

A d v a n c e s   i n  
**Geosciences**

Volume 27: Solar Terrestrial (ST)

# ADVANCES IN GEOSCIENCES

**Editor-in-Chief:** Wing-Huen Ip (*National Central University, Taiwan*)

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**Geosciences**

Volume 27: Solar Terrestrial (ST)

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## PREFACE

The present volume set (volumes 22 through 27) of *Advances in Geosciences* (*ADGEO*) is the fifth round of *ADGEO* series edited and published by the Asia Oceania Geosciences Society (AOGS). This volume set contains papers presented at the 6th (2009) AOGS annual meeting held in Singapore and the 7th (2010) meeting in Hyderabad.

The AOGS is an international society legally registered in Singapore, aiming to cooperate and promote discussion on studies of the Earth and its environment, as well as the planetary and space sciences. To achieve this objective, the AOGS has held its annual meetings since 2004, and published *ADGEO* series since 2006. The AOGS has six sections, Atmospheric Sciences, Hydrological Sciences, Ocean Sciences, Planetary Sciences, Solar and Terrestrial Sciences, and Solid Earth Sciences. Accordingly, each volume set consists of 6 volumes (AS, HS, OS, PS, ST and SE) corresponding to each section. Papers presented at joint sessions of two sections or at IWG (Interdisciplinary Working Groups) sessions are included in appropriate volumes.

*ADGEO* is not a scientific journal, but a monograph series or proceeding volumes of the AOGS meetings. Only papers presented at the AOGS meetings are invited to *ADGEO* series, and are published after peer reviews. The first (volumes 1 to 5), second (volumes 6 to 9) and third (volumes 10 to 15) sets corresponded to the 2nd, 3rd and 4th AOGS annual meetings. The last (fourth) volume set (volumes 16 to 21) included papers presented at the 4th and 5th annual meetings. The AOGS decided to publish the volumes in a timely manner (before the next annual meeting) and to include papers presented at the penultimate meetings. Hence this volume set contains some papers presented at the 6th (2009) Singapore meeting but not published in the previous volume set. For those papers presented at the 7th (2010) Hyderabad meeting, only papers that went quickly through the editorial and review processes are included in the current volume set.

As a young scientific society, AOGS needs to develop ways to promote information exchange and interaction among scientists in Asia and Oceania region, in the era of the internet. Until we establish a journal or other means

of publication, *ADGEO* is expected to serve as a publication tool among the AOGS members and society at large.

Finally, as Editor-in-Chief, I would like to thank authors, reviewers, volume editors and volume editors-in-chief for their timely efforts to publish the current volume set before the 8th annual meeting to be held in Taipei. Supports from Meeting Matters International (MeetMatt) for developing and maintaining a system for submission, review and editorial processes, and World Scientific Publication Company (WSPC) for the editorial, publication and marketing processes should be greatly acknowledged.

Kenji Satake  
Editor-in-Chief

## PREFACE TO ST VOLUME

Solar terrestrial science is concerned with the interactions between the earth, the sun, and interplanetary space and the resulting effects these interactions induce at the earth such as those collectively known as space weather. This volume comprises recent research results and invited reviews on solar terrestrial research with an emphasis on work undertaken in the Asia Oceania region. Aspects of Solar Terrestrial research covered include: solar flares and active regions, coronal magnetic fields, the interplanetary magnetic field and plasma, coronal mass ejections, the magnetosphere, the ionosphere, and observations of activity in other nearby stars. Observational measurements, modeling and theoretical developments are included.

Marc Duldig  
ST Volume Editor-in-Chief

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