

Preface

In this era of global change, geohazards in various forms and their monitoring and observations have come into the limelight of the Earth scientific research worldwide. The most effective techniques of such observation are undoubtedly those of modern space geodesy and geophysics. In 2003, Geohazard Information Laboratory of the Sejong University was named as a National Research Laboratory by the Korea Ministry of Science and Technology. With this support, the Geohazard Information Laboratory has been conducting a 5-year research project “*Optimal Data Fusion of Geophysical and Geodetic Measurements for Geological Hazards Monitoring and Prediction*”. Two special sessions of the International Symposium on Remote Sensing were held in Jeju and Busan, Korea, in 2004 and 2006, respectively, under the sponsorship of the project. Many of the papers in this special issue of Earth, Planets and Space (EPS) are from these two special sessions.

In the two special sessions, international scientists presented the state-of-the-art technologies, results of contemporary research topics, the current challenges and possible future directions in the field of geohazard research from space-based observations including InSAR, GPS, superconducting gravimetry, GRACE, satellite altimetry (TOPEX/POSEIDON and ENVISAT), ESPERIA, DEMETER and other geodetic satellites. The specific research areas of geohazards covered by the papers published in the Special Issue include intraplate earthquake and earthquake postseismic studies, volcanic deformation, experiment to detect seismic-induced topside ionosphere signals, in situ and space observed temporal gravity field, geomagnetism, land subsidence, and Southern Ocean mass variations and oceanic heat transport. We anticipate that the publication of this special issue will illustrate the various possibilities of monitoring geohazard and further broadens our knowledge and enthusiasm.

We are very grateful to the Sejong University, The Korean Society of Remote Sensing, Korea Ministry of Science and Technology, and University of Calgary for their support. We thank the authors and reviewers for their time and efforts to make possible this special issue of EPS. We also gratefully acknowledge Prof. Kiyoshi Yomogida and the editorial staff of EPS for their gracious help.

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