

## APPENDIX TO

# EARTHQUAKES OF BOSNIA AND HERZEGOVINA FROM 2022 TO 2023 RECORDED ON THE BOSNIAN ADRIA ARRAY TEMPORARY NETWORK

Anne Obermann<sup>1</sup>, Merjema Genjac-Zukić<sup>2</sup>, Snježana Cvijić-Amulić<sup>3</sup>,  
Pascal Graf<sup>1</sup>, Dario Jozinović<sup>1</sup>, Amra Krehić<sup>2</sup>

<sup>1</sup> Swiss Seismological Service, Department of Earth and Planetary Sciences, ETH Zurich, 8092 Zurich, Switzerland

<sup>2</sup> Hydrometeorological Institute of Federation of Bosnia and Herzegovina, Sarajevo, Bosnia and Herzegovina

<sup>3</sup> Republic Hydrometeorological Institute of Republic of Srpska, Banja Luka, Bosnia and Herzegovina

## Appendix

**Table A1.** Coordinates and operational period for the temporary seismic stations of the Y5 network.

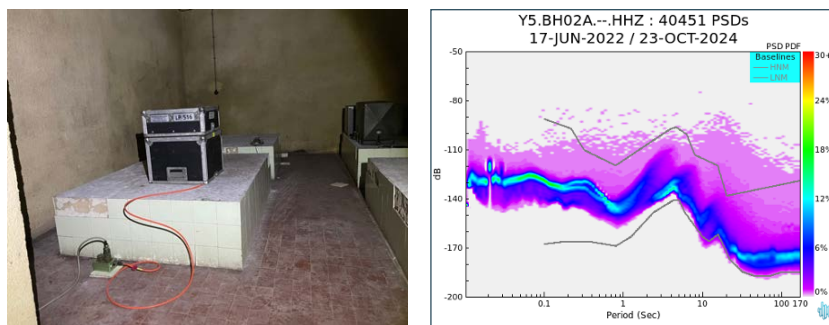
Station Code	Description	Latitude	Longitude	Elevation (m)	Starttime (YYYY-MM-DD hh:mm)	Starttime (YYYY-MM-DD hh:mm)
BH01A	Vitkovići, Goražde, community building, BiH	43.62646	18.96271	374	2022-06-13 12:00	2024-30-11 00:00
BH02A	Sarajevo, seismic tunnel "old institute", BiH	43.87458	18.42409	730	2022-06-15 20:00	2024-11-29 00:00
BH03A	Here, Prozor-Rama, BiH	43.821239	17.688522	990	2022-06-14 14:00	2024-12-04 00:00
BH04A	Mostar, meteorological institute, BiH	43.348317	17.793517	110	2022-06-14 17:30	2024-11-29 00:00
BH05A	Gacko, hydroelectric power plant (dam), BiH	43.169517	18.585392	1034	2022-06-15 10:30	2024-08-12 00:00
BH06A	Kalinovik, existing seismic station, BiH	43.502236	18.446322	1078	2022-06-15 15:00	2024-10-03 00:00

Station Code	Description	Latitude	Longitude	Elevation (m)	Starttime (YYYY-MM-DD hh:mm)	Starttime (YYYY-MM-DD hh:mm)
BH07A	Ivan Sedlo, meteorological observatory, BiH	43.751114	18.036111	962	2022-06-16 15:00	2024-11-28 00:00
BH08A	Zenica, Elementary school, BiH	44.235739	18.008219	464	2022-06-17 15:00	2024-07-10 00:00
BH09A	Demiševci, Sanski Most, BiH	44.785611	16.615556	245	2022-07-18 16:00	2024-12-01 00:00
BH10A	Mrđanovci, Kupres, BIH (RS)	44.068548	17.165691	1128	2022-07-19 14:00	2024-11-27 00:00
BH11A	Klekovača, BIH (RS)	44.481844	16.531313	899	2022-07-19 19:00	2023-11-08 00:00
BH12A	Magaljdol, Mrkonjić Grad, BIH (RS)	44.393089	17.157294	705	2022-07-19 14:00	2024-11-27 00:00
BH13A	Krupa na Uni, Donji Dubovik, BIH (RS)	44.890764	16.320242	327	2022-07-19 19:00	2024-11-28 00:00
BH14A	Očauš, Teslić, goat farm, BIH (RS)	44.513557	17.657208	834	2022-07-20 16:00	2024-12-12 00:00
BH15A	Šamac, Water-Reservoir, BIH (RS)	45.058136	18.464769	101	2022-07-20 14:00	2024-12-16 00:00
BH16A	Doboj, meteorological observatory, BIH (RS)	44.726258	18.089228	174	2022-07-20 20:00	2024-12-16 00:00
BH17A	Banovići, Ethno Restaurant, BIH (RS)	44.383708	18.551372	325	2022-07-21 20:00	2024-12-01 00:00
BH18A	Magnojević Gornji, Bijeljina, school, BIH (RS)	44.770368	18.997248	139	2022-07-21 15:00	2024-07-29 00:00
BH19A	Zvornik, graveyard, BIH (RS)	44.398208	19.093175	338	2022-07-21 21:00	2024-06-14 00:00
BH20A	Gradina, Motajica, radio tower, BIH (RS)	45.092811	17.662483	660	2022-07-22 16:00	2024-11-29 00:00

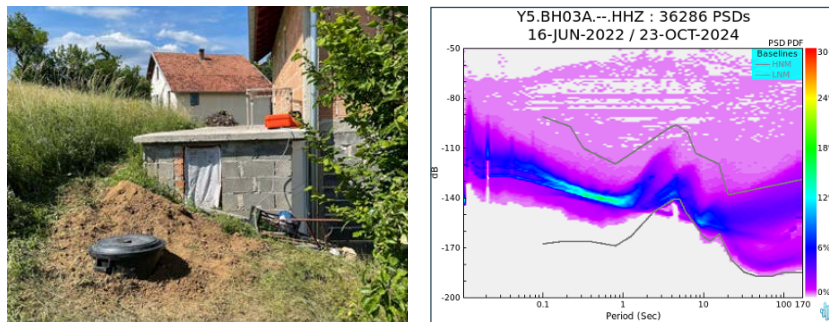
## Bosnian Adria Array network



**Figure A1.** BH01A, Vitkovići, Gorazde, is installed in a municipal building on the ground floor, in the central southern part of the building, which is used only for monthly meetings. The sensor is placed in the northeast corner of the room on floor tiles. The building is situated in a dense urban village.



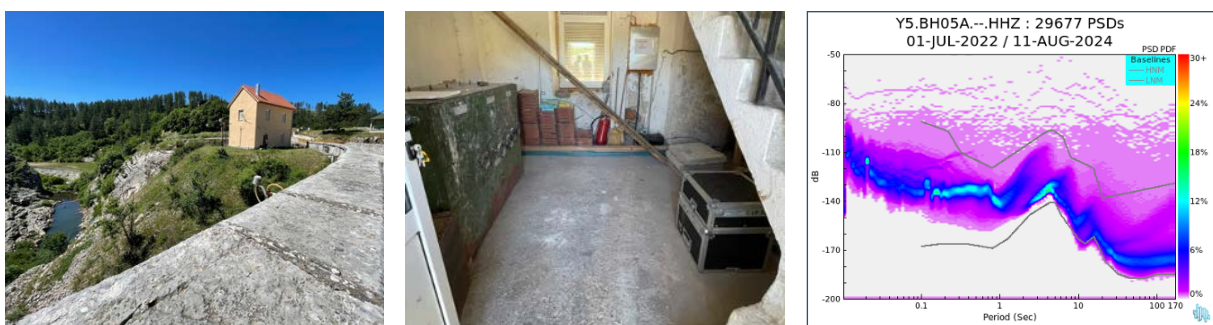
**Figure A2.** BH02A, Sarajevo, is installed at an abandoned seismic test site of the Sarajevo institute. The sensor is housed in an underground shelter (5 m × 5 m) about 20 m below the surface. It is placed on a 50-cm-high concrete pedestal, with an unknown coupling condition. The nearest entrance is around 55 m southeast.



**Figure A3.** BH03A, Here, is installed in an urban free-field. The sensor is installed in a self-constructed seismic vault at a distance of 2 m from a two-storey 8 m-high building. The sensor is placed on a concrete foundation on soil. The sedimentary setting at this site causes higher noise levels compared with the sites on crystalline rock.



**Figure A4.** BH04A, Mostar, is installed in the Meteorological Observatory Mostar. The sensor is located in the basement, in the northeast corner of a two-storey office building. The basement is unused. The sensor is placed directly on the concrete floor of the building in a dense urban area.

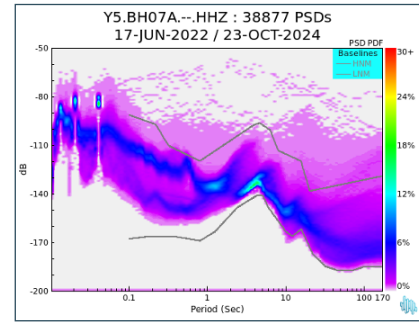


**Figure A5.** BH05A, Gacko, is installed in a small, isolated, unused one-storey building on a rock pillar close to a dam. The sensor is located on the ground floor, in the southeast corner of the room.

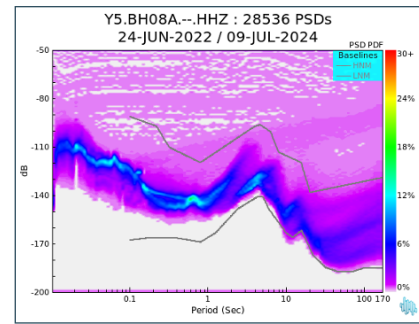


**Figure A6.** BH06A, Kalinovik, is installed in an urban free-field. The sensor is placed on a concrete pedestal inside a seismic vault on the periphery of a small village. The sedimentary setting at this site causes higher noise levels compared with the sites on crystalline rock.

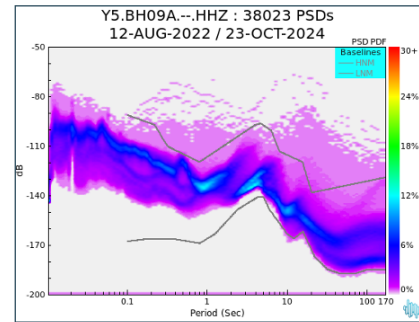
## Bosnian Adria Array network



**Figure A7.** BH07A, Ivan Sedlo, is installed in the Meteorological Observatory Ivan Sedlo. The sensor is located on the ground floor, in the north-central part of a small, isolated two-storey building. The sensor is placed directly on the floor tiles. The observatory is staffed by one or two persons.



**Figure A8.** BH08A, Zenica, is installed in an urban free-field. The sensor is installed inside a self-constructed seismic vault at a distance of 10 m from a two-storey elementary school with a height of 8 m. It rests on a self-constructed concrete foundation on a relatively steep slope with soil ground.



**Figure A9.** BH09A, Sanski Most, is installed in the garage of a private house in a small village. The sensor is located on the ground floor, in the south-western part of a two-storey building, which is in use. The sensor is placed in the northeast of the room directly on the floor tiles.



**Figure A10.** BH10A, Kupres, is installed in a used municipal office. The sensor is in the basement, in the north-central part of a two-storey building. It is placed directly on the concrete floor.



**Figure A11.** BH11A, Klekovača, is installed in an open free-field in a mountainous area. The sensor is installed in a self-constructed seismic vault within a fenced area built for a meteorological station and rests on a self-constructed concrete foundation. Due to the swaying of the mast in the wind, we observe periodic degradation of the long-period signal.



**Figure A12.** BH12A, Magaljdol, is installed in a small building (former toilet) with a 4 m × 2 m footprint, 2 m away from a one-storey abandoned school. The sensor is on the ground floor, in the southeast corner of the room, placed on floor tiles. This station is solar-powered.



**Figure A13.** BH13A, Krupa na Uni, is installed in an urban free-field, housed in a seismic vault. The sensor is placed on a concrete pedestal, 5 m from a one-storey building. The sedimentary setting at this site causes higher noise levels compared with the sites on crystalline rock.



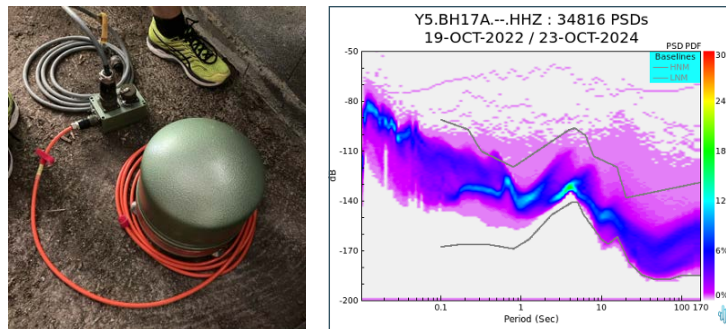
**Figure A14.** BH14A, Ocaus, is installed in an urban free-field. The sensor is inside a self-constructed seismic vault at a distance of 10 m from a one-storey building less than 8 m high. It is placed on a self-constructed concrete foundation on a relatively steep slope with soil ground. The sedimentary setting at this site causes higher noise levels compared with the sites on crystalline rock.



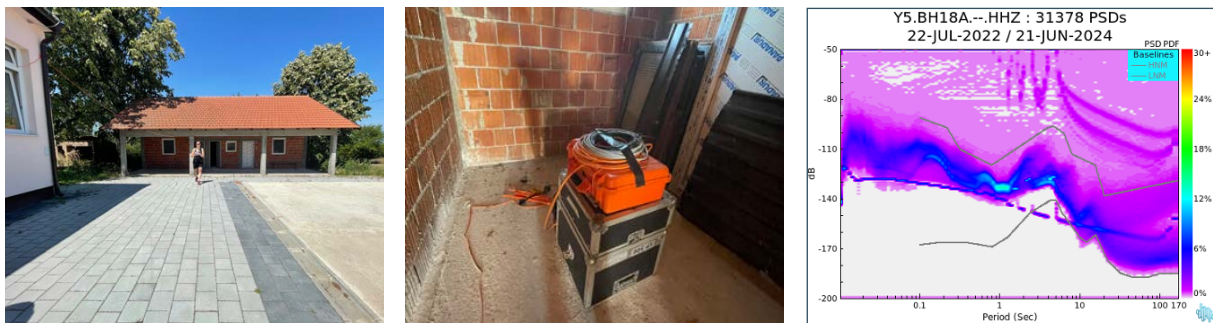
**Figure A15.** BH15A, Šamac, is installed in a two-storey building (6 m × 12 m) used as a machine room for a local water reservoir in a small village. The sensor is located on the ground floor in the northern part of the building and placed directly on the concrete floor. Due to the swaying of the nearby mast in the wind, we observe periodic degradation of the long-period signal.



**Figure A16.** BH16A, Dobož, is installed in an urban open field in the backyard of the local meteorological observatory Dobož. The sensor is inside a seismic vault on a concrete base at the edge of a dense urban village.



**Figure A17.** BH17A, Banovići, is installed in a one-storey building in a small village. The sensor is located in the basement, in the southeast part of the building, placed directly on the concrete floor.

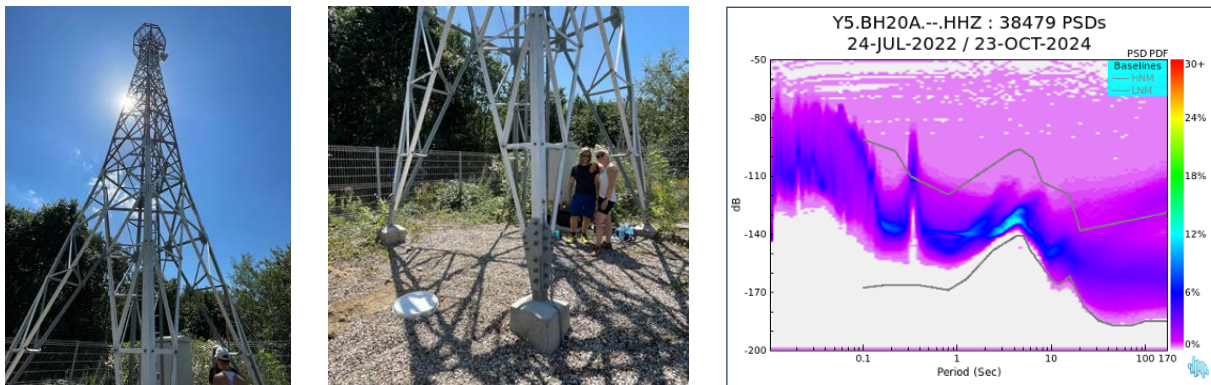


**Figure A18.** BH18A, Magnojević Donji, is installed in a one-storey building in a dense urban village. The sensor is located on the ground floor, in the center of the building, directly on the concrete floor.

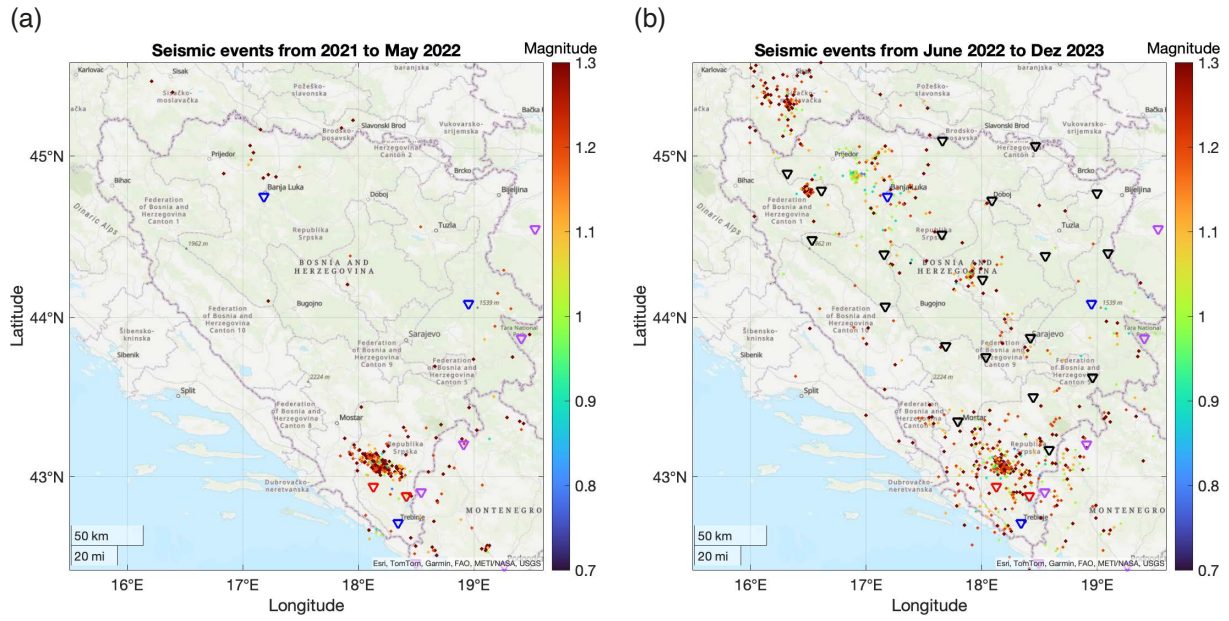
## Bosnian Adria Array network



**Figure A19.** BH19A, Zvornik, is installed in an open free-field. The sensor is inside a self-constructed seismic vault on a concrete foundation. The ground consists of soil. Mobile phone coverage is very limited despite a nearby cell tower, resulting in the recovery of minimal data.



**Figure A20.** BH20A, Gradina, is installed in a free-field, housed inside a self-constructed seismic vault on a concrete foundation, beneath an approx 30 m-high antenna tower. The ground consists of soil. Due to the swaying antenna tower in the wind, we observe periodic degradation of the long-period signal. We also observe a high intensity spike around 3-4 Hz that might be related to electrical interference.



**Figure A21.** Seismicity in BiH and the neighboring regions (a) from January 2021 to May 2022 and (b) from June 2022 to December 2023 for events smaller or equal to ML1.3. Prior to the Adria Array deployment, events of this magnitude are not captured throughout BiH. An exception is the densely instrumented Southern region, where micro-seismic events of the aftershock sequences of the 2022 Berkovići ML6.0 earthquake are recorded.