

Seismology in Croatia, 2003–2006

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Seismological research in Croatia is carried out almost exclusively within the Department of Geophysics, Faculty of Sciences, University of Zagreb. Scientific investigations are mostly organized within the framework of the project »Seismicity of Croatia«, which is financed by the Ministry of Science, Education and Sports of the Republic of Croatia. The staff of Croatian Seismological Survey (a part of the Department) maintain and deploy the network of seismographs and strong-motion instruments, compile the earthquake catalogue and analyse and exchange the seismological data. In this period the number of seismological instruments increased and several new seismological stations were opened. The Croatian network currently consists of 13 BB stations and a SP one, most of which transmit data in real time to the central observatory in Zagreb.

11 researchers (4 PhD, 5 MSc and 2 BSc) took part in seismological investigations. In the period 2003–2006 they published a total of 21 scientific, conference and professional papers. Croatian seismologists were active in national scientific project as well as in international multilateral and bilateral programs. The research topics included seismic zoning of megacities around the world (UNESCO-IGCP sponsored project coordinated by the Department of Earth Sciences, University of Trieste), interpretation and analysis of historical seismograms (cooperation between Universities of Zagreb and Hamburg), and assessment of seismic site amplification and seismic building vulnerability in the framework of the NATO Sfp project where a number of techniques involving analyses of ambient vibration were tested and improved. Bilateral Croatian-Macedonian project was concentrated on improvement of the Macedonian earthquake catalogue and investigation of seismic anisotropy on the Macedonian territory.

Significant part of seismological studies is related to Croatian seismicity, which was characterized by only a moderate earthquake activity. An overview of Croatian seismicity in period 2002–2005 was presented by Ivančić et al. (2006). Also, the Croatian earthquake catalogue has been regularly updated and currently consists of over 30,000 records (BC–2007). Herak D. et al. (2005) presented overall analysis of one of the strongest earthquake sequences ever

recorded within the Adriatic microplate, which occurred near the Jabuka island in the very centre of the Adriatic Sea. Herak M. et al. (2004) considered linear amplification of horizontal strong ground motion in Zagreb. Intermediate term earthquake prediction algorithm CN was used by Peresan et al. (2006) to provide an overview of the application of the intermediate-term middle-range earthquake prediction algorithm CN for the analysis of seismicity in the Adria region and surrounding countries, namely Italy and Croatia. Historical seismograms recorded in Göttingen and Zagreb were studied by Herak M. et al. (2004). Anisotropy of Pg-wave velocity was determined for the hypocentral volume of the Krn Mt. (Slovenia) earthquake sequence (Herak M. et al., 2003).

On the occasion of the 100th anniversary of the Zagreb seismological station, and 125 years since the great Zagreb earthquake, Andrija Mohorovičić Memorial Rooms were opened in the premises of the Department of Geophysics, Faculty of Science in Zagreb. The exhibition consists of original seismographs, meteorological instruments, clocks, furniture, etc. that Mohorovičić used, his papers, documents and correspondence. All instruments are restored to a perfect working condition. The rooms are presented also on <http://www.gfz.hr/sobe-en/index.htm>.

The scientific productivity of Croatian seismologists retained about the same level as in the previous 4-year period.

List of publications

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