

AdriaArray Seismic Network - status in October 2022

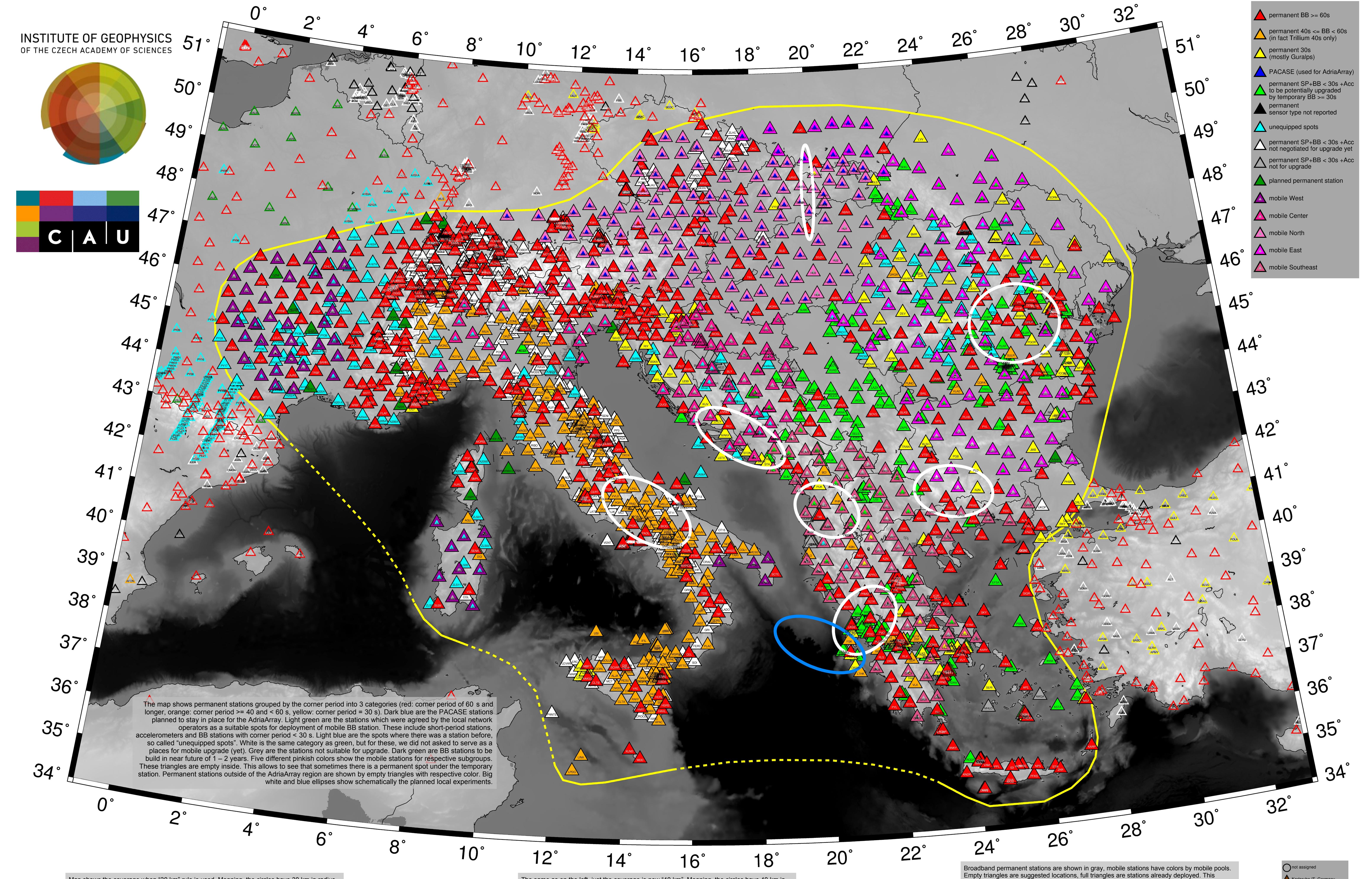
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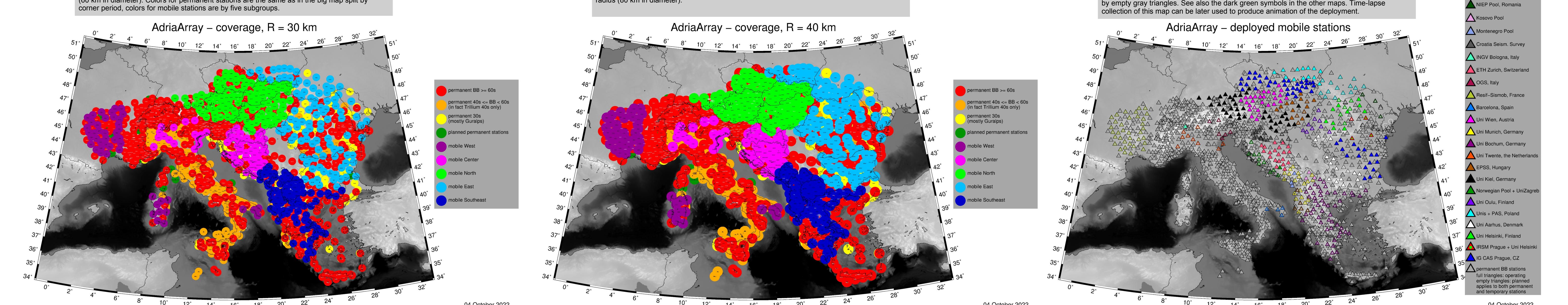
2nd International EPOS SP Workshop on AdriaArray – Seismology, Potsdam, Germany, 6–7 October 2022



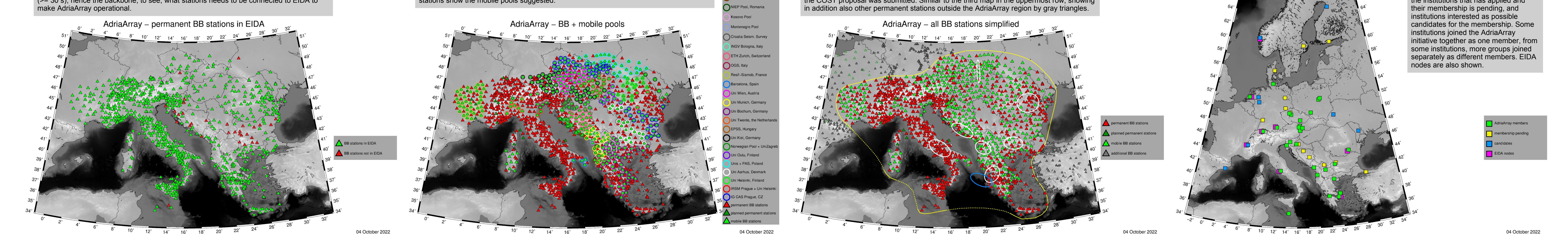
The map shows permanent stations grouped by the corner period into 3 categories (red: corner period ≥ 60 s and longer, orange: corner period > 40 s < 60 s, yellow: corner period = 30 s). Dark blue are the PACASE stations planned to stay in place for the AdriaArray. Light green are the stations which were agreed by the local network operators as a suitable spots for deployment of mobile BB station. These include short-period stations, accelerometers and other sensors. Some of these spots are not yet negotiated with the local network operator, so called "unequipped spots". White is the same category as green, but here we did not ask to serve as a places for mobile upgrade (yet). Grey are the stations not suitable for upgrade. Dark green are BB stations to be build in near future of 1–2 years. Five different pinkish colors show the mobile stations for respective subgroups. These triangles are empty inside. This allows to see that sometimes there is a permanent spot under the temporary station. Permanent stations outside of the AdriaArray region are shown by empty triangles with respective color. Big white and blue ellipses show schematically the planned local experiments.

The same as on the left, just the coverage is now "40 km". Meaning, the circles have 40 km in radius (80 km in diameter).

Broadband permanent stations are shown in gray, mobile stations have colors by mobile pools. Empty triangles are suggested locations, full triangles are stations already deployed. This applies to both permanent and mobile stations as we show also the future permanent stations by empty gray triangles. See also the dark green symbols in the other maps. Time-lapse collection of this map can be later used to produce animation of the deployment.

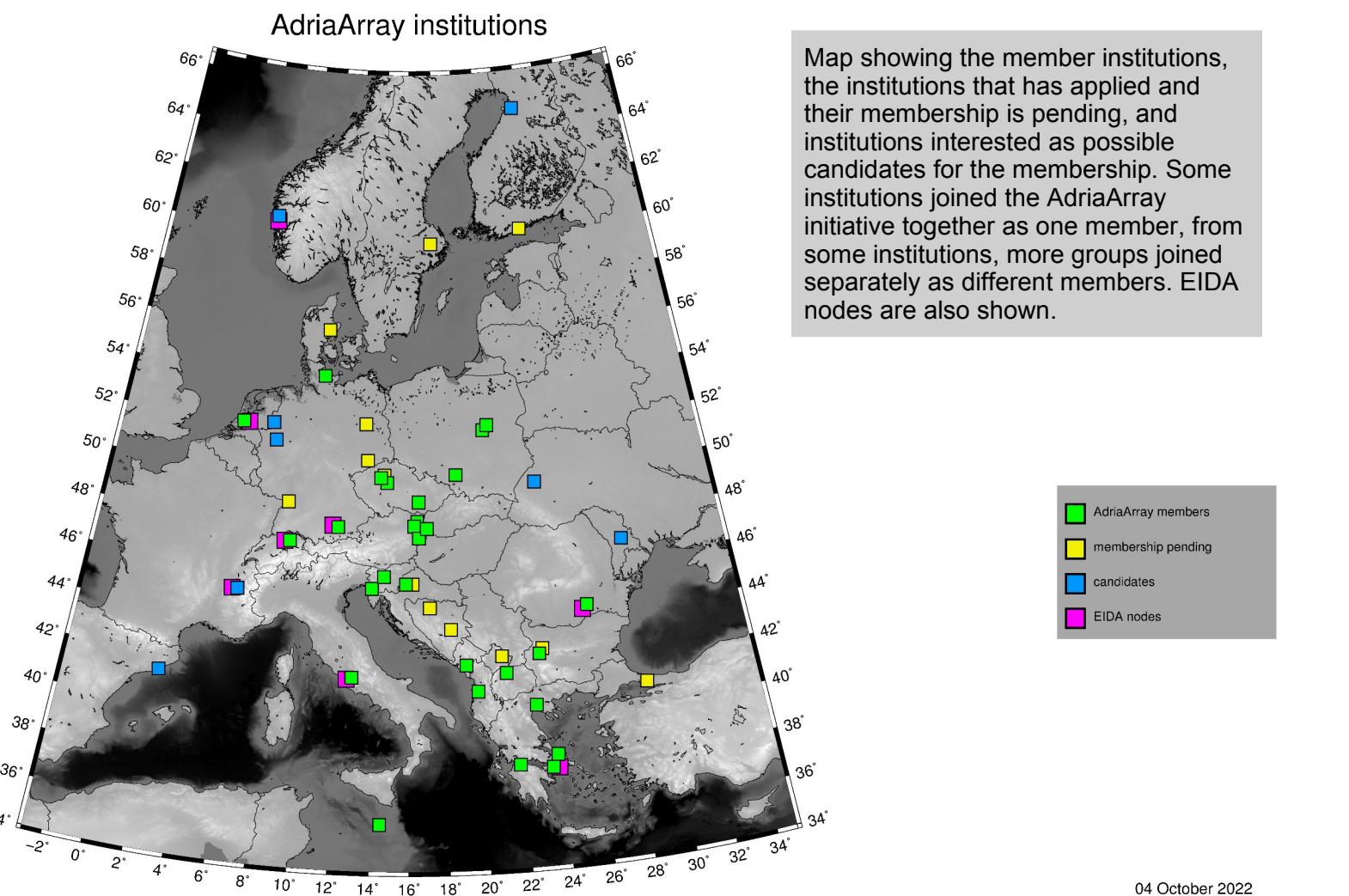


Stations which are / are not connected to EIDA. This map shows only BB station (≥ 30 s), hence the backbone, to see, what stations need to be connected to EIDA to make AdriaArray operational.



All permanent stations are in red, temporary in light green. Circles around mobile stations show the mobile pools suggested.

Simplified map with the layout as used for the COST proposal and updated further after the COST proposal was submitted. Similar to the third map in the uppermost row, showing in addition other permanent stations outside the AdriaArray region by gray triangles.



The mobile station distribution was done in GoogleEarth. Permanent stations were imported to the maps and circles of 30 and 40 km in radius corresponding to the mobile stations were manually moved over the region to cover it. We tried to place as many of the mobile BB stations as possible to existing SP/SM stations or unequipped spots, so that the scouling is minimized later in the field. As there was no strict limit of what was the corner period of the backbone, the virtual "deployment" of the mobile stations was done so, that we were successively replacing the "worst" (most SP) stations with the best (longer corner period) BB stations in the coverage area. The temporary stations at given coverage have been replaced as much SP as possible. It gave us the best "quality" of the coverage. In the subgroup EAST and partly in the subgroup CENTER, there are several stations with 30 s corner period for the backbone. The rest is covered with stations of 40 s and longer corner period. This obviously trades-off with the station spacing considered. If for example the 30 s station coverage is not considered for subgroup CENTER, it will cover almost all covered area in the region. As, however, for this subgroup the stations spacing used was "30 km", some 30 s sensors are popping up in the respective coverage maps.

In consideration to the backbone, we suggested several local experiments. These are to be considered as a local densification of the backbone, either with BB or SP/SM or a combination stations in the regions of particular interest. So far, we have eight suggestions and the negotiation is ongoing.

The table on the right shows which mobile pool goes to which region including the number of stations to be deployed. The table is split by five subgroups. Cells with blue background denote the mobile pools already deployed.

Map showing the member institutions, the institutions that has applied and their membership is pending, and institutions interested as possible candidates for the membership. Some institutions joined the AdriaArray initially together as one member, from some institutions, more groups joined separately as different members. EIDA nodes are also shown.

	adhesive members	candidate pending	coincide	EIDA nodes
NORTH	10	14	11	20
CENTER	10	15	10	12
SOUTHEAST	10	15	10	12
WEST	10	15	10	12

