

# Solar Physics Topical Issue: “Observations and Modelling of the Inner Heliosphere” - A Brief Overview

Observations and modelling of the solar wind in the inner heliosphere via remote-sensing methods and data are of a critical importance to improving our understanding of the physics behind the origin and development of the solar wind, transients, and the various interactions which take place throughout the inner heliosphere. They are also essential to further our understanding of space weather both in the vicinity of the Earth, and at other solar-system bodies. This second workshop on remote-sensing observations of the inner heliosphere, to be held at Aberystwyth University again during the week of 06-10 June 2011, will consider a wide assortment of heliospheric remote-sensing observations as well as detailed three-dimensional (3-D) modelling and reconstruction methods of the inner heliosphere. A particular focus of the workshop will be an entire day concentrating on the July/August 2010 events, their complexity of interpretation and modelling, and their use as a case study to bring together all the key observational and modelling techniques we have available to us. The workshop will also look at occasions where remote-sensing observations and/or heliospheric modelling have failed us, and investigate these options and the causes behind them. It is envisaged that some of the early remote-sensing heliospheric results from the newly-operational LOW Frequency ARray (LOFAR), Solar-Terrestrial Environment Laboratory (STELab) Toyokawa array, and the Murchison Widefield Array (MWA) radio systems will feature in this Topical Issue (T.I.), as well as future space-based remote-sensing instrumentation and plans. The T.I. of Solar Physics will act as proceedings to the workshop, the fifth in a series of workshops on heliospheric remote sensing (the second of direct remote-sensing of the inner heliosphere themes), and will provide a primary reference for further future collaborations and science resulting from our workshop (as the first T.I. published in August 2010 is starting to now). Originally, this workshop was scheduled for early 2011 to be held at the Massachusetts Institute of Technology (MIT) in Cambridge, MA, USA, but due to other commitments from colleagues there, Aberystwyth University stepped in again to host this next Workshop in early summer 2011 instead. It is hoped that a further workshop in this series will occur again in another two years either at Aberystwyth University or hosted elsewhere.

Full Workshop Title:

“Second Remote Sensing of the Inner Heliosphere Workshop”

Envisaged Timeline of Special Edition:

- Titles, Author Lists, Abstracts, and Suggested Referees due by Friday 29 July 2011.
- Full Paper Submissions due by Friday 25 November 2011.
- Estimated Publication between May and August 2012.

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