

2nd edition of the IASPEI New Manual of Seismological Observatory Practice on the Web!

Since March 2012, the larger parts of an updated and significantly amended second edition of the IASPEI New Manual of Seismological Observatory Practice, NMSOP-2, is freely accessible on the Internet, scheduled for completion in the course of 2012. With some 2000 pages of texts and figures, plus linked sources of information, NMSOP-2 will then become the largest seismology E-book available to date.

The printed first edition of the IASPEI New Manual of Seismological Observatory Practice (NMSOP), elaborated under the conceptual guidance and editorship of Prof. Dr. Peter Bormann, was published in 2002 by the GFZ German Research Centre for Geosciences (Helmholtz Association). NMSOP-1 is used already in more than 100 countries in seismological practice, national and international training courses, teaching and research. Meanwhile, it is also available as a print publication in Chinese and in partial translations into Russian, Indonesian and Turkish language.

Under the editorship of P. Bormann (GFZ), 73 authors from Australia, Japan, Taiwan, USA and 15 European countries have contributed to NMSOP-2 and more than 70 experts from 20 countries provided peer reviews. Most of the original 13 NMSOP-1 chapters have been revised significantly and five new topical areas were added. They cover marine seismic observations, investigation of site response in urban areas, seismological contributions to seismic risk mitigation, automated event and phase identification as well as issues and procedures related to nuclear test-ban treaty monitoring. Additionally, information sheets on many new topics have been added, e.g. on the recently agreed IASPEI standards for determining magnitudes from digital data, on stress conditions inferable from modern magnitudes, on seismic energy determination from local and regional seismic events, on the optimization of seismic network configurations and on self-organizing seismic early warning information networks. All this is (respectively will be) complemented by interactive exercises, tutorials and computer animations, e.g. on earthquake rupture and tsunami propagation, on seismic ray propagation through the Earth in relation to the formation of travel-time curves and seismic records, on the radiation patterns of P and S waves for different rupture mechanisms and slip orientations, on 3-D viewing and interpretation of earthquake clusters etc.

Before NMSOP, text books in seismology generally focussed either on a general, graduate-level introduction or on specialized theory and research. After the era of analog seismology and thus of the 1979 Willmore Manual had ended, virtually no material was available that provided both the scientific background and the competent unique guidance for carrying out modern seismological observation, data analysis and field operation practice. Yet, these activities increasingly depend on global communication, data exchange and standardization of formats and procedures as well as interdisciplinary cooperation, which necessitates the understanding of related differences in technical terminology, approaches and procedures. The printed first edition of the NMSOP aimed at filling these gaps.

NMSOP-2 now allows the download of dozens of computer programs for data analysis, instrument calibration, event locations, network performance assessment and educational animations. Finally, besides a highly extended list of Acronyms, NMSOP-2 contains the largest ever published glossary of terms in earthquake, volcano and engineering seismology (200 pages). It will notably facilitate the

mutual understanding between earth scientists, engineers, educators, disaster managers, decision makers and journalists.

All items can be viewed and downloaded via the NMSOP website maintained by the GFZ German Research Centre for Geosciences in Potsdam, Germany (<http://nmsop.gfz-potsdam.de>; doi: 10.2312/GFZ.NMSOP-2). The NMSOP-1 and NMSOP-2 websites are also mirrored on the websites of the International Association of Seismology and Physics of the Earth's Interior (IASPEI; <http://www.iaspei.org/projects/NMSOP.html>) and the International Seismological Centre (ISC; <http://www.isc.ac.uk/standards>).