

Copernicus Special Issue on “Developments in the Science and History of Tides”

This is to mention once again the special issue of Copernicus journals called “Developments in the Science and History of Tides”. The issue is open to any aspect of the subject including the present accuracy of coastal, regional and global tide models, tidal dissipation and its role in geophysics, internal tides and their role in mixing the ocean and in the global ocean circulation, secular changes in tides, and new techniques for measuring tides and analysing the data. The issue also welcomes new findings on earth and atmospheric tides, the role of tides in the origin of life on earth, palaeotides, lake and planetary tides and many other aspects of tides.

In order to accommodate such a wide range of topics, the special issue spans five Copernicus journals:

Ocean Science – for aspects of tides in the ocean

Nonlinear Processes in Geophysics – for aspects of tidal dynamics including internal tides

Solid Earth – for aspects of solid earth and planetary tides

Atmospheric Chemistry and Physics – for aspects of atmospheric tides

History of Geo- and Space Sciences – for any aspect of the history of tidal science or scientists

The Copernicus journals provide a good mechanism for different types of paper to appear in different journals but be linked within the same special issue. This is the first time that a special issue has spanned so many journals. It opened for submissions in January 2018 and has already had a number of contributions. It will stay open until at least the end of 2019, thereby taking advantage of new findings presented at the EGU in Vienna (7-12 April 2019) and the IUGG in Montreal (9-18 July 2019). Both conferences will have special sessions on tides. However, the special issue is open to any contributor, not only to those who plan to attend the conferences. Authors can submit their contributions by using the online registration form on the websites of any of the above journals. During the registration process, it is important that the correct special issue is selected, which is “Developments in the science and history of tides (OS/ACP/HGSS/NPG/SE inter-journal SI)”.

Papers that are accepted for publication will appear immediately on the web site of the appropriate journal. Eventually a printed version of the whole special issue will become available.

The special issue is intended to mark the 100th anniversary of the founding of the Liverpool Tidal Institute (LTI). The LTI was established in 1919 and for many years was the world centre for knowledge of the tides, with Joseph Proudman taking the lead in dynamical theories, and Arthur Doodson in the analysis of tidal information from around the world, and on tidal prediction. The year 2019 is also the 100th anniversary of the IUGG. The Montreal Assembly will include a Joint Symposium on Tides with IAPSO as the lead Association. Of course, we hope that contributors to the EGU session and the IUGG Symposium will write up their work for publication in the special issue.

More information can be obtained from the guest editors: Philip Woodworth (plw@noc.ac.uk), Richard Ray (Richard.d.ray@nasa.gov) and Mattias Green (m.green@bangor.ac.uk).

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