

Seismicity catalogue of the entire Chilean margin (18° to 56°S) from an automated approach

Martin Riedel-Hornig¹, Christian Sippl², Andrés Tassara¹, Sergio Ruiz³, Bertrand Potin³, Jorge Puente²

- 5
- ¹Departamento de Ciencias de la Tierra, Universidad de Concepcion, Concepcion, Chile

²Institute of Geophysics, Czech Academy of Sciences, Prague, Czech Republic

³Departamento de Geofísica, Universidad de Chile, Santiago, Chile

Correspondence to: Martin Riedel-Hornig (mriedel@udec.cl)

10

Supplementary Material

	Network	Station	Latitude	Longitude	Altitude (m)
0	CX	PB01	-21.0432	-69.4874	900
1	CX	PB02	-21.3197	-69.896	1015
2	CX	PB03	-22.0485	-69.7531	1460
3	CX	PB04	-22.3337	-70.1492	1520
4	CX	PB05	-22.8528	-70.2024	1150
5	CX	PB06	-22.7058	-69.5719	1440
6	CX	PB07	-21.7267	-69.8862	1570
7	CX	PB08	-20.1411	-69.1534	3060
8	CX	PB09	-21.7964	-69.2419	1530
9	CX	PB10	-23.5134	-70.5541	250
10	CX	PB11	-19.761	-69.6558	1400
11	CX	PB12	-18.6141	-70.3281	908
12	CX	PB13	-18.3359	-69.5016	4480
13	CX	PB14	-24.626	-70.4038	2630
14	CX	PB15	-23.2083	-69.4709	1830
15	CX	PB16	-18.3351	-69.5077	4480
16	CX	PB17	-21.5341	-68.7302	3650
17	CX	PB18	-17.5859	-69.48	4155
18	CX	PB19	-23.9048	-69.2906	2480
19	CX	PB20	-21.6191	-68.8415	4280

20	CX	HMBCX	-20.2782	-69.8879	1152
21	CX	MNMCX	-19.1311	-69.5955	2304
22	CX	PSGCX	-19.5972	-70.1231	966
23	CX	PATCX	-20.8207	-70.1529	832
24	CX	CAR3	-23.5115	-70.2496	700
25	CX	PX06	-23.5115	-70.2496	700
26	GE	LVC	-22.6182	-68.9113	2960
27	IU	LVC	-22.6182	-68.9113	2960
28	C	GO01	-19.6685	-69.1942	3809
29	C	GO02	-25.1626	-69.5904	2550
30	C	GO03	-27.5937	-70.2347	730
31	C	GO04	-30.1727	-70.7993	2076
32	C	GO05	-35.0099	-71.9303	488
33	C	GO06	-39.5839	-71.472	1258
34	C	GO07	-43.1142	-73.6644	178
35	C	GO08	-48.4648	-72.5566	1000
36	C	GO09	-51.2707	-72.3381	268
37	C	GO10	-53.1546	-71.0498	652
38	C	CCSP	-36.8442	-73.109	84
39	C	LMEL	-33.8476	-70.2075	1536
40	C	ROC1	-32.9756	-71.0156	2191
41	C	FAR1	-33.3377	-70.2994	2770
42	WA	ZON	-31.5456	-68.6843	773
43	IU	LCO	-29.011	-70.7005	2274
44	GT	PLCA	-40.7328	-70.5508	1080
45	G	COYC	-45.573	-72.0814	235
46	C1	AF01	-22.952	-68.1788	2443
47	C1	AP01	-18.3708	-70.3419	31
48	C1	AP02	-18.854	-69.1433	4334
49	C1	TA01	-20.5656	-70.1807	75
50	C1	TA02	-20.2705	-70.1311	23
51	C1	AC01	-26.1479	-70.5987	346

52	C1	AC02	-26.8355	-69.1291	3980
53	C1	AC03	-27.2391	-70.7455	321
54	C1	AC04	-28.2046	-71.0739	228
55	C1	AC05	-28.8364	-70.2738	1227
56	C1	AC06	-27.3571	-70.3547	380
57	C1	AC07	-27.1297	-70.8602	72
58	C1	AY01	-44.4209	-72.648	9
59	C1	AY02	-46.4839	-73.1947	79
60	C1	AY03	-47.253	-72.5908	207
61	C1	AY04	-46.5826	-71.6909	308
62	C1	AY05	-45.151	-73.5117	21
63	C1	AY06	-47.8033	-73.5378	57
64	C1	BI02	-36.6634	-71.2731	913
65	C1	BI03	-36.8438	-73.0258	196
66	C1	BI04	-38.4116	-73.8862	41
67	C1	BI05	-36.7478	-73.1905	52
68	C1	BI06	-36.1313	-72.7885	23
69	C1	BO01	-34.3917	-71.0848	263
70	C1	BO02	-34.7924	-70.7814	886
71	C1	BO03	-34.4961	-71.9612	128
72	C1	BO04	-33.9888	-70.609	625
73	C1	CO01	-29.9773	-70.0939	2157
74	C1	CO02	-31.2037	-71.0003	1190
75	C1	CO03	-30.8389	-70.6891	1003
76	C1	CO04	-32.0433	-70.9747	2401
77	C1	CO05	-29.9186	-71.2384	101
78	C1	CO06	-30.6738	-71.635	247
79	C1	CO10	-29.2406	-71.4609	35
80	C1	LC01	-38.8975	-71.8761	406
81	C1	LC02	-38.7919	-73.3947	67
82	C1	LC09	-39.4861	-72.1531	213
83	C1	LL01	-42.3787	-72.4125	62

84	C1	LL02	-43.1906	-71.8484	368
85	C1	LL03	-41.1384	-72.4034	227
86	C1	LL04	-40.9097	-72.4082	247
87	C1	LL05	-41.4053	-73.4745	208
88	C1	LL06	-42.2151	-73.6283	180
89	C1	LL07	-42.8324	-73.4779	54
90	C1	LR02	-39.8061	-73.2505	0
91	C1	LR03	-39.6322	-72.3457	253
92	C1	LR04	-39.8802	-73.4258	94
93	C1	LR05	-40.23	-72.0044	204
94	C1	MG01	-54.9322	-67.63	57
95	C1	MG02	-52.7808	-69.2242	82
96	C1	MG03	-53.848	-70.4628	83
97	C1	MG04	-52.8572	-71.57	82
98	C1	MG05	-51.6784	-72.5032	99
99	C1	ML02	-35.7626	-71.4181	237
100	C1	ML03	-35.7172	-72.4224	274
101	C1	MT01	-33.8641	-71.2509	310
102	C1	MT02	-33.2591	-71.1377	323
103	C1	MT03	-33.4936	-70.5102	1087
104	C1	MT04	-33.4045	-70.1372	1922
105	C1	MT05	-33.3919	-70.7381	765
106	C1	MT07	-32.976	-71.0156	2234
107	C1	MT08	-33.4459	-70.0172	2045
108	C1	MT09	-33.7762	-70.9887	1371
109	C1	MT10	-33.2728	-70.5372	1410
110	C1	MT12	-33.7327	-70.5487	727
111	C1	MT13	-33.7435	-70.2861	1199
112	C1	MT14	-33.3957	-70.5362	856
113	C1	MT15	-33.5994	-70.5063	784
114	C1	MT16	-33.4285	-70.5234	780
115	C1	MT18	-33.4631	-70.6644	525

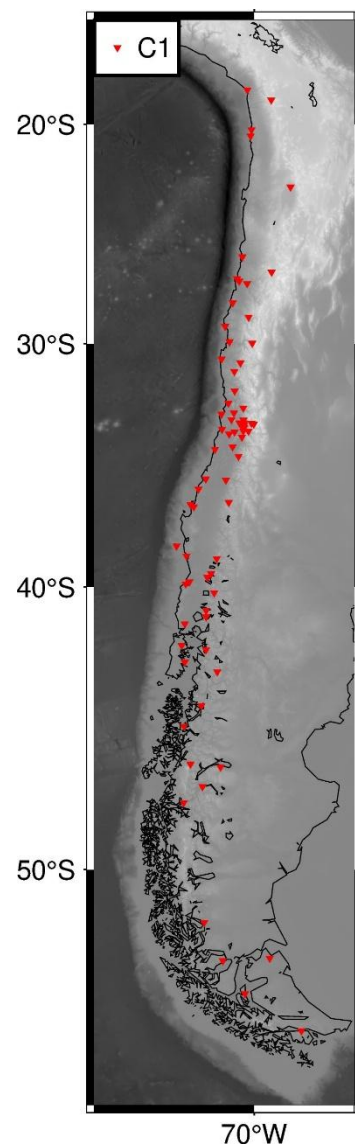
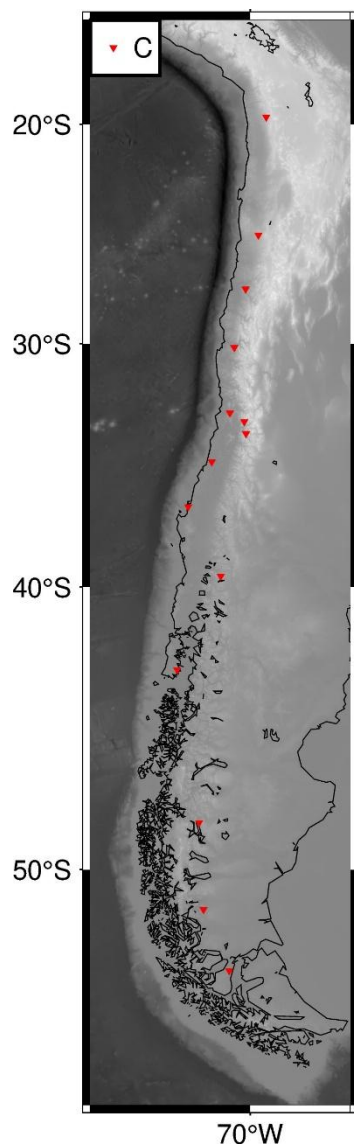
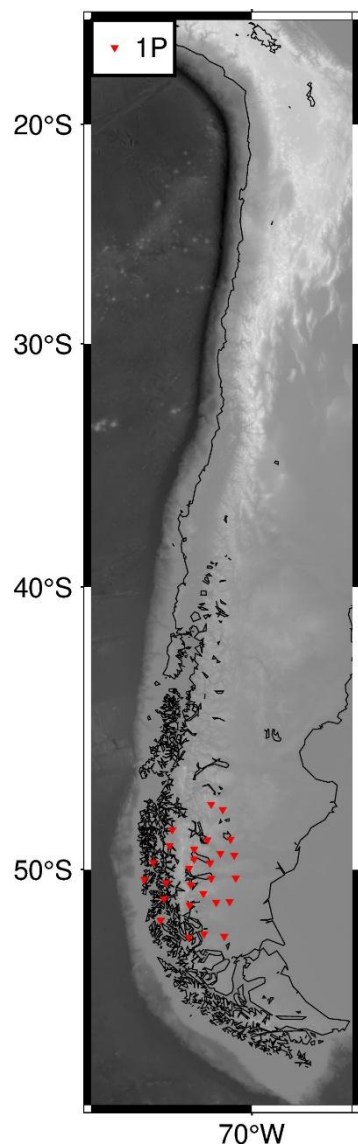
116	C1	VA01	-33.0229	-71.6374	76
117	C1	VA03	-32.7637	-70.5508	1053
118	C1	VA05	-33.6571	-71.6143	80
119	C1	VA06	-32.5612	-71.2977	80
120	G	PEL	-33.1436	-70.6749	700
121	IQ	AERO	-20.5399	-70.1782	20
122	IQ	APAC	-19.8166	-69.3954	2196
123	IQ	BUEN	-19.9562	-69.9073	1120
124	IQ	CERR	-20.6222	-69.6625	987
125	IQ	CHOM	-21.094	-70.0102	1200
126	IQ	CORZ	-19.4945	-69.7935	0
127	IQ	HUAR	-19.932	-69.7261	1135
128	IQ	MAM1	-20.1335	-69.4555	1426
129	IQ	MAM2	-20.0922	-69.395	1426
130	IQ	NEUQ	-20.1722	-70.0732	1043
131	IQ	PATA	-20.6918	-70.0026	780
132	IQ	PATS	-20.7843	-69.8952	921
133	IQ	PICL	-20.5021	-69.2611	1773
134	IQ	PICL2	-20.4995	-69.2662	1744
135	IQ	PICL3	-20.5015	-69.2738	1708
136	IQ	PICL4	-20.5024	-69.282	1654
137	IQ	PICL5	-20.4897	-69.28	1656
138	IQ	PICL6	-20.4864	-69.2661	1748
139	IQ	PICL7	-20.4912	-69.2502	1827
140	IQ	PICL8	-20.5121	-69.2774	1612
141	IQ	PICL9	-20.4915	-69.2612	1749
142	IQ	PICLA	-20.5077	-69.2538	1947
143	IQ	PINT	-20.7613	-69.3973	1146
144	IQ	POZO	-20.2525	-69.7594	1024
145	IQ	SALG	-21.0827	-69.9109	799
146	IQ	SECO	-20.9714	-70.0326	725
147	IQ	SOG1	-19.6703	-69.6183	1590

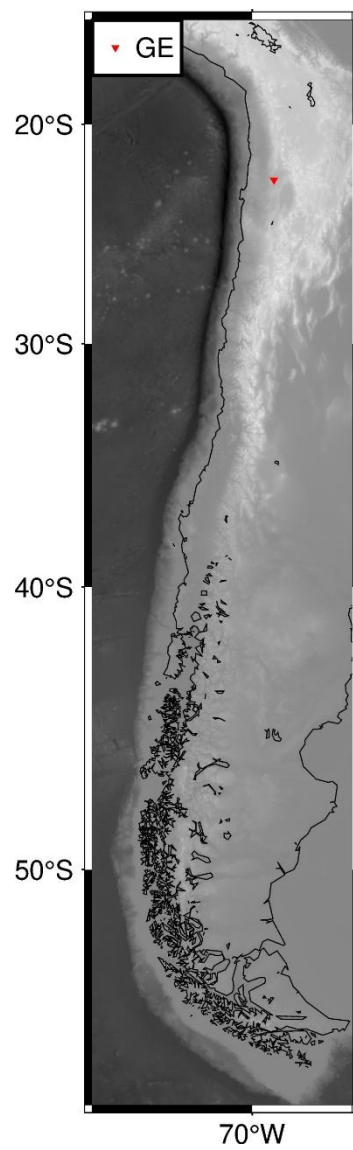
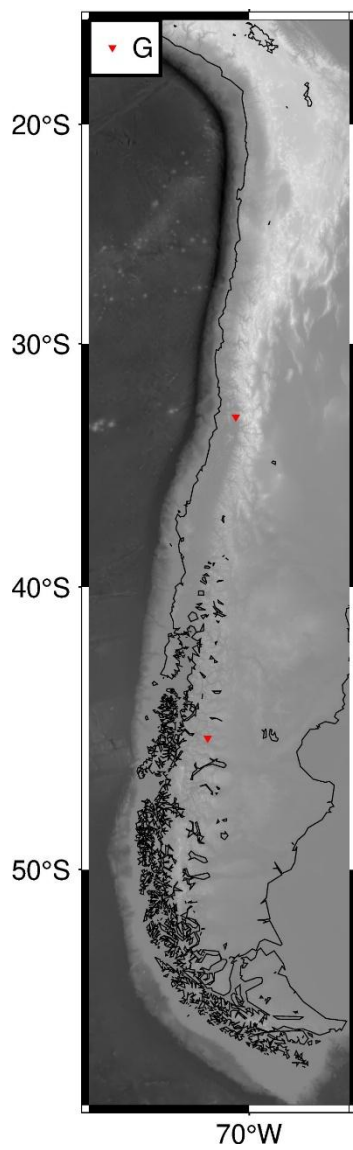
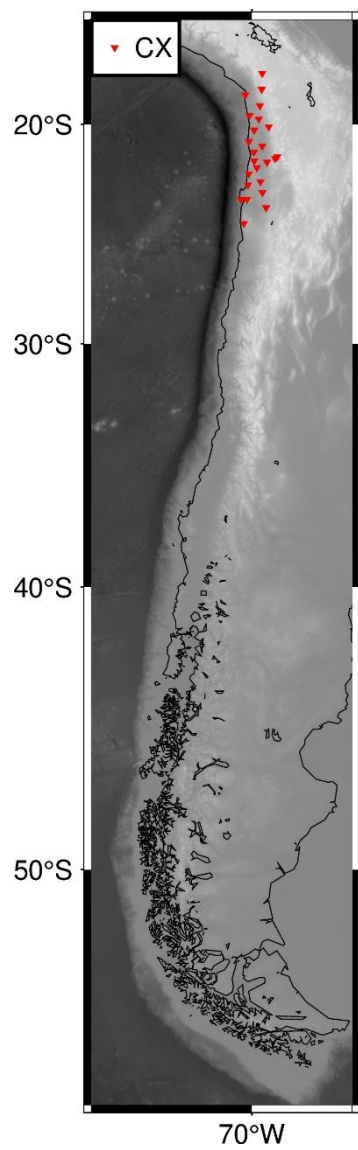
148	IQ	SOG2	-19.5284	-69.3786	2722
149	IQ	TIRA	-20.3299	-69.5717	1020
150	IQ	UNAP	-20.2439	-70.1404	0
151	1P	BONA	-50.2894	-72.0275	252
152	1P	BRMY	-52.1425	-73.1532	54
153	1P	CURI	-51.6131	-74.556	53
154	1P	EHEL	-49.6686	-72.8857	299
155	1P	EIDA	-49.5393	-70.8801	213
156	1P	ELCH	-49.3389	-72.8834	428
157	1P	ES3R	-50.7735	-72.426	724
158	1P	ESCR	-49.9588	-73.1319	215
159	1P	GRAF	-49.7702	-74.9223	61
160	1P	GUMN	-50.3199	-75.3644	52
161	1P	HANO	-50.9341	-74.393	78
162	1P	LACD	-49.0152	-71.0601	471
163	1P	LEST	-49.7877	-72.0906	299
164	1P	LPRF	-50.2791	-70.8098	490
165	1P	LSMN	-49.0385	-72.2228	327
166	1P	LVAN	-51.0252	-71.1152	263
167	1P	MAMA	-52.0337	-72.3827	184
168	1P	OHRS	-48.7078	-73.9807	57
169	1P	PEMO	-47.8508	-72.0323	937
170	1P	PEN2	-49.2304	-74.1063	54
171	1P	PMOR	-50.4904	-73.0428	222
172	1P	PTTY	-50.4237	-74.273	33
173	1P	RPTE	-52.1152	-71.3773	261
174	1P	TAPA	-51.0488	-71.7863	327
175	1P	TDPA	-51.1322	-73.1184	80
176	1P	TRLG	-49.4756	-71.5728	412
177	1P	WIND	-48.027	-71.4552	853
178	VC	RUI	-18.0827	-69.5008	5212
179	VC	PA2	-18.1757	-69.1695	4912

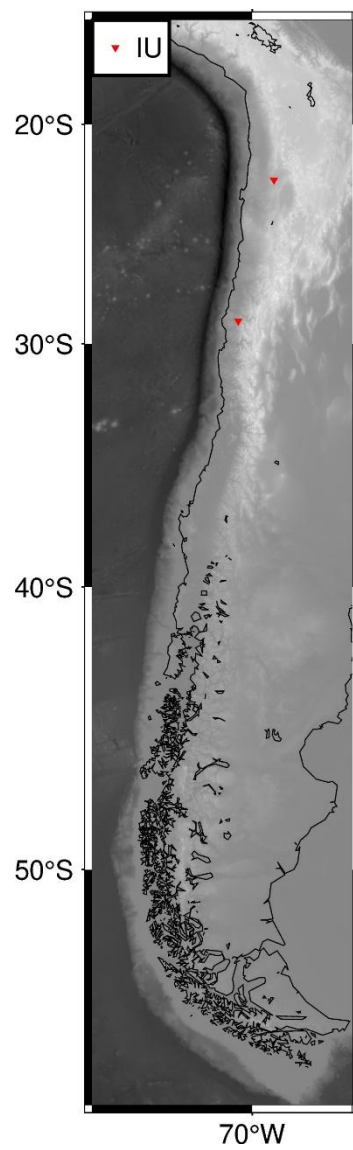
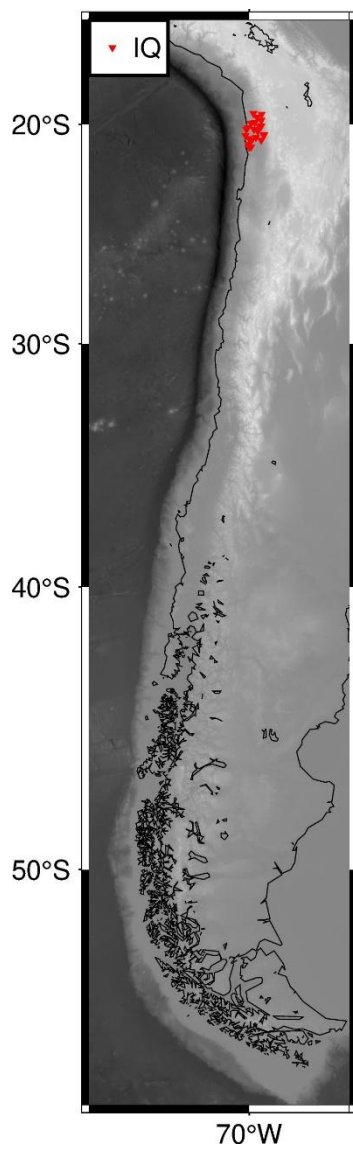
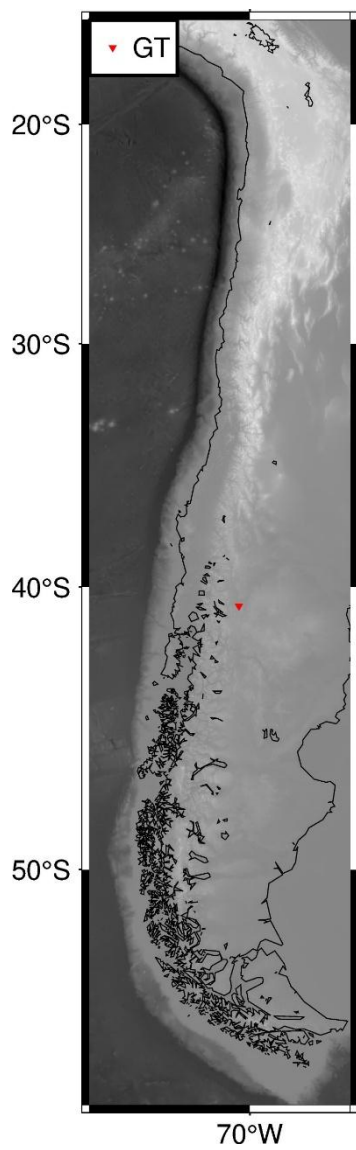
180	VC	PAR	-18.1757	-69.1695	4912
181	VC	GUA	-18.4645	-69.1319	4658
182	VC	ISL	-19.1986	-68.7777	4167
183	VC	BLO	-20.7196	-68.5827	4155
184	VC	BL2	-20.7196	-68.5827	4155
185	VC	OLC	-20.96	-68.508	4641
186	VC	YU2	-20.9781	-68.4776	4653
187	VC	ING	-21.294	-68.1997	4895
188	VC	POR	-21.8702	-68.4839	3616
189	VC	PED	-21.921	-68.416	4380
190	VC	LAS	-23.3477	-67.7817	4243
191	VC	LEJ	-23.3874	-67.6782	4822
192	VC	QUE	-23.3229	-67.7366	4386
193	VC	PUN	-23.3897	-67.7418	4781
194	VC	CAZ	-33.3593	-69.8909	3486
195	VC	MOR	-33.823	-70.0672	1931
196	VC	TIN	-34.8638	-70.3621	3533
197	VC	AD2	-35.1474	-70.4713	2061
198	VC	GUP	-35.5401	-71.0363	2300
199	VC	TA2	-35.9767	-70.834	2850
200	VC	MAU	-36.0672	-70.5346	2215
201	VC	CLD	-35.9508	-70.5868	1818
202	VC	LNG	-36.2187	-71.1562	2420
203	VC	FRE	-36.8699	-71.3952	2630
204	VC	ELT	-37.3805	-71.3803	1513
205	VC	MAH	-37.8892	-71.1677	2043
206	VC	CAQ	-37.9451	-71.4081	2390
207	VC	HMO	-38.3844	-71.6105	2207
208	VC	LLA	-38.7723	-71.6997	1168
209	VC	REI	-38.9929	-71.4931	1939
210	VC	VN2	-39.3986	-71.9637	1471
211	VC	AL2	-39.5274	-71.7412	1897

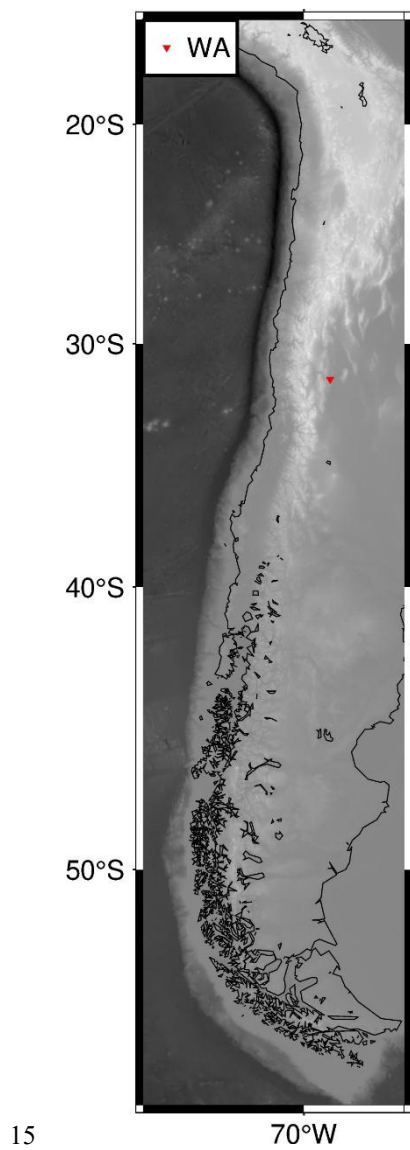
212	VC	LAN	-39.6139	-71.5407	1900
213	VC	MOX	-39.9406	-72.0001	1850
214	VC	RAN	-40.3366	-72.4743	400
215	VC	FUT	-40.3783	-72.3003	1366
216	VC	PHU	-40.6063	-72.1331	1585
217	VC	CSB	-40.762	-72.0974	1377
218	VC	DSL	-41.0827	-72.4819	1307
219	VC	PES	-41.3212	-72.6732	667
220	VC	PI2	-41.8095	-72.3529	1610
221	VC	CB2	-41.8238	-72.4532	1282
222	VC	AY2	-42.3086	-72.7865	0
223	VC	GLA	-42.784	-72.51	826
224	VC	QUI	-42.773	-72.607	388
225	VC	MLL	-43.206	-72.881	95
226	VC	RMB	-43.889	-72.907	40
227	VC	MA2	-44.634	-72.925	35
228	VC	YLT	-45.0583	-73.1087	1022
229	VC	CUE	-45.1692	-73.0957	1280
230	VC	AYS	-45.4062	-72.6981	60
231	VC	CAB	-41.8238	-72.4532	1282
232	VC	MAG	-44.634	-72.925	35
233	VC	PIN	-41.8095	-72.3529	1610
234	VC	TAT	-35.9767	-70.834	2850
235	VC	YUM	-20.9781	-68.4776	4653

Table S1: List of stations with their network, station code, latitude, longitude and altitude.

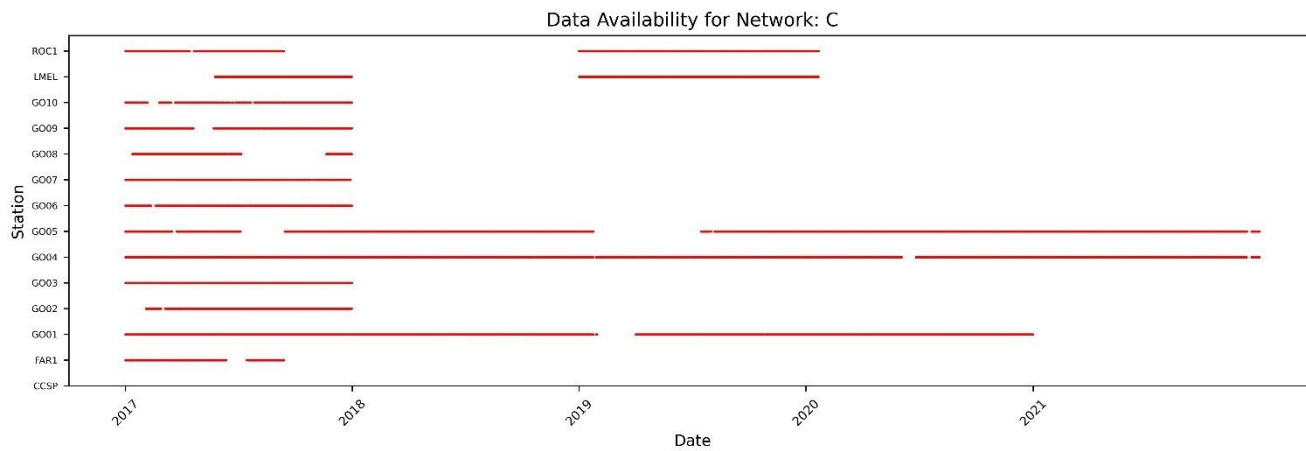






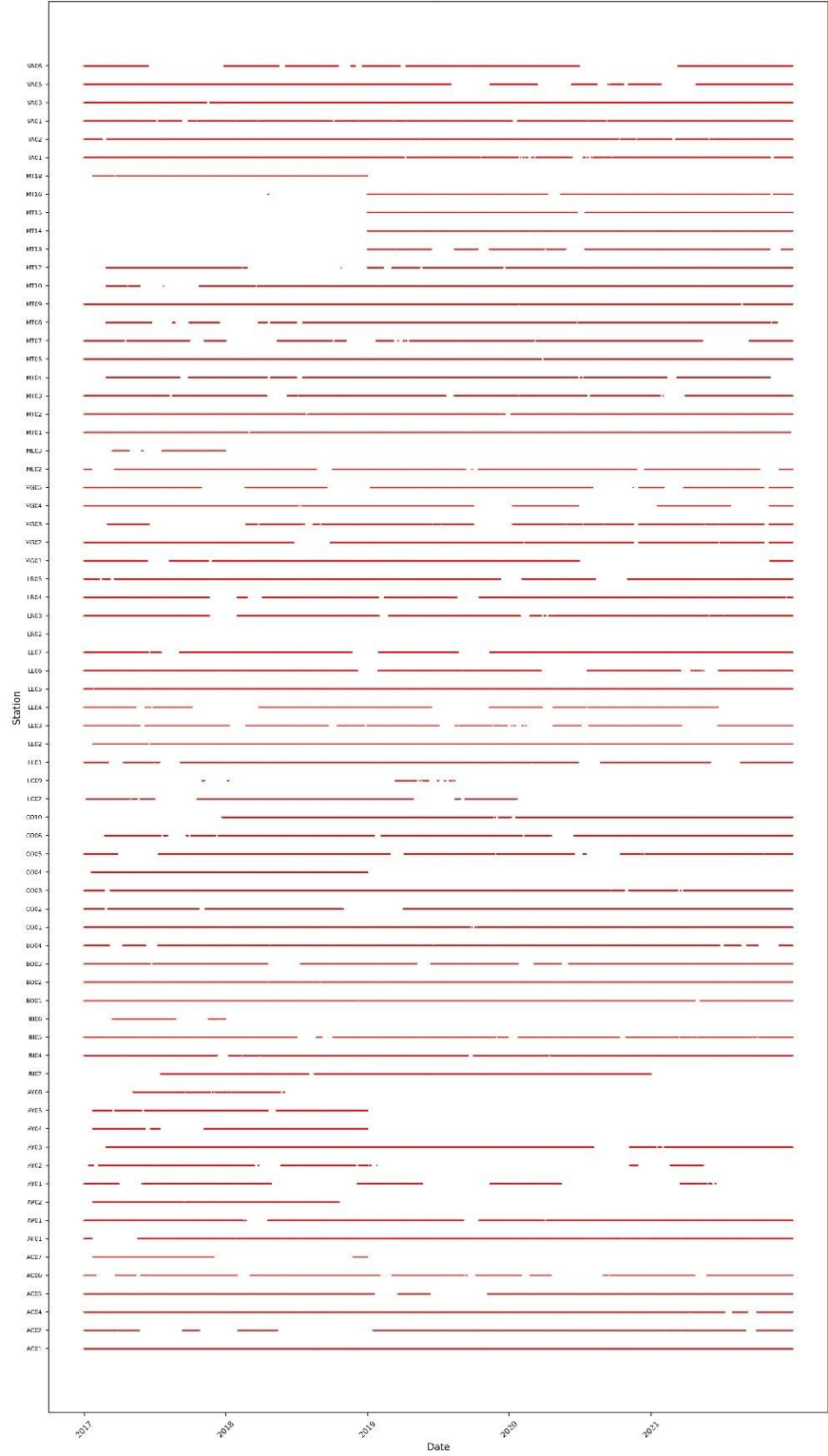


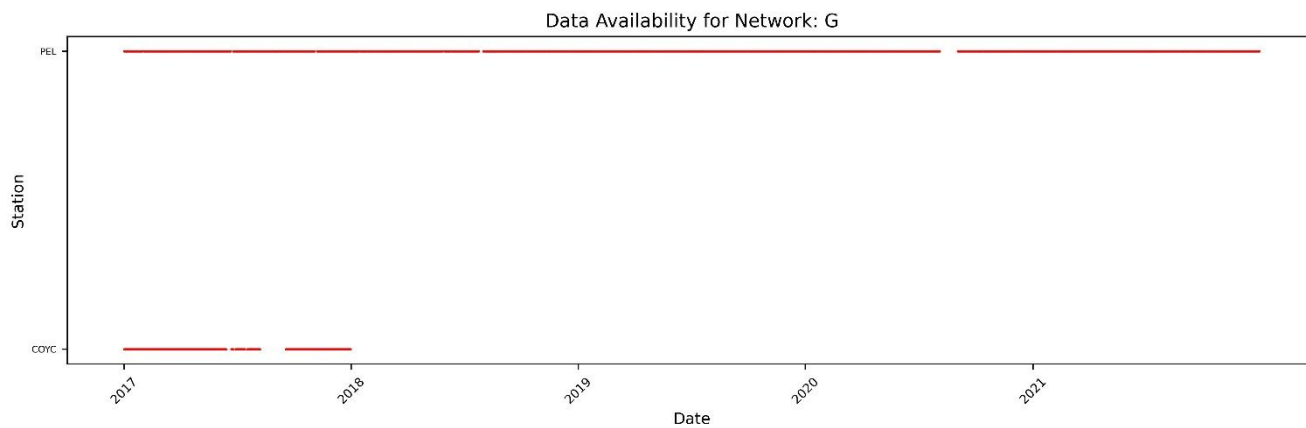
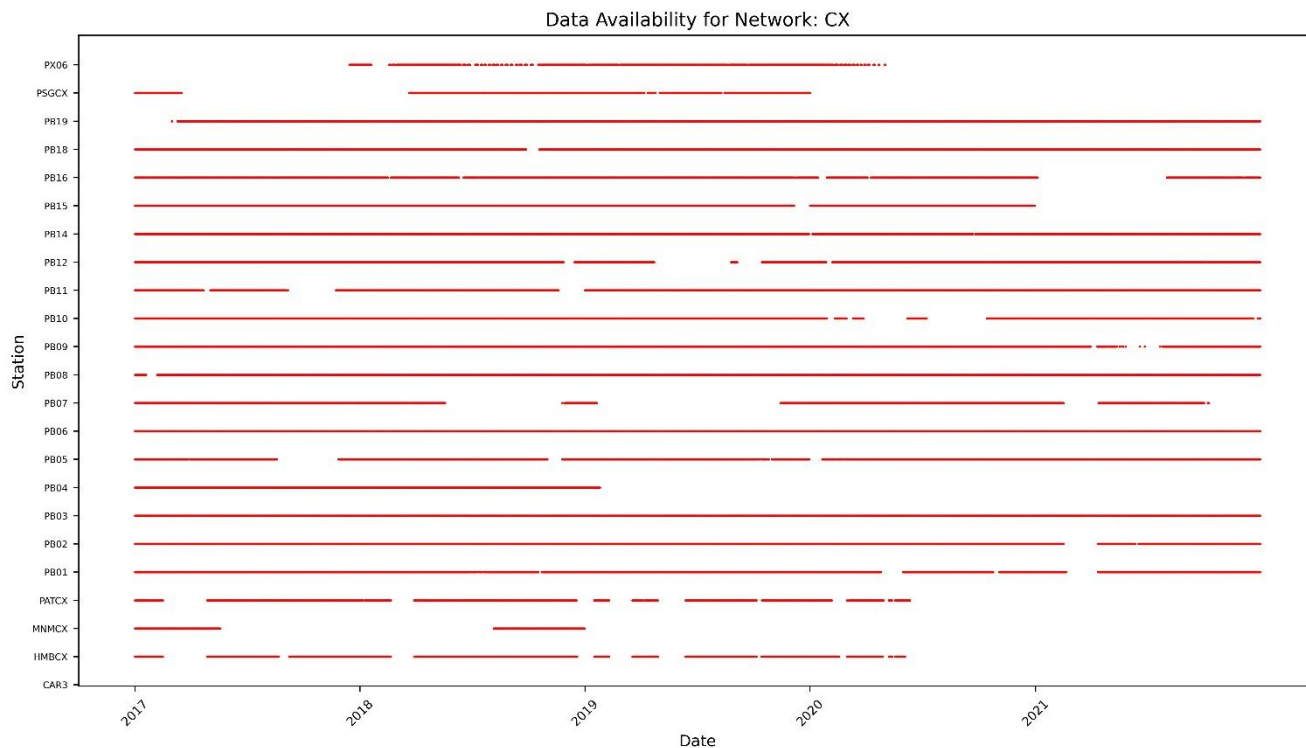
Figures S1-10: Maps of individual networks.

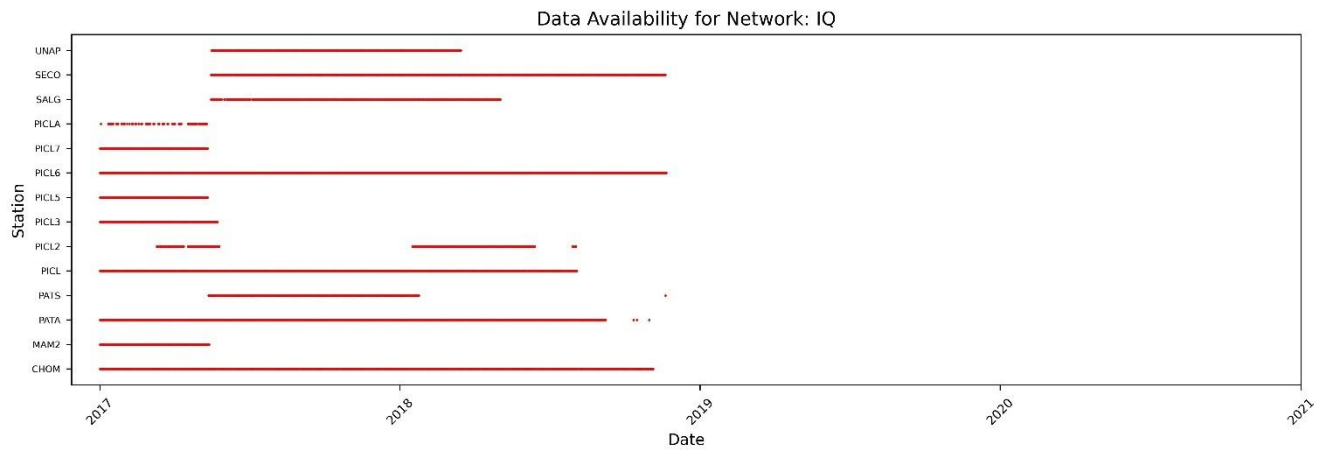
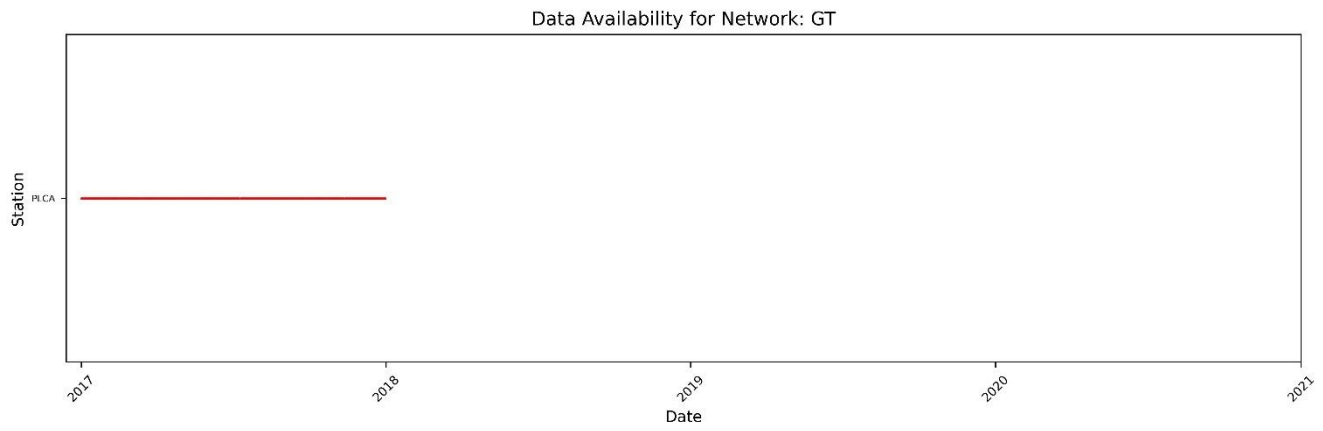
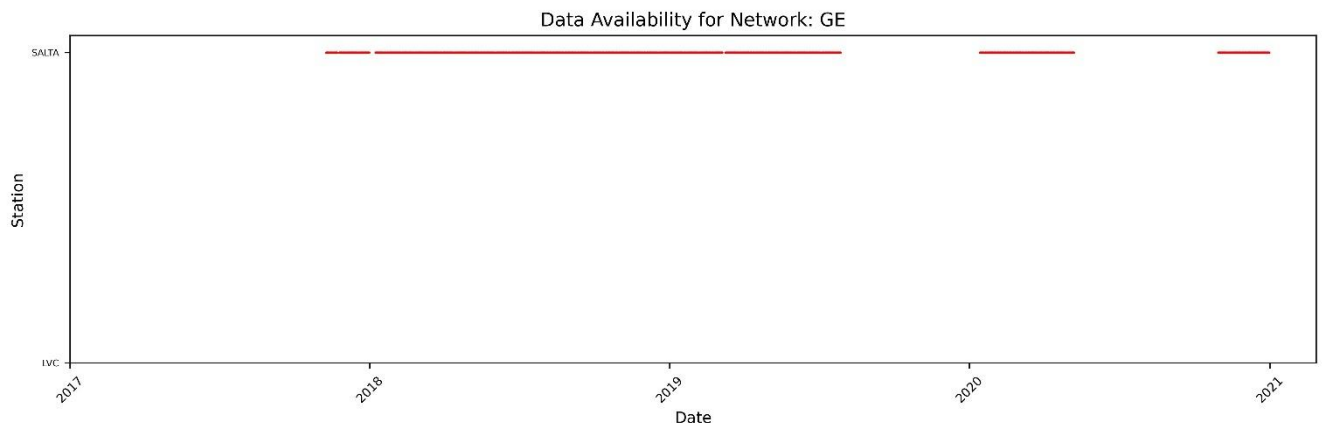


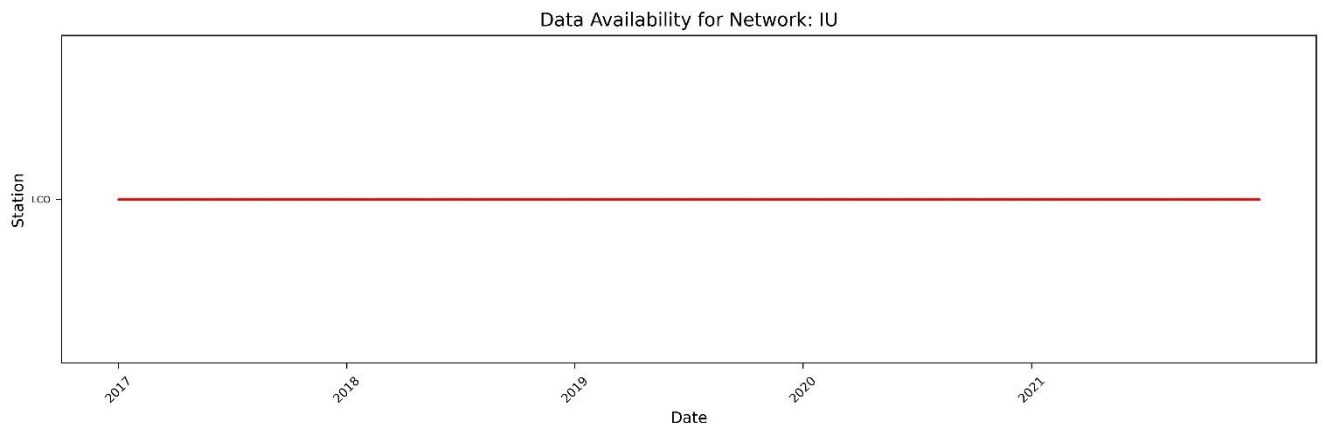
25

Data Availability for Network: C1

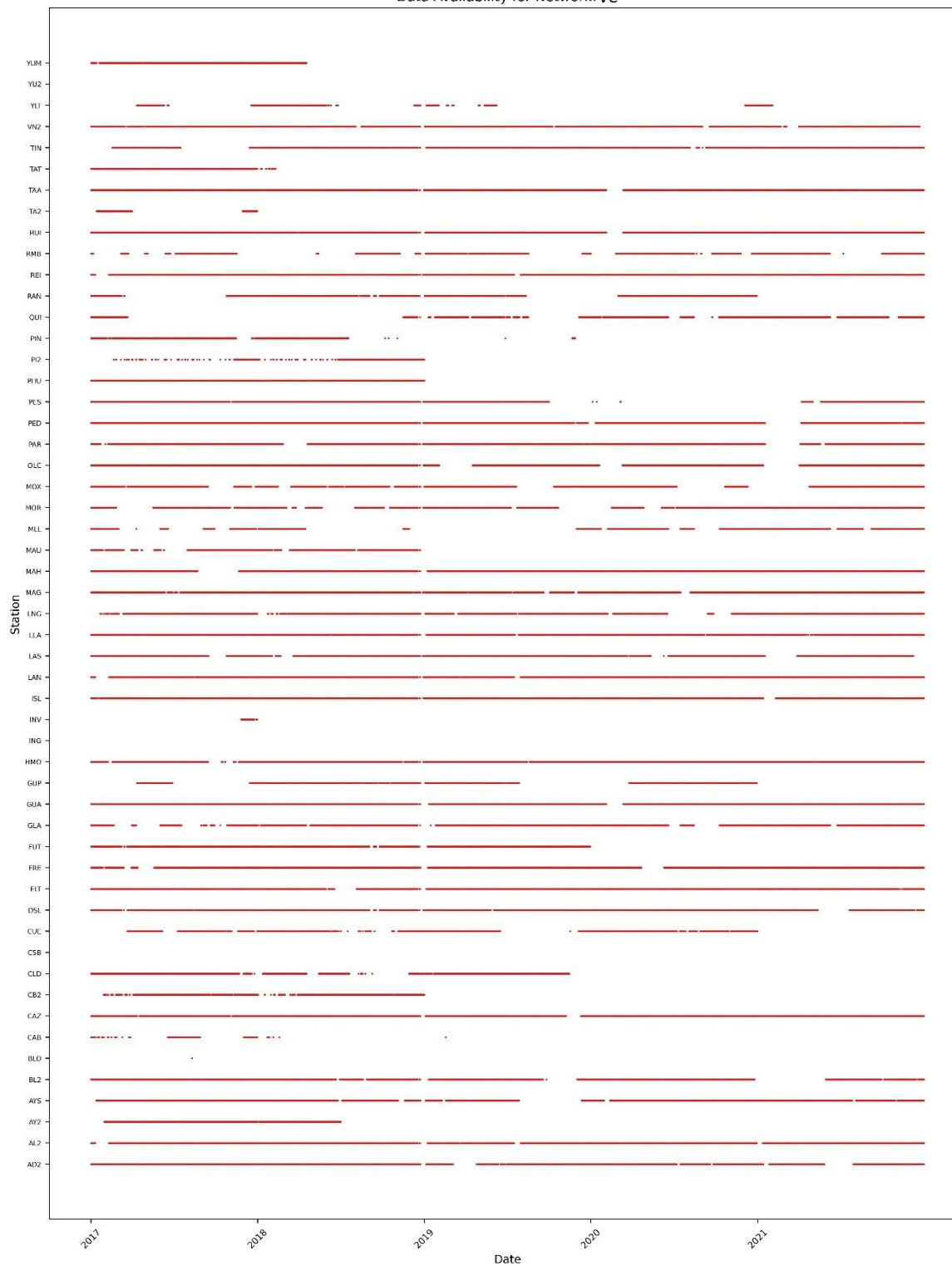


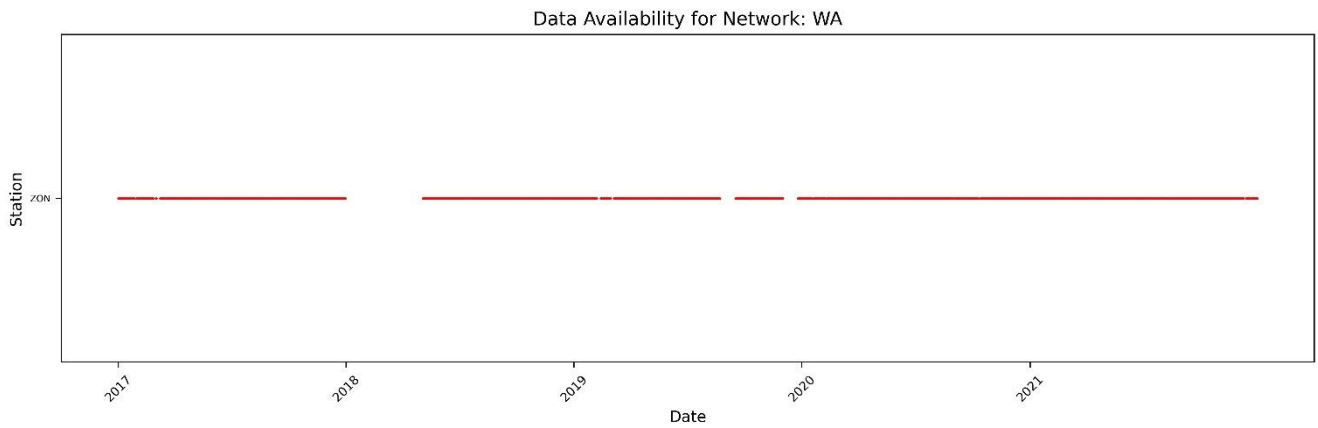






Data Availability for Network: VC





35 **Figures S11-20: Data availability over time of each station of the networks.**

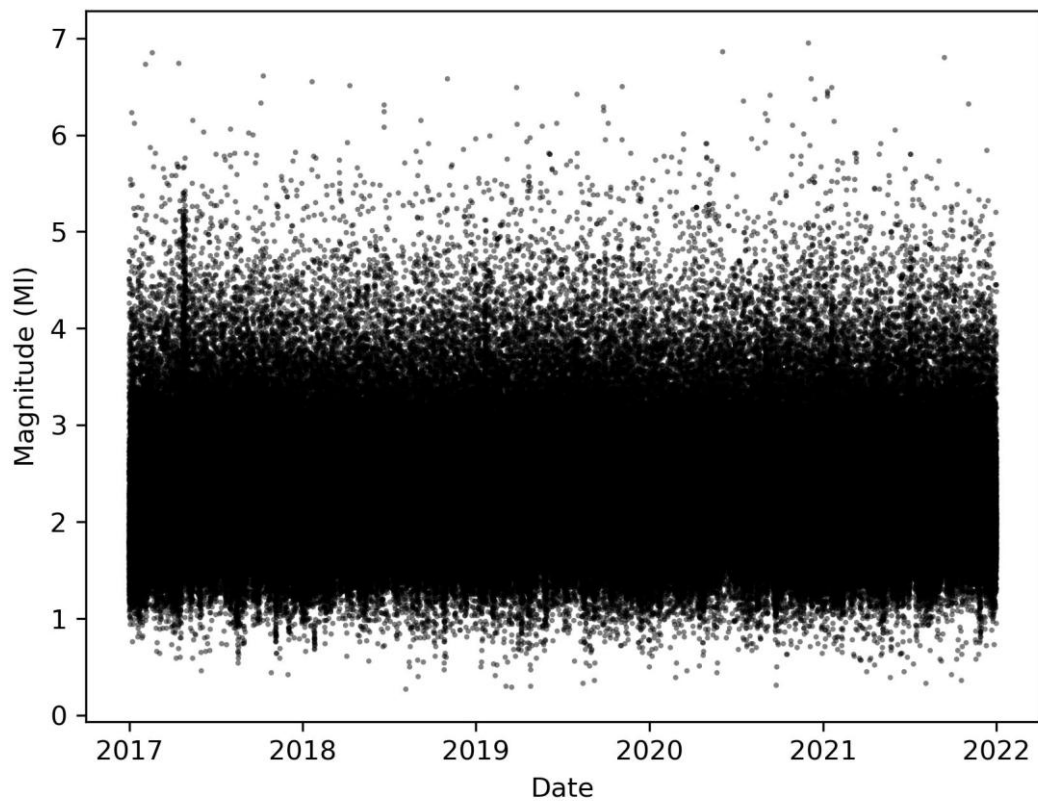


Figure S21: Magnitude over time for our main seismicity catalogue.