

# 1 Background Noise Level

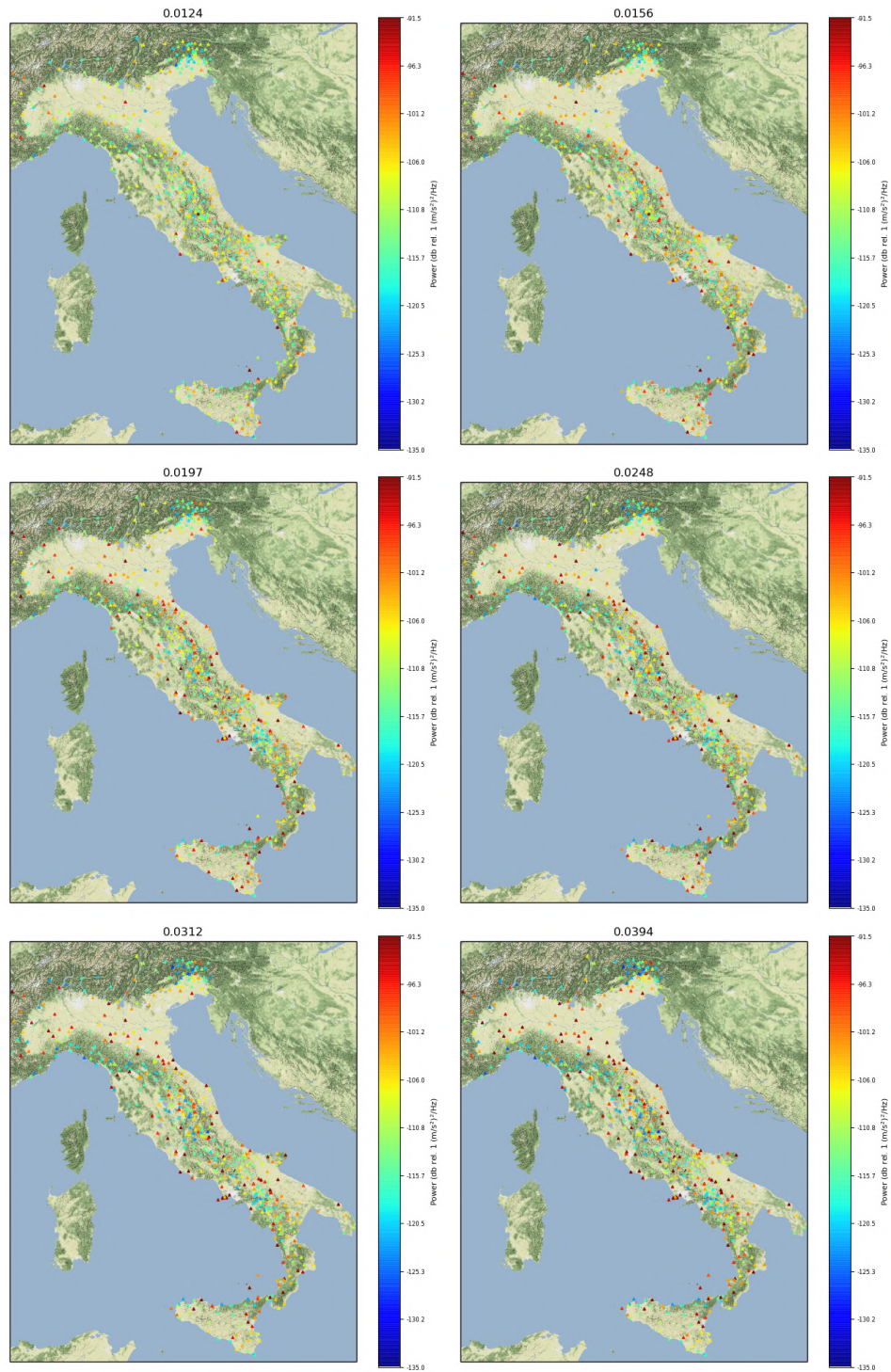


Figure S1: Background noise levels of Italian strong motion network. Basemap data are retrieved from © Stamen Design.

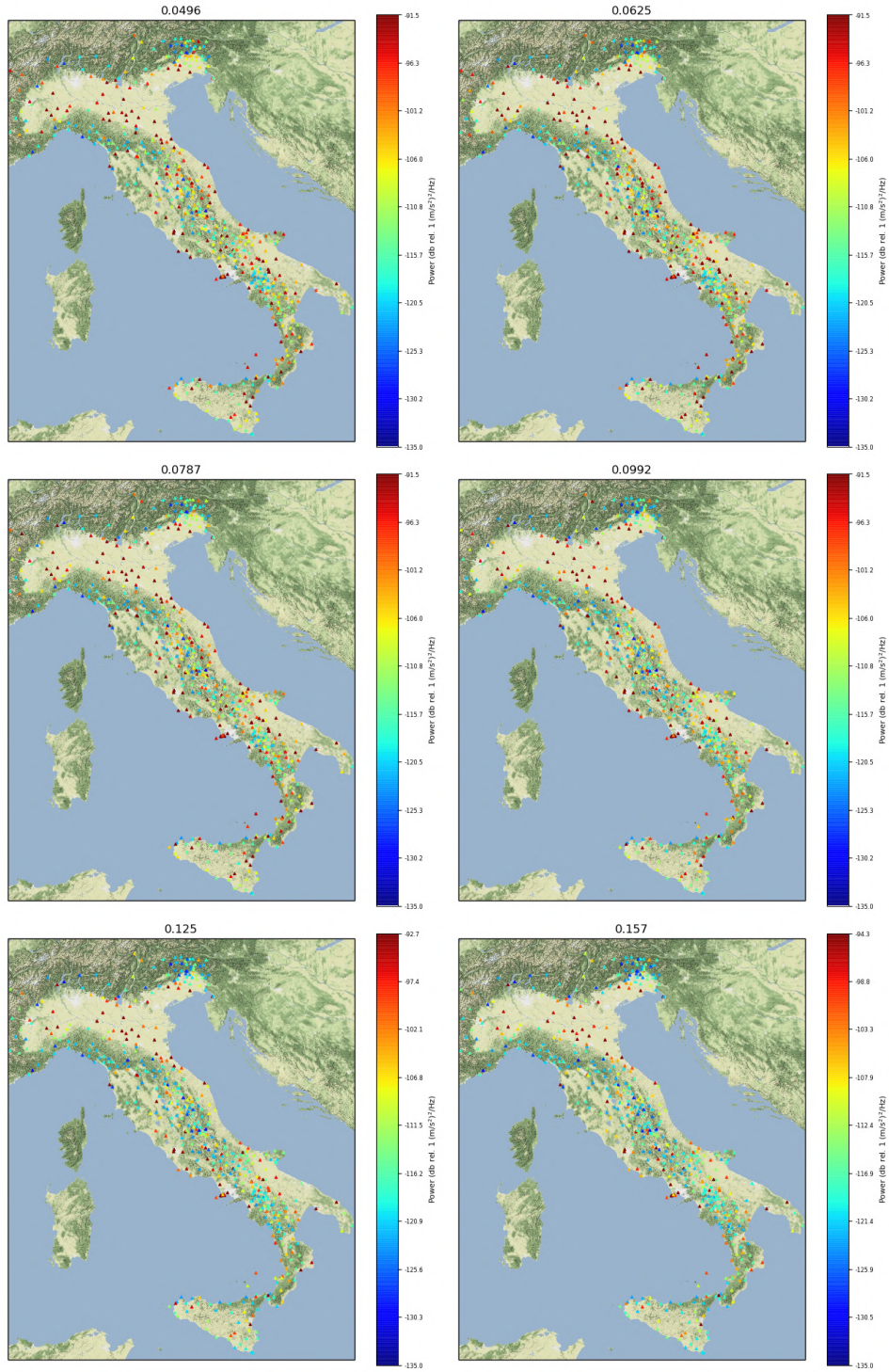


Figure S1: Background noise levels of Italian strong motion network (cont.). Basemap data are retrieved from © Stamen Design.

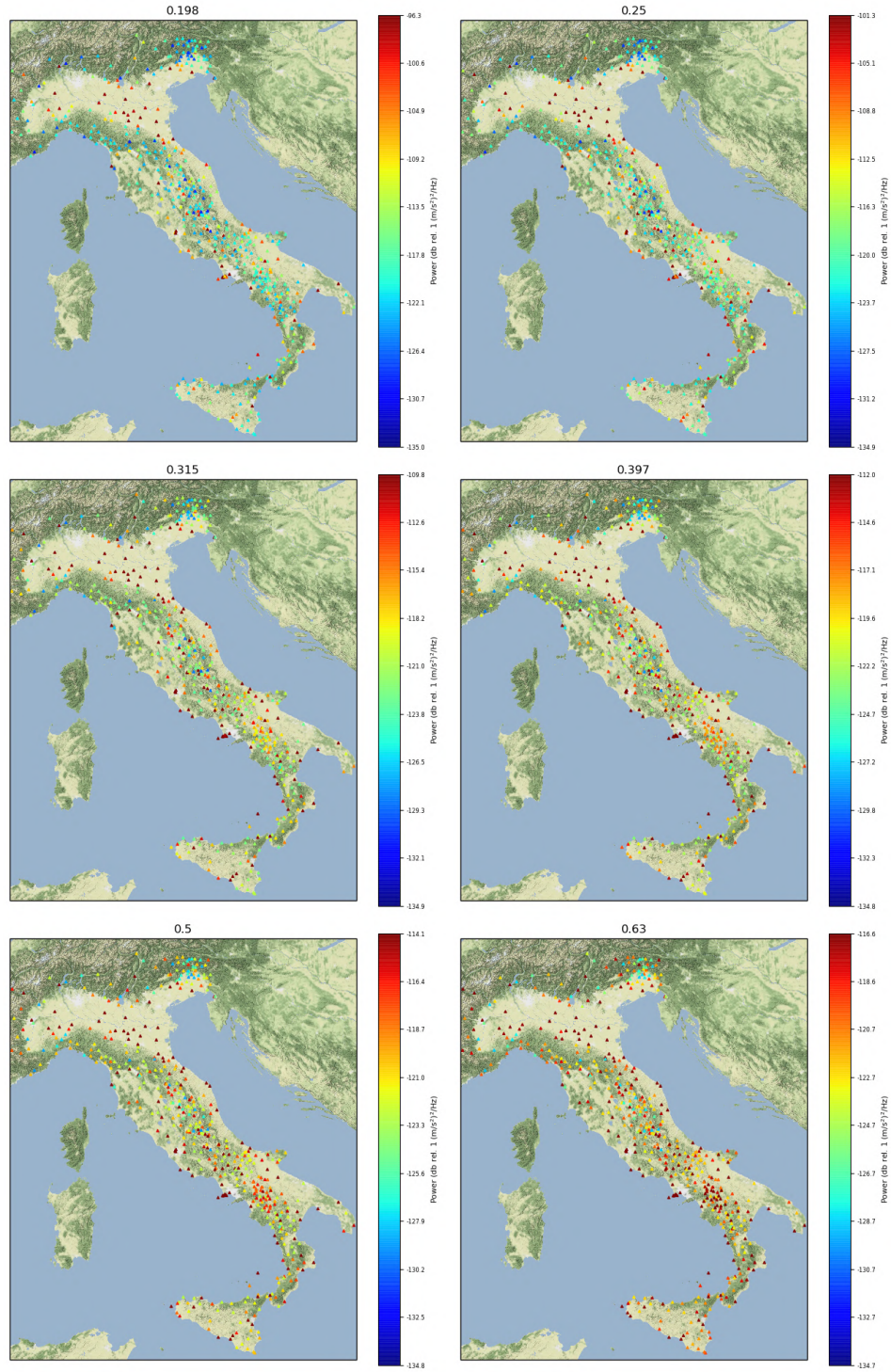


Figure S1: Background noise levels of Italian strong motion network (cont.). Basemap data are retrieved from © Stamen Design.

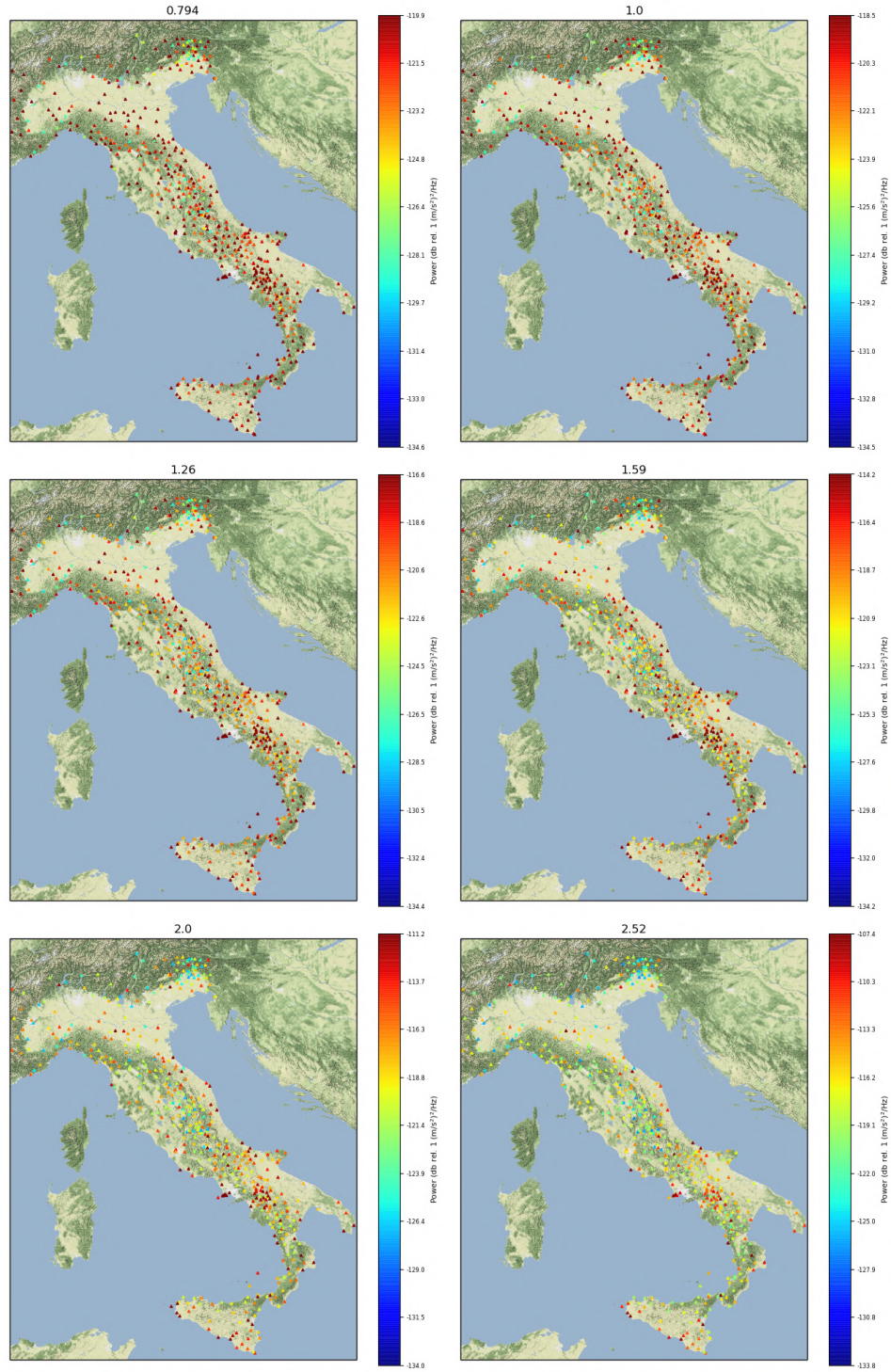


Figure S1: Background noise levels of Italian strong motion network (cont.). Basemap data are retrieved from © Stamen Design.

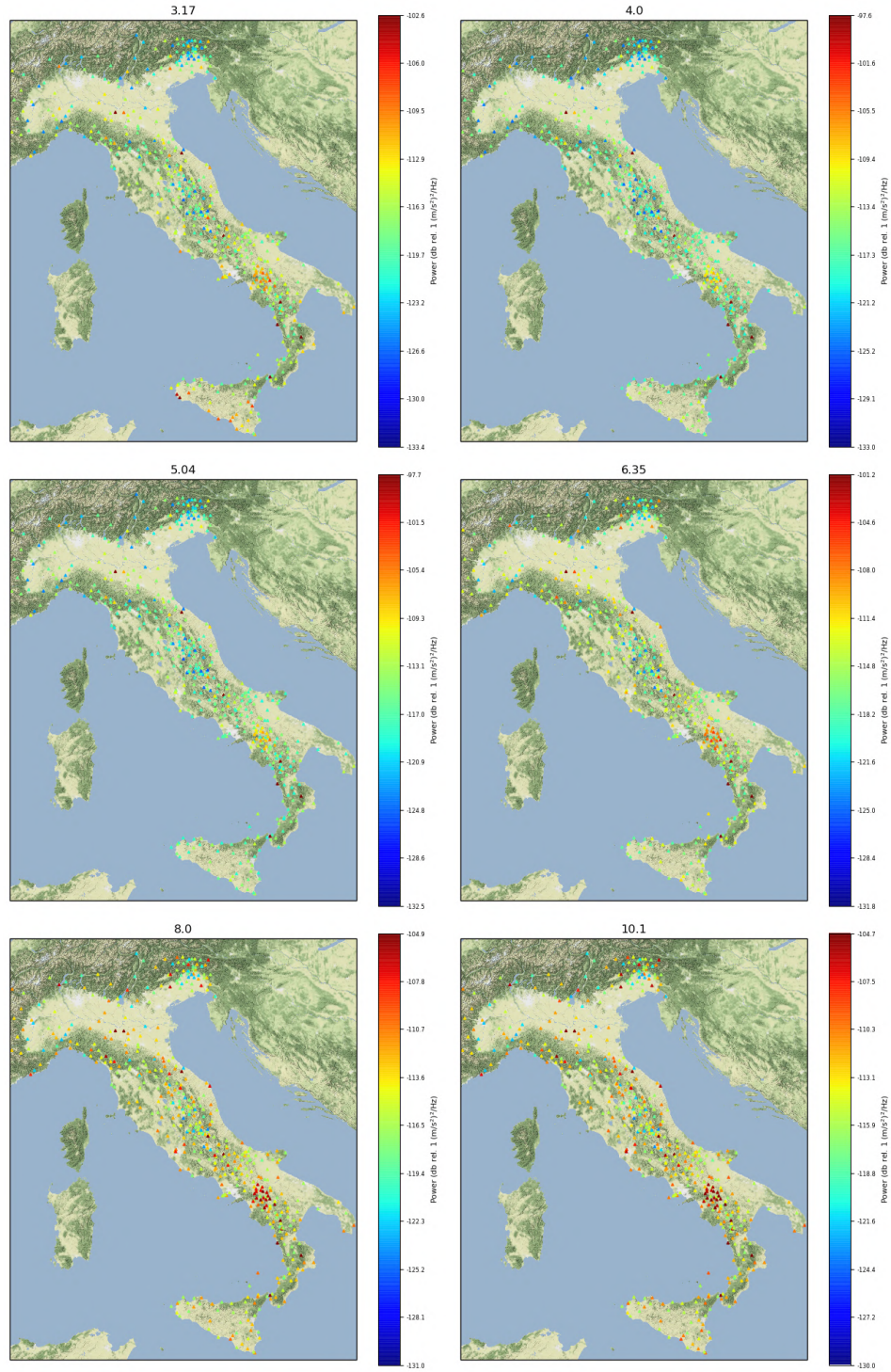


Figure S1: Background noise levels of Italian strong motion network (cont.). Basemap data are retrieved from © Stamen Design.

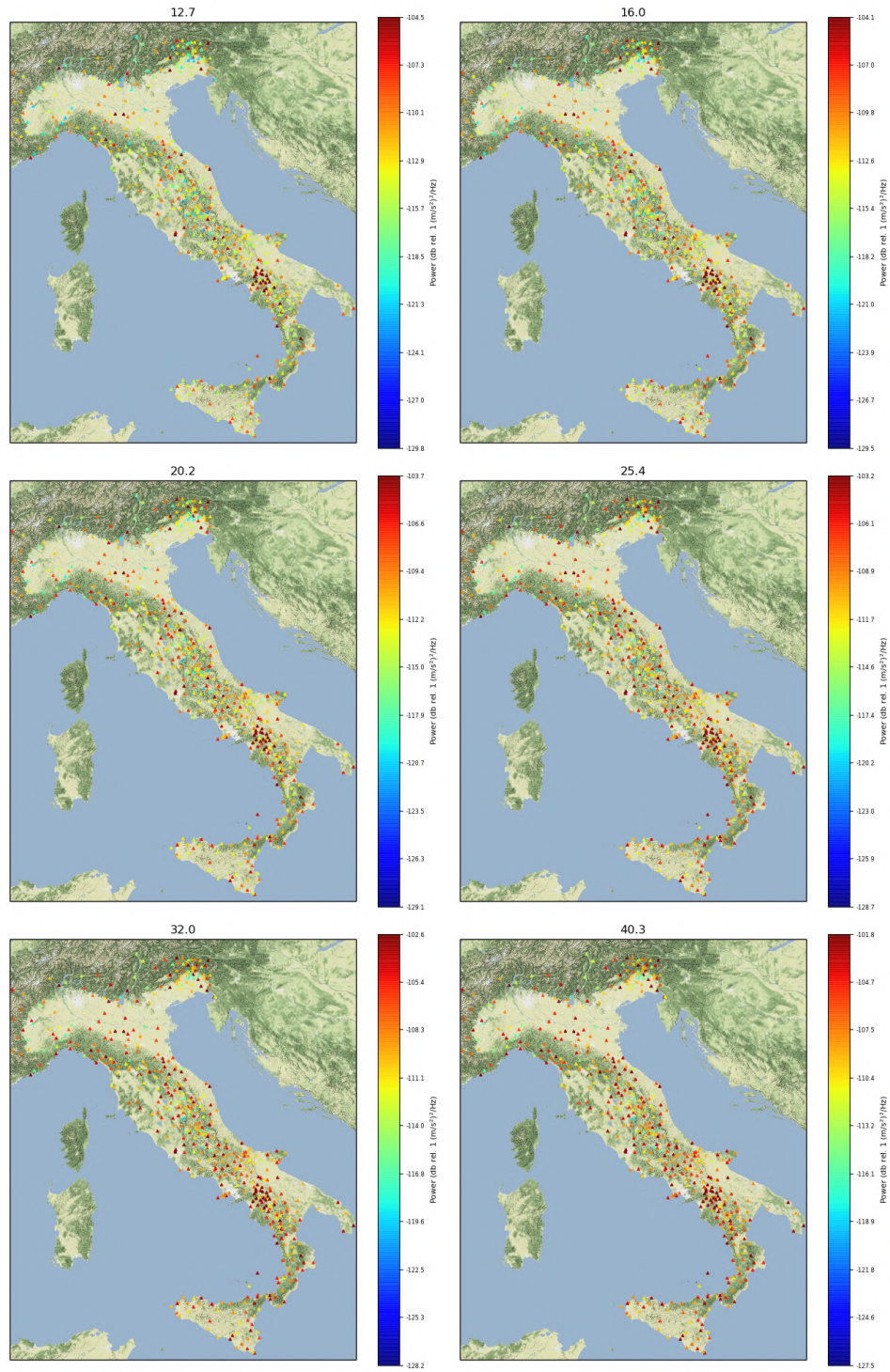


Figure S1: Background noise levels of Italian strong motion network (cont.). Basemap data are retrieved from © Stamen Design.

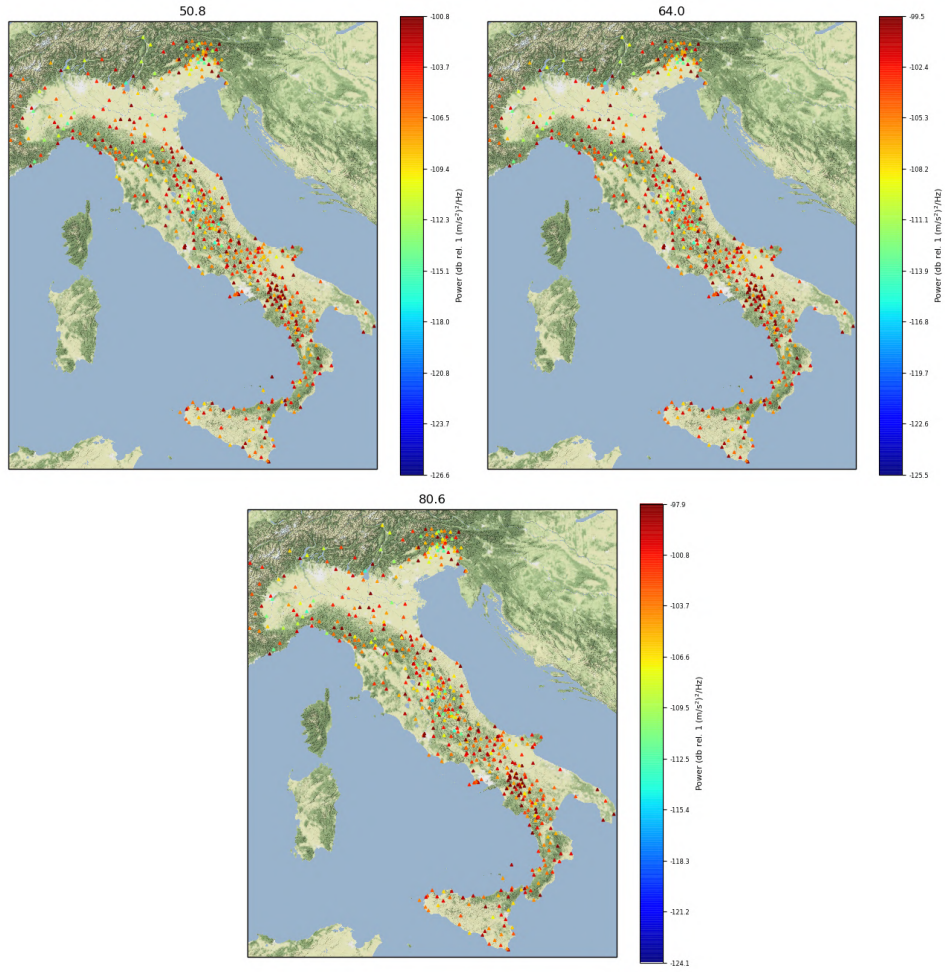


Figure S1: Background noise levels of Italian strong motion network (cont.). Basemap data are retrieved from © Stamen Design.

## 2 Weekday-Weekend Difference

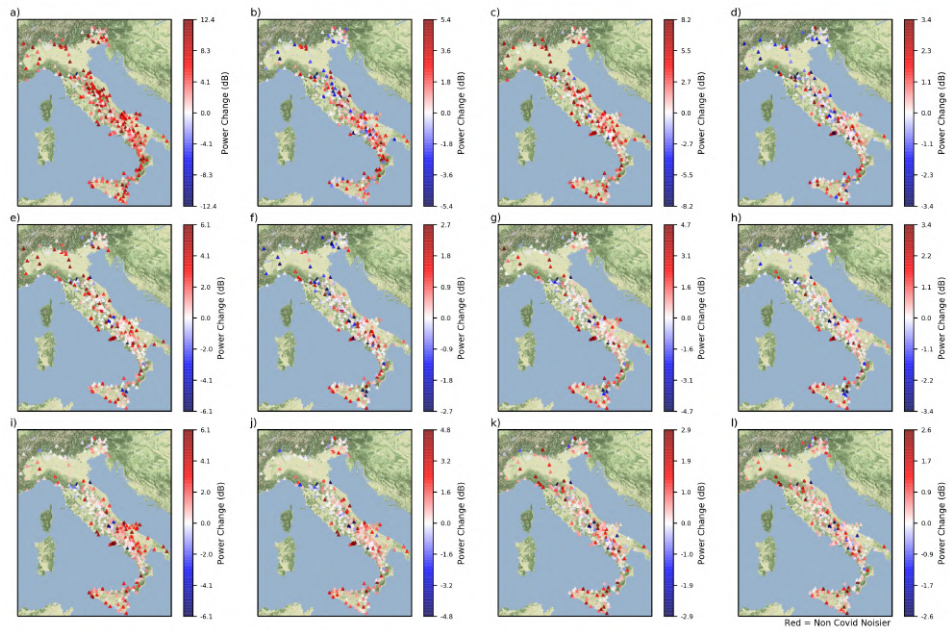


Figure S2: Difference between noise levels in 0.1 s, 0.25 s, 0.5 s, 1.0 s, 2.0 s, and 5.0 s between 2019 - 2022 and lockdown in a, c, e, g, i, k) weekday, b, d, f, h, j, l) weekend. Basemap data are retrieved from © Stamen Design.



### 3 Period wise Statistics

Table S1: Stations with higher than AHNM in the network (median and 2.5 statistics).

Period	AHNM	Median		2.5 Statistics	
		No. of station	Percentage of network (%)	No. of station	Percentage of network (%)
0.01	-91.50	3	0.56	1	0.19
0.016	-91.50	7	1.32	1	0.19
0.02	-91.50	23	4.32	1	0.19
0.025	-91.50	27	5.08	1	0.19
0.03	-91.50	39	7.33	4	0.75
0.04	-91.50	51	9.59	6	1.13
0.05	-91.50	60	11.28	4	0.75
0.06	-91.50	78	14.66	4	0.75
0.08	-91.50	74	13.91	5	0.94
0.10	-91.50	58	10.90	4	0.75
0.12	-92.73	34	6.39	3	0.56
0.16	-94.31	28	5.26	3	0.56
0.20	-96.33	25	4.70	3	0.56
0.25	-101.34	43	8.08	4	0.75
0.32	-109.85	93	17.48	23	4.32
0.40	-112.02	92	17.29	23	4.32
0.50	-114.06	88	16.54	30	5.64
0.63	-116.64	111	20.86	60	11.28
0.79	-119.88	213	40.04	149	28.01
1.00	-118.53	183	34.40	134	25.19
1.26	-116.63	109	20.49	55	10.34
1.59	-114.21	65	12.22	9	1.69
2.00	-111.20	41	7.71	7	1.32
2.52	-107.39	16	3.01	5	0.94
3.17	-102.62	8	1.50	4	0.75
4.00	-97.62	7	1.32	1	0.19
5.04	-97.66	8	1.50	1	0.19
6.35	-101.25	8	1.50	5	0.94
8.00	-104.91	12	2.26	6	1.13
10.10	-104.71	11	2.07	5	0.94
12.70	-104.46	16	3.01	5	0.94
16.00	-104.14	40	7.52	14	2.63
20.20	-103.74	25	4.70	7	1.32
25.40	-103.24	28	5.26	7	1.32
32.00	-102.60	51	9.59	27	5.08
40.30	-101.81	37	6.95	12	2.26
50.80	-100.80	39	7.33	13	2.44
64.00	-99.53	67	12.59	29	5.45
80.60	-97.93	64	12.03	27	5.08
102.00	-95.87	45	8.46	5	0.94
128.00	-93.37	38	7.14	5	0.94
Any	-	290	54.51	171	32.14