AlpArray is a unique transnational research initiative to study the geodynamics and seismology of the Alps with a large-scale temporary broadband seismological network which complements the existing permanent stations. 34 research institutes from 17 countries join their expertise to advance our knowledge about the structure and evolution of the lithosphere beneath the entire Alpine area.

AlpArray in Austria and Slovakia is coordinated by the Department of Meteorology and Geophysics (IMGW) at the University of Vienna and funded by the Austrian Science Fund (FWF).

Installation

Typical installation inside basements, unused huts or wine cellars.

Sensor alignment

N-S orientation of sensor determined with magnetic compass during deployment. Checked sensor alignment later with optical gyroscope.

Power supply

24 x connected to grid + 4 x solar panels + 2 x fuel cell

Data acquisition

Live data transmitted via cellular network (DigiWAN 3G) + stored on memory cards + data streamed in real-time to OMEUS/ODC

Power Spectral Densities (Noise characteristics, selected examples)

Calculated for March 2016

Noise requirements for AlpArray stations

1-10 Hz: < NHNM - 20 dB
30-200 s: < NHNM - 20 dB (2 comp.)
< NHNM - 10 dB (N+E comp.)

Does the station meet the limits?

Yes  No

Expected duration of deployment: 2016 - 2018

NHN M = New High Noise Model, Peterson 1991