



*Advancing
Astronomy and
Geophysics*

ROYAL ASTRONOMICAL SOCIETY

Meeting Notes:

12 May 2017

RAS Specialist Discussion Meeting

UK-SEDI: Study of the Earth's interior at the cutting edge

10:30–15:30 in the Lecture Theatre of the Royal Astronomical Society, Burlington House, Piccadilly, London W1J 0BQ

Organisers: Dr Andy Nowacki (Leeds)
Prof Tim Elliott (Bristol)
Prof Richard Holme (Liverpool)

RAS Specialist Discussion Meeting

The Large Synoptic Survey Telescope

10:30–15:30 in the Lecture Theatre of the Geological Society, Burlington House, Piccadilly, London W1J 0BG

Organisers: Prof Sarah Bridle (Manchester)
Prof Bob Mann (Edinburgh)

Annual General Meeting of the Royal Astronomical Society

16:00–17:00 in the Lecture Theatre of the Geological Society, Burlington House, Piccadilly, London W1J 0BG.

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.

Open (Monthly A&G) Meeting of the Royal Astronomical Society

17:00–18:00 in the Lecture Theatre of the Geological Society, Burlington House, Piccadilly, London W1J 0BG

Talks:

Presentation of the second tranche of RAS 200: Sky and Earth awards by Professor Steve Miller

2017 PRESIDENTIAL ADDRESS:

Professor John Zarnecki

Titan; The Moon that Thinks It's a Planet

Admission fees:

Admission to Specialist Discussion Meetings is free to RAS Fellows, £15 to non-fellows (£5 to students), 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. For more information see www.ras.org.uk

RAS Specialist Discussion Meeting

UK-SEDI: Study of the Earth's interior at the cutting edge

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Organisers: Dr Andy Nowacki (Leeds)
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Summary: The Study of the Earth's Deep Interior (SEDI) focusses on the study of Earth's mantle and core and has links to comparative planetology. The meeting will comprise invited review talks, contributed student-presented talks and include discussion about the big, unsolved questions in deep Earth research. Additionally we will have the opportunity for poster presentations over an extended lunch. This meeting will help to identify important topics in deep Earth research to which the UK SEDI community might contribute and we hope to foster new collaborations between UK and international deep Earth researchers.

10:00 Registration & Coffee

MORNING SESSION (10:30-12:30) – CHAIR ANDY NOWACKI

10:30 Invited: Matt Jackson (University of California Santa Barbara)
Sampling primordial reservoirs with hot plumes

11:00 Jennifer Jenkins (University of Cambridge)
Mid-mantle seismic structure beneath Europe and Iceland: Implications for the nature of the Iceland mantle plume

11:15 Simon Hunt (UCL)
Deformation of bridgmanite + ferropervicite under lower-mantle conditions

11:30 Lotta Kemppinen (University of Bristol)
First identification of molybdenite in diamond-hosted sulphide inclusions and possible implications for Re–Os dating of diamonds

11:45 Paula Koelemeijer (University of Oxford)
Large-scale topography of the core–mantle boundary

12:00 Lars Stixrude (UCL)
Electrical conductivity of silicate liquids at extreme conditions and planetary dynamos

12:15 Martha G. Pamato (UCL)
Pre melting in fcc and hcp metals

12:30 Lunch & Posters

AFTERNOON SESSION (13:30 -15:30) - CHAIR RICHARD HOLME

13:30 Invited: Alex Fournier (Institut de Physique du Globe de Paris)
Power-based scaling laws for planetary dynamos: An updated database and a reassessment

14:00 Oliver Bardsley (University of Cambridge)
The evolution of magnetic-Coriolis waves in the Earth's outer core

14:15 Avishek Ranjan (University of Cambridge)
Columnar structure formation in the Earth's core by internally-driven inertial waves

14:30 Vernon F. Cormier (University of Connecticut)
Earth's inner core and its boundary from seismic body waves

14:45 Yunguo Li (UCL)
Carbon in the Earth's inner core

15:00 Amy Edginton (UCL)
The Implications of Fe–S–Si on Mercury's core evolution

15:15 Andy Biggin (University of Liverpool)
Did average geomagnetic field strength increase 1–1.5 billion years ago and, if so, why?

Suggested Hashtag #RASUK-SEDI

15:30 Tea will be available in the Lower Library of the Geological Society

17:00 Open (Monthly A&G) Meeting

Admission fees:

Admission to Specialist Discussion Meetings is free to RAS Fellows, £15 to non-fellows (£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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RAS Specialist Discussion Meeting

The Large Synoptic Survey Telescope

10:30 – 15:30 in the Geological Society Lecture Theatre, Burlington House, Piccadilly, London W1J 0BG

Organisers: Prof Sarah Bridle (Manchester)
Prof Bob Mann (Edinburgh)

Summary: This meeting aims to bring together the ~200 people in the UK, from >30 astronomy groups, who have expressed an interest in (see <http://www.lsst.ac.uk/governance> for more information), and follows the recent Memorandum of Agreement between the UK and LSST and the resulting growing number of UK participants in LSST. This is an excellent opportunity for the LSST: UK Science Working Group to present current activity to help engage the wider UK community, highlighting exciting areas, discussing cross-cutting science topics e.g. survey strategy, and interfacing with the many complementary projects the UK has leadership.

10:00 Registration & Coffee

MORNING SESSION: (10:30-13:00) CHAIR: BOB MANN

10:30 Bob Mann (University of Edinburgh)

Introduction: UK involvement in LSST

10:45 Beth Willman (LSST) (presented by Ian Shipsey)

LSST project status

11:20 Wes Fraser (QUB)

Solar System

11:40 Mark Sullivan (University of Southampton)

Transients and Variable Stars

12:00 Phil Lucas (University of Herts)

Stars, Milky Way and Local Volume

12:20 Sugata Kaviraj (University of Herts)

Galaxies

12:40 Carole Mundell (University of Bath)

Active Galactic Nuclei

13:00 Lunch

AFTERNOON SESSION: (14:00 -15:30) - CHAIR BOB MANN

14:00 Benjamin Joachimi (UCL)

Dark Energy Science

14:20 Jason McEwen (UCL)

Informatics and Statistics

14:40 David Bacon (University of Portsmouth)

Synergies with Euclid and SKA

14:55 Chris Copperwheat (LJMU)

Follow-up with Liverpool Telescope 2

15:10 Ian Shipsey (University of Oxford)

LSST and UK particle physics

15:25 Wrap-up

15:30 Tea will be available in the Lower Library of the Geological Society

Suggested Hashtag #RAS LSST

17:00 Open (Monthly A&G) Meeting

Notes for Fellows of the Society

1. ADMISSION FEES

Admission to the Open (Monthly A&G) Meeting of the RAS is open to all, at no charge. Admission to Specialist Discussion Meetings is free to RAS Fellows, and £15 to non-fellows (£5 to students), cash or cheque only, collected at the door.

3. ATTENDANCE BY GUESTS AT THE MONTHLY A&G (OPEN) MEETING

Guests of the Society (particularly students) who have attended the Specialist Discussion Meeting are most welcome to attend the Open (Monthly A&G) Meeting of the Society, which commences at 16:00 in the Lecture Theatre of the Geological Society. This meeting is open to all, not just RAS members.

4. UPDATES TO MEETING PROGRAMMES

Please refer to the meetings pages at <http://www.ras.org.uk/> for the most up to date meetings information.

5. NAM 2017

The next RAS National Astronomy Meeting (NAM) will be held at the University of Hull from Sunday, 2nd July to Thursday, 6th July 2017.

Code of Conduct

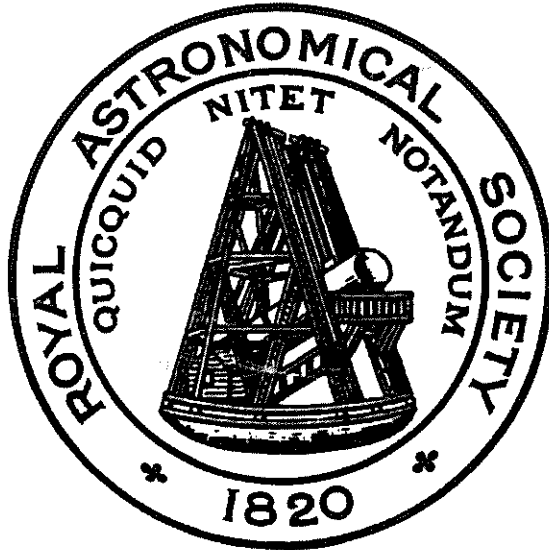
We value the participation of everyone at Royal Astronomical Society events and want all attendees to have an enjoyable and fulfilling experience. Accordingly, all attendees are expected to show respect and courtesy to other attendees and staff.

As such the RAS will be a harassment-free environment for everyone, regardless of gender, sexual orientation, disability, physical appearance, body size, race, nationality, religion. We do not tolerate harassment of attendees in any form.

- Lecturers give their time freely, many have travelled a considerable distance, some are very distinguished, some are early career scientists perhaps giving a lecture at this level for the first time, and all deserve a fair and encouraging hearing. Please try to be on time for the start of a session, or otherwise slip quietly into the lecture theatre, refrain from loud conversations outside the doors and switch off mobile phones, and if you must use a lap-top computer do so inconspicuously in one of the rear seats.
- Harassment includes offensive verbal comments related to gender, sexual orientation, disability, physical appearance, body size, race, religion, sexual images in public spaces, deliberate intimidation, stalking, following, harassing photography or recording, sustained disruption of talks or other events, inappropriate physical contact, and unwelcome sexual attention.
- All communication given by lecturers, organisers and attendees should be appropriate for a professional audience including people of many different backgrounds. Sexual language, jokes and imagery is not appropriate for any event.
- Be kind to others. Do not insult or put down other attendees.
- Respect RAS staff.
- Behave professionally. Remember that harassment and sexist, racist, or exclusionary jokes are not appropriate.

Participants asked to stop any harassing behaviour are expected to comply immediately. Attendees violating these rules may be asked to leave the event, without a refund of any charge that may have been levied.

Thank you for helping make this a welcoming, respectful space for all.



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