



Session 04

The cycle of observational seismology from Waveform Data Collection to scientific products

Conveners:

Carlo Cauzzi¹, Susana Custódio², Christos Evangelidis³, Giovanni Lanzano⁴, Lars Ottemöller⁵

¹ ORFEUS and SED@ETH, Zurich, Switzerland

² FCUL, Lisbon, Portugal

³ IG-NOA, Athens, Greece

⁴ INGV, Milan, Italy

⁵ UiB, Bergen, Norway

Observational seismology has witnessed tremendous advances in the last two decades in Europe and worldwide. The establishment of EIDA marked a change of paradigm in seismic data dissemination in Europe. The deployment of dense modern accelerometer networks has blurred the boundary between broadband and strong-motion seismology. Geophysical site characterization has become standard practice, and open databases have been created to host basic and advanced station metadata. In this dynamic landscape, ORFEUS (<http://orfeus-eu.org/>) carries out since 1987 its mandate to promote and coordinate waveform seismology in Europe. ORFEUS services (<http://orfeus-eu.org/data/>) currently provide access to the waveforms acquired by more than 10,000 stations in Pan-Europe, including dense temporary experiments, with strong emphasis on open and high data quality. The data and services are collected or developed at the national level and further standardized, homogenized and promoted through ORFEUS, including full integration with EPOS. Contributing data to ORFEUS archives means long-term archival, state-of-the-art quality control, enhanced data access and usage, especially through webservice. This means, in turn, increased scientific impact of seismic waveform data. This session aims at discussing the latest advances in seismological observation in Pan-Europe and the challenges ahead. Focus is not limited to the participants to ORFEUS, their hardware and software infrastructure, technical and scientific products. Contributions from other global / international / national agencies and scientists working in the broad domain of observational seismology are welcome, as are suggestions for innovative developments and ideas to be considered for integration into the EPOS Seismology domain.