	45.524	7.7104	-0.92	128.60	9.8	67.6	6.95	0.4890	0.2897	1909141621
CI31A	45.441	7.8122	-14.62	-70.10	258.6	251.2	9.74	0.5816	0.0492	1903010850
CI31A	45.441	7.8122	29.00	139.37	434.8	41.0	9.43	-0.6504	0.1497	1906040439
CI31A	45.441	7.8122	6.80	125.15	19.5	65.4	8.02	0.4940	0.0762	1910161137
CI32A	45.359	7.9062	6.26	126.61	98.0	64.6	7.82	0.7431	0.1956	1905311012
CI32A	45.359	7.9062	6.80	125.20	19.5	65.4	8.02	0.4591	0.1371	1910290104
CI33A	45.288	7.9447	-23.04	112.66	10.2	97.3	6.42	-0.9293	0.1217	1812161426
CI33A	45.288	7.9447	-30.11	-71.58	61.3	241.3	7.93	0.6535	0.1378	1901200132
CI33A	45.288	7.9447	9.78	126.60	19.5	62.2	8.22	0.2719	0.0948	1902081155
CI33A	45.288	7.9447	19.79	144.47	409.8	41.9	7.89	-1.4684	0.0720	1906281551
CI34A	45.191	8.0221	29.00	139.37	434.8	41.2	9.42	-0.8557	0.1315	1906040439
CI36A	45.031	8.1833	-10.46	120.17	10.0	81.8	6.82	-1.1712	0.2383	1810020016
CI36A	45.031	8.1833	-10.37	119.05	19.5	82.6	6.93	-0.7112	0.0744	1901220510
CI36A	45.031	8.1833	-2.72	100.20	19.5	90.6	9.62	-0.0929	0.2266	1902020927
CI36A	45.031	8.1833	11.71	125.30	84.8	62.3	8.55	0.3814	0.0714	1904230537
CI36A	45.031	8.1833	6.26	126.61	98.0	64.9	7.83	0.8216	0.1222	1905311012
CI37A	44.952	8.2530	-23.04	112.66	10.2	97.6	6.45	-1.4554	0.4135	1812161426
CI37A	44.952	8.2530	6.26	126.61	98.0	65.0	7.83	0.3742	0.1807	1905311012
CI37A	44.952	8.2530	-5.97	149.59	77.3	52.8	5.10	-0.9196	0.1089	1907150821
CI37A	44.952	8.2530	-0.92	128.60	9.8	68.3	6.97	0.7664	0.2996	1909141621
CI37A	44.952	8.2530	6.80	125.15	19.5	65.8	8.03	0.0407	0.0936	1910161137
CI38A	44.762	8.4124	-57.30	-66.37	63.3	216.7	6.05	0.0020	0.0200	1810290654
CI38A	44.762	8.4124	-57.49	-66.29	33.6	216.6	6.04	0.0013	0.0212	1810292017
CI38A	44.762	8.4124	-14.62	-70.10	258.6	251.6	9.71	-0.5057	0.0510	1903010850

CI38A	44.762	8.4124	11.71	125.30	84.8	62.5	8.55	0.0356	0.1141	1904230537
CI38A	44.762	8.4124	6.26	126.61	98.0	65.1	7.83	-1.3133	0.1998	1905311012
CI38A	44.762	8.4124	19.79	144.47	409.8	42.4	7.87	-0.0079	0.0850	1906281551
CI38A	44.762	8.4124	0.49	126.18	19.5	69.3	7.31	-0.0235	0.2395	1907071508
CI38A	44.762	8.4124	-0.64	128.02	9.8	68.6	7.05	-0.0216	0.2307	1907140910
CI38A	44.762	8.4124	-5.97	149.59	77.3	53.0	5.09	-0.0113	0.1240	1907150821
CI38A	44.762	8.4124	6.80	125.20	19.5	66.0	8.03	-0.0554	0.3688	1910290104
CI38A	44.762	8.4124	6.87	125.24	34.8	65.9	8.03	-0.0287	0.3667	1910290242
CI38A	44.762	8.4124	6.94	125.31	19.9	65.7	8.03	-0.0234	0.3639	1910310111
CI38A	44.762	8.4124	-31.80	-71.45	55.9	240.1	7.77	-0.0203	0.2100	1911042153
CI38A	44.762	8.4124	1.64	132.86	9.8	63.1	6.88	-0.0321	0.3138	1911231211
CI38A	44.762	8.4124	-18.35	-70.45	9.8	249.3	9.30	-0.0295	0.3405	1912030846
CI39A	44.674	8.4731	-57.30	-66.37	63.3	216.7	6.05	-1.1151	0.1490	1810290654
CI39A	44.674	8.4731	-2.72	100.20	19.5	90.8	9.66	0.0927	0.2980	1902020927
CI39A	44.674	8.4731	-60.03	-26.63	124.2	197.5	7.34	0.9247	0.0259	1908272355
CI39A	44.674	8.4731	1.64	132.86	9.8	63.2	6.88	-0.1997	0.1510	1911231211
CI40A	44.605	8.5230	-2.72	100.20	19.5	90.9	9.66	-1.9685	0.2516	1902020927
CI40A	44.605	8.5230	-2.16	138.50	19.5	61.2	6.12	-0.7546	0.0745	1906191724
CI40A	44.605	8.5230	-18.05	120.33	9.8	88.3	6.22	-0.7765	0.2318	1907140539
CI40A	44.605	8.5230	-0.92	128.60	9.8	68.6	6.97	0.2667	0.2197	1909141621
CI41A	44.530	8.5343	-14.62	-70.10	258.6	251.7	9.71	-1.1041	0.0740	1903010850
CI41A	44.530	8.5343	-6.85	125.03	549.6	75.7	6.64	-0.4293	0.0606	1904062155
CI41A	44.530	8.5343	-30.00	-72.11	9.8	241.9	7.90	-0.5665	0.0411	1906140019
CI41A	44.530	8.5343	-6.38	129.17	226.4	72.1	6.41	-0.4470	0.0766	1906240253
CI41A	44.530	8.5343	19.79	144.47	409.8	42.6	7.85	-0.7258	0.0398	1906281551
CI41A	44.530	8.5343	-60.03	-26.63	124.2	197.6	7.35	0.7816	0.0243	1908272355
CI41A	44.530	8.5343	-35.41	-73.17	13.1	238.4	7.33	-0.7712	0.0424	1909291557
CI42A	44.462	8.5805	-10.37	119.05	19.5	83.1	6.95	1.1350	0.2285	1901220510
CI42A	44.462	8.5805	-42.87	42.28	19.5	155.9	9.78	0.8690	0.0501	1901221901
CI42A	44.462	8.5805	-6.38	129.17	226.4	72.2	6.41	-0.6015	0.0986	1906240253
CI42A	44.462	8.5805	-35.41	-73.17	13.1	238.4	7.33	-1.2119	0.0655	1909291557
CI43A	44.397	8.6165	-42.87	42.28	19.5	155.9	9.80	0.9450	0.0675	1901221901

CI43A	44.397	8.6165	-3.35	152.23	358.6	48.8	5.12	-0.6969	0.0964	1902171435
CI43A	44.397	8.6165	-14.62	-70.10	258.6	251.7	9.70	-0.6959	0.0911	1903010850
CI43A	44.397	8.6165	-6.38	129.17	226.4	72.3	6.41	-0.3171	0.0641	1906240253
CI43A	44.397	8.6165	-34.17	-72.38	19.7	238.9	7.50	-0.8792	0.0723	1908011828
CI43A	44.397	8.6165	-35.41	-73.17	13.1	238.4	7.33	-1.0847	0.0803	1909291557
CW01A	45.433	7.2591	-57.49	-66.29	33.6	216.4	6.04	-0.2244	0.4004	1810292017
CW01A	45.433	7.2591	-23.04	112.66	10.2	96.7	6.37	-0.7174	0.1679	1812161426
CW01A	45.433	7.2591	-42.87	42.28	19.5	155.0	9.57	0.3877	0.1196	1901221901
CW01A	45.433	7.2591	0.49	126.18	19.5	68.2	7.24	0.8938	0.0544	1907071508
CW02A	45.433	7.3747	-57.30	-66.37	63.3	216.5	6.04	1.7705	0.1204	1810290654
CW02A	45.433	7.3747	-57.49	-66.29	33.6	216.4	6.03	-0.2153	0.0996	1810292017
CW02A	45.433	7.3747	0.49	126.18	19.5	68.3	7.25	1.0730	0.0886	1907071508
CW02A	45.433	7.3747	-0.92	128.60	9.8	67.4	6.93	0.0417	0.1917	1909141621
CW03A	45.407	7.5053	2.27	126.85	66.8	66.7	7.37	1.7258	0.1987	1901061727
CW03A	45.407	7.5053	11.71	125.30	84.8	61.7	8.51	0.5868	0.0836	1904230537
CW03A	45.407	7.5053	0.49	126.18	19.5	68.4	7.26	0.8621	0.1016	1907071508
CW03A	45.407	7.5053	6.80	125.20	19.5	65.1	7.99	-0.5815	0.2034	1910290104
CW04A	45.367	7.6128	8.52	127.04	15.6	62.5	8.02	0.4399	0.0883	1903060013
CW04A	45.367	7.6128	0.49	126.18	19.5	68.5	7.27	1.0816	0.0850	1907071508
CW05A	45.324	7.7318	-5.52	133.85	9.8	66.6	6.14	0.8727	0.1121	1901260812
CW05A	45.324	7.7318	6.80	125.20	19.5	65.3	8.00	-0.7146	0.0854	1910290104
CT03A	44.324	5.0275	-46.33	35.07	33	159.7	9.43	1.0060	0.0652	1307220701
CT04A	44.371	5.1477	-46.33	35.07	33	159.7	9.42	1.4409	0.0996	1307220701
CT05A	44.370	5.2677	-46.33	35.07	33	159.8	9.43	1.4937	0.0686	1307220701
CT06A	44.382	5.3872	-3.23	100.59	23.5	88.7	9.18	-0.8362	0.1189	1307060505
CT08A	44.412	5.6051	18.79	145.27	598.0	39.9	7.44	-0.6962	0.0466	1305140032
CT09A	44.429	5.7144	-46.33	35.07	33	160.1	9.44	1.6600	0.0938	1307220701

CT10A	44.437	5.7940	-46.33	35.07	33	160.2	9.44	1.9193	0.0602	1307220701
CT11A	44.454	5.9026	-10.03	107.18	11.1	89.3	7.83	-0.9164	0.0895	1306131647
CT11A	44.454	5.9026	-5.43	-81.99	5	264.6	9.80	-1.6904	0.0501	1308120949
CT12A	44.475	5.9826	-46.33	35.07	33	160.3	9.44	1.8337	0.0526	1307220701
CT13A	44.460	6.0559	-46.33	35.07	33	160.3	9.45	1.9759	0.0929	1307220701
CT20A	44.585	6.5389	-46.33	35.07	33	160.6	9.45	1.3514	0.0864	1307220701
CT21A	44.654	6.5686	-3.23	100.59	23.5	89.5	9.31	-0.3706	0.1366	1307060505
CT21A	44.654	6.5686	-46.33	35.07	33	160.7	9.44	1.1207	0.0477	1307220701

Table S2 - Anisotropy parameters obtained from SI measurements

STA	ST LAT	ST LON	FPD	Time Delay (s)	FPDerr	TDerr
CE03A	45.786	7.6024	-0.78	0.74992	-11.2	0,639
CI07A	46.231	5.5241	11.58	0.13265	14.3	0,203
CI11A	46.087	6.0314	-0.32	0.83092	12.8	1,75
CI15A	46.005	6.5370	-7.45	1.08421	-7.0	1,101
CI16A	45.925	6.6170	-2.58	1.09206	2.1	1,304
CI17A	45.947	6.7180	11.48	0.79153	12.3	0,709
CI18A	45.900	6.7699	15.11	0.64205	21.3	1,154

CI19A	45.945	6.8987	0.99	1.32372	4.1	1,079
CI21A	45.724	7.1389	37.08	1.03633	36.2	0,871
CI23A	45.678	7.2388	22.22	0.73735	22.8	1,026
CI24A	45.650	7.2530	37.75	0.92882	32.4	0,781
CI38A	44.762	8.4124	-59.03	0.13426	-45.1	0,187
CI39A	44.674	8.4731	-43.54	1.00657	79.8	1,005
CI41A	44.530	8.5343	-53.46	0.98773	-66.8	0,707
CI42A	44.462	8.5805	76.64	2.17814	79.3	1,755
CI43A	44.397	8.6165	-67.27	0.84845	-63.6	0,865
CW01A	45.433	7.2591	1.35	0.88253	-5.7	1,428
CW02A	45.433	7.3747	22.80	0.77871	35.3	1,92