

# RAS Specialist Discussion Meeting

## Waves in the Magnetic Sun

13 May 2011

10:00–13:30 in the Geological Society Lecture Theatre, Burlington House, Piccadilly, London W1

**Organisers:** Dr Balázs Pintér (Aberystwyth University, b.pinter@aber.ac.uk)  
Dr Youra Taroyan (Aberystwyth University, yot@aber.ac.uk)

**Summary:** Magnetic fields play a major role in solar dynamics and are therefore important to understand. From its core, throughout the interior, photosphere and atmosphere, the Sun is abundant in waves and oscillations. Waves channelled through magnetic waveguides can be used to gain vital information about the magnetic field in various regions of the Sun and other stars. On the other hand, the presence of magnetic fields results in various wave phenomena such as scattering, phase mixing, resonant absorption and instabilities.

The aim of the discussion meeting is to address the twofold interaction between waves, flows and magnetic fields in current solar/stellar physics research.

### 9:30 Registration & Welcome

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#### MORNING SESSION (10:00-11:30)

Chair: Dr Balázs Pintér (Aberystwyth University)

**10:00 Dr W. Chaplin (University of Birmingham)**

*Sounding Stellar Activity and Stellar Cycles with Asteroseismology (Review Talk)*

**10:30 Dr S. Shelyag (Queen's University Belfast)**

*Multiwavelength Spectropolarimetric Diagnostics of Simulated Solar Photosphere*

**10:45 Dr D. Jess (Queen's University Belfast)**

*Mode Coupling in the Smallest Magnetic Elements*

**11:00 Dr V. Fedun (University of Sheffield)**

*3D Numerical Simulations of Torsional Alfvén Waves*

**11:15 Dr G. Verth (Northumbria University)**

*Magnetoseismological Determination of Magnetic Field and Plasma Density Height Variation in a Solar Spicule*

**11:30 Tea & Coffee**

Served in the Lower Library of the Geological Society

## AFTERNOON SESSION (12:00-13:30)

Chair: Dr Youra Taroyan (Aberystwyth University)

- 12:00 Professor R. Erdélyi (University of Sheffield)**  
*Resonant Coupling of the Interior to the Atmosphere (Review Talk)*
- 12:30 Dr I. Arregui (University of the Balearic Islands, Spain)**  
*Bayesian Inference for Solar Atmospheric Seismology*
- 12:45 Dr J. Terradas (University of the Balearic Islands, Spain)**  
*Resonant Absorption in Twisted Coronal Loops*
- 13:00 Dr R. Soler (University of Leuven, Belgium)**  
*Resonantly Damped Propagating Kink Waves in Stratified Coronal Magnetic Waveguides*
- 13:15 Dr J. L. Ballester (University of the Balearic Islands, Spain)**  
*Prominence Thread Seismology using the  $P_1 / 2P_2$  Ratio*

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### **14:00 191<sup>st</sup> Annual General Meeting:**

in the Lecture Theatre of the Geological Society, Burlington House, Piccadilly, London W1

The AGM is only open to Fellows; non-Fellows intending to attend the following A&G meeting are welcome to wait in the Lower Library of the Geological Society.

**15:30 Tea** will be available in the Lower Library of the Geological Society for those attending the Open (Monthly A&G) Meeting of the Royal Astronomical Society.

### **16:00 Open (Monthly A&G) Meeting**

in the Lecture Theatre of the Geological Society, Burlington House, Piccadilly, London W1

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#### *Admission fees:*

Admission to Specialist Discussion Meetings is free to RAS members, £15 to non-members (£5 to students) for all or part of the day cash or cheque only, collected at the door. Admission to the subsequent Open (Monthly A&G) Meeting of the Royal Astronomical Society is open to all, at no charge.

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**For more information see**  
[www.ras.org.uk](http://www.ras.org.uk)