

PREFACE

The seismic sequence that struck Emilia area (northern Italy) on May-June 2012 represented an important case study for scientists involved in the Earth sciences. Multidisciplinary and multiparametric datasets were collected from the beginning of the seismic sequence. Geological, geochemical and geophysical data were rapidly analyzed, to identify the seismogenic structures, to define the level of damage, and to study the effects on the environment, with the ultimate goal being to better understand earthquakes and to provide new knowledge for civil protection applications.

The need to share these preliminary data among scientists and to inform people and the media about the causes and effects of the earthquake in a short time has been strongly felt. On this basis, the Istituto Nazionale di Geofisica e Vulcanologia (INGV) launched the idea of publishing a special issue of the Annals of Geophysics in a new kind of format, as 'Letters' (fast track papers), to allow scientists to quickly publish the preliminary results of their findings.

Therefore, this first issue of the Annals of Geophysics 'Letters', entitled *The Emilia (northern Italy) seismic sequence of May-June, 2012: preliminary data and results*, is entirely dedicated to this dramatic seismic sequence, with papers freely available on line at <http://www.annalsofgeophysics.eu/>, for rapid diffusion of these scientific results through a peer-reviewed journal.

In this issue, the readers will find preliminary data and the first scientific interpretations of the spatial and temporal evolution of this seismic sequence, the responsible faults, the surface geological effects, the crustal deformation, and the new estimates of seismic hazard for the Padana Plain. All of this large amount of information is collected in 42 brief, but exhaustive, papers. The initial papers introduce the reader to the northern Italy geological and geophysical features, with particular emphasis on the Emilia region. The following papers refer to data acquisition and analysis of seismological, geological, geodetic, InSar and geochemical data, all pointing to different geophysical aspects of the earthquake.

This issue then concludes with a few articles dealing with the dissemination of information through the latest channels of media communication. We would also like to emphasize the heterogeneity of this issue, in terms of papers from the INGV (60%) and from non-INGV (40%) experts.

The preparation of a special issue in such a short time has been a great challenge, and it would have been impossible without the contributions of the many reviewers who enthusiastically supported us. Their work has been of the utmost importance, and for this reason we wish to sincerely acknowledge more than 60 Italian and 30 foreign scientists who worked hard even during their summer holidays.

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