Geophysical Research Abstracts
Vol. 19, EGU2017-14442-1, 2017
EGU General Assembly 2017

EU H2020 SERA: Seismology and Earthquake Engineering Research Infrastructure Alliance for Europe

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SERA – Seismology and Earthquake Engineering Research Infrastructure Alliance for Europe – is a new infrastructure project awarded in the last Horizon 2020 call for Integrating Activities for Advanced Communities (INFRAIA-01-2016-2017). Building up on precursor projects like NERA, SHARE, NERIES, SERIES, etc., SERA is expected to contribute significantly to the access of data, services and research infrastructures, and to develop innovative solutions in seismology and earthquake engineering, with the overall objective of reducing the exposure to risks associated to natural and anthropogenic earthquakes. For instance, SERA will revise the European Seismic Hazard reference model for input in the current revision of the Eurocode 8 on Seismic Design of Buildings; we also foresee to develop the first comprehensive framework for seismic risk modeling at European scale, and to develop new standards for future experimental observations and instruments for earthquake engineering and seismology.
To that aim, SERA is engaging 31 institutions across Europe with leading expertise in the operation of research facilities, monitoring infrastructures, data repositories and experimental facilities in the fields of seismology, anthropogenic hazards and earthquake engineering.
SERA comprises 26 activities, including 5 Networking Activities (NA) to improve the availability and access of data through enhanced community coordination and pooling of resources, 6 Joint Research Activities (JRA) aimed at creating new European standards for the optimal use of the data collected by the European infrastructures, Virtual Access (VA) to the 5 main European services for seismology and engineering seismology, and Trans-national Access (TA) to 10 high-class experimental facilities for earthquake engineering and seismology in Europe. In fact, around 50% of the SERA resources will be dedicated to virtual and transnational access.
SERA and EPOS (European Platform Observing System, a European Research Infrastructure Consortium for solid Earth services in Europe) will be developed in parallel, giving SERA the capacity to develop building blocks for EPOS in the areas of seismology, anthropogenic hazards and seismic engineering, such as new virtual access, new anthropogenic hazards products, expanded access to waveform data, etc. In addition, services developed and validated in SERA will be produced in a way that is compatible for integration in EPOS.
This communication is aimed at informing the scientific community about the objectives and workplan of SERA, starting in spring 2017 for a duration of 3 years.