

## Preface

The New Manual of Seismological Observatory Practice (NMSOP or "the Manual") is an initiative of the former Commission on Practice (CoP), now Commission on Seismic Observation and Interpretation (CoSOI) of the International Association of Seismology and Physics of the Earth Interior (IASPEI). It aims at continuation and significant expansion of the materials and guidance provided by the earlier Willmore (1979) Manual of Seismological Observatory Practice (MSOP). To achieve this goal IASPEI established at its General Assembly in Wellington, New Zealand, January 1994, a Manual Working Group within the CoP. Peter Bormann agreed to chair the group. A first concept for the NMSOP was put forward at the General Assembly of IASPEI's European Seismological Commission (ESC) in Athens, Greece, September 1994 (Bormann, 1994). At subsequent meetings and through correspondence, Working Group members were found, willing to contribute major chapters, topical sections or complementary annexes to the Manual. Over the course of time the original conception of the organization of the Manual evolved, in response to the material that authors actually provided. The authorship itself changed as well, as some people dropped out and replacements emerged. This has delayed the completion of the NMSOP. In support of the NMSOP the Manual Working Group organized six open workshop sessions in conjunction with IASPEI and ESC assemblies, with oral and poster presentations as well as temporary presentations of first Manual drafts as pdf files on the website of Global Seismological Services. The history of the Manual and its forerunners, the activities of the Working Group, as well as the scope, philosophy and expected outreach of the NMSOP, are outlined in more detail in Chapter 1. In total, 40 authors and contributors from nine countries have collaborated in producing about 1250 pages of drafts (see list of authors and contributors). These were reviewed extensively both within the Working Group and by 35 external reviewers from 10 countries. Thus we hope to have produced a Manual that will be considered useful not only for the daily work of personnel at seismological observatories and centers for data analysis, but which may also find interest in a broader context of education in Earth sciences and training at universities and secondary schools.

In order to engage the broadest possible user community, the Working Group had recommended to make the NMSOP available both in printed and electronic form. We have refrained from issuing the NMSOP as a voluminous bound book produced by a commercial publisher, in order to assure that the NMSOP will be affordable for all its intended users, particularly in developing countries, and so that it can be easily and quickly up-dated without waiting years for a costly new edition. Rather, it will be printed as a loose-leaf collection in two clamp-folders, Vol. I for the 13 main chapters and Vol. II for annexed complementary data and information sheets, program descriptions and exercises with solutions. All documents have their individual page numbers. Thus, any chapter or section/sheet requiring up-dating can be further developed individually and circulated as an E-mail attachment to known users or be placed on the current NMSOP website at the GeoForschungsZentrum Potsdam (<http://www.gfz-potsdam.de>) and downloaded from there as pdf-files. New chapters and annexes will be circulated as soon as they have passed the review process by the CoSOI of IASPEI, the successor to CoP. The first printed edition of the NMSOP (2002) still misses some intended sections (e.g., about IASPEI recommended new standards for magnitude measurements, treatment of strong-motion instrumentation and data processing, ocean-bottom seismometer (OBS) installations and data, data exchange procedures with World Data Centres (WDCs) in seismology, etc. They will gradually be supplemented via the web-version of the NMSOP.

The NMSOP CD-ROM, which is attached to Volume 2 of the printed Manual, additionally offers animations of seismic ray propagation and the formation of seismic recordings in the local and teleseismic range up to an epicentral distances of 167°. A preliminary version of the Manual has also been included in the complementary CD-ROM which accompanies Part B of the International Handbook of Earthquake and Engineering Seismology (Lee et al., 2002). In 2006 the Seismological Press in Beijing published a two-volume hard-cover edition of the NMSOP in Chinese language (ISBN 7-5028-2867-2) in close collaboration with the China Earthquake Administration and its associated institutes.

In the case of open questions about material contained in the Manual, users are invited to consult the authors directly (with copy to the editor). Their full addresses have been given in the list of authors and contributors. Any piece of information contained in the NMSOP will be made freely available for non-commercial use, provided that full reference is given to the NMSOP publication as a whole and to the author(s) and title of any specific chapter, section or annex. However, reproduction of any piece of information, figures in particular, in other publications will require copyright permission by IASPEI through the Editor who has been designated as the Association's agent. For details see editorial remarks.

The Manual is the result of a cooperative international effort. It should be maintained under the auspices of IASPEI/CoSOI to assure that the seismological community can always refer to up-to-date and IASPEI-authorized guidance in observatory practice. Anyone with suggestions about important pieces of information which should be added to the Manual or who feels fit to make a related contribution himself should inform the editor. All suggestions for further improvement and eliminating errors and typos are very welcome.

The members of the Manual Working Group would like to express their gratitude to IASPEI for entrusting this important task to them and for the continuous encouragement provided by CoP/CoSOI. Particular thanks go to the many external reviewers<sup>1)</sup>. Their constructive criticism and suggestions have greatly facilitated the completion of this work and helped to improve the original drafts. Specific acknowledgments are given at the end of individual chapters. Special thanks go to Ms. Margaret Adams (UK/USA) for final English proof-reading of the whole manuscript and to the GeoForschungsZentrum Potsdam (GFZ) for its support given to the printing of the Manual. The Editor also acknowledges the valuable technical assistance provided by Ms. J. Suckale, Ms. A. Sachse, Ms. U. Borchert, Ms. R. Stromeyer now Milkereit), Mr. Ch. Neger and Mr. L. Gabrysch. Without their help in consistent formatting, drawing of figures and compiling the lists of acronyms, the glossary and the index, the Manual would not have been completed in due time. IASPEI, NORSAR and Kinematics provided grants to make Manual copies available to users most in need, particularly in developing countries.

Potsdam, October 2007

P. Bormann (on behalf of the IASPEI WG NMSOP)

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