Call for Papers: Special Issue of Earth, Planets and Space (EPS) "Swarm Science Data Processing and Products—the Swarm Satellite Constellation Application and Research Facility, SCARF"

In order to take optimal advantage of the unique three-satellite constellation aspect of the European Space Agency's Swarm mission, implemented as part of the Agency's Living Planet programme and targeted for launch within the next months, considerably advanced data analysis tools have been developed. Scientific users of data from the Swarm mission will therefore benefit significantly from free and open access to such derived products, so-called Level 2 data, that take due account the constellation features. This facility, called "Satellite Constellation Application and Research Facility" (SCARF), has been developed, tested and validated by a European consortium of six research institutions under a contractual agreement with ESA. A number of Level-2 data products will be generated by this service, including various models of the core and lithospheric part of the geomagnetic field as well as of the ionospheric and magnetospheric field contribution. In addition, derived parameters like three-dimensional electrical conductivity of the mantle, thermospheric mass density and winds, field-aligned currents, an ionospheric plasma bubble index, the ionospheric total electron content and the dayside equatorial ionospheric electrical field will be provided. This service is planned to be operational for a period of 5 years after the launch of the Swarm Mission, including processing of 4 years nominal mission data. ESA will provide all data products through the archiving and dissemination infrastructure of the Swarm mission.

Considering the scientific potential of the unique set of data from the constellation of three spacecraft and to foster an enhanced discussion within and across scientific disciplines it has been decided to publish in a special issue a selection of papers that describe or discuss a number of new scientific results, algorithms, and methods, which have been obtained and developed for this facility and which will be of high interest to the wider scientific community.

All submitted manuscripts will go through a peer review process before publication. Contributors to this special issue should submit their papers online through "http://www.editorialmanager.com/eps/", and select the article type: "Swarm Satellite Constellation Application and Research Facility, SCARF". For details, please visit the EPS website:

http://www.terrapub.co.jp/journals/EPS, and click on "Guideline for Authors".

After papers are accepted, the authors will receive instructions for the final manuscript from the editorial office. Deadline for submission of manuscripts for this special issue is on 31st of December 2012 aiming at publication in the 2nd half of 2013.

For more information on this special issue, please contact the corresponding editor (E. Friis-Christensen, efc@space.dtu.dk); questions on manuscript preparation should be addressed to the EPS editorial office (eps@terrapub.co.jp).

Note: EPS accepts manuscripts of original research contributions only, and so-called "review papers" will not be accepted.

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