

The contribution of the Sismos project to the preservation and dissemination of the material heritage of instrumental seismology

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In view of the long Italian tradition in instrumental earthquake observation, on 2001 INGV officially started the Sismos project for the research, recovery, high resolution scanning and dissemination of seismograms recorded in Italian observatories during the period 1895 -1984 (<http://sismos.rm.ingv.it/en/>). The Sismos High resolution scanning laboratory is equipped with 3 flat bed scanners Escoscan 3640 (A0 Format). The seismograms are scanned at 1016 dpi grey scale.

A major effort was made to intervene in the different sectors (scientific, historical, cultural and popular dissemination) with the disciplinary rigour of the different disciplines and synergies involved as compared with analogous initiatives at the national and the international level. With the EuroSeismos project which started in 2002, in collaboration with the WG History and data of instrumental seismology of ESC, the experience and the technologies of SISMOS have allowed us to broaden the “user base” of the project to the whole Euro-Mediterranean area. During the period 2003-2010 around 30.000 historical seismograms from 34 Euro-mediterranean countries have been scanned at Sismos on a total of more than 220.000 scanned, up to now.

During the period 2006-2010 SISMOS was part of the facilities of the European project NERIES, and from 2010 and 2012 participated to the GEM project.

Sismos is also a seismological infrastructure (History and data of instrumental seismology) into the Working Group 1 of the European Plate Observing System (EPOS), the integrated solid Earth Sciences research infrastructure of EU.

SISMOS pays also particular attention to the recovery, restoration and conservation of historical materials relating to Italian and international seismology with scientific as well as cultural aims. Amongst other things, it catalogues, reproduces and makes available a large amount of complementary documentation (500,000 pages of worldwide Bulletins in the Sismos portal).

Since 2008, two restoration laboratories have been set up at Sismos, one for historical papers (i.e. seismograms, bulletins, etc.) and one for historical instruments.

The laboratory for the restoration of historical papers acts upon the seismograms and the most interesting documents, which are particularly damaged and that risk definitively losing the information they contain. The laboratory for the restoration of instruments provides the conservative and functional restoration as well as periodic, non-invasive cleaning for the instruments.

Since 2005, SISMOS has developed a specific software for the viewing and processing of raster images of historical seismograms into a vectoral form: Teseo2 - Vectorizer of historical seismograms (<http://teseo.rm.ingv.it/>). The program has been extensively used by SISMOS researchers and foreign colleagues who attended a special training in the field of access to the Transnational Access 3 of the NERIES project (2006-2010).

A new database has been build and a new Seismogram request interface (seismogramrequest.rm.ingv.it) of the SISMOS portal make more efficient the request and download of seismograms' raster images and of relevant instrument's constants and station bulletins.