



Preface

## Probing the atmosphere with geodetic techniques

Advances in space-geodetic techniques such as GPS, InSAR, and VLBI in terms of accuracy and reliability enable the interpretation of the observed spatially or temporally varying atmospheric delay for meteorological purposes. The increased number of continuous space-geodetic networks and the availability of processed data in near real-time, allows for the utilization of such observations in numerical weather prediction. Current progress towards near real-time processing and slant-delay estimation techniques provide promise for operational meteorology. Moreover, high resolution SAR data and GPS time-series data afford special opportunities for meteorological analysis.

In this issue of Physics and Chemistry of the Earth, issues related to the synergy between meteorology and geodesy in this fast maturing multidisciplinary field are presented. Papers deal with the delay data accuracy, interpretation, and representation, as well as with data latency and assimilation (e.g., 3D/4D variational assimilation), and weather analysis.

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