

NEWSLETTER

October 2008

University society members celebrate a year of physics

Highlights of the academic year for the University of Cambridge Physics Society included an introduction by Nobel laureate Prof. Brian Josephson to his scientific theories, Prof. Peter Barham's talk entitled "Molecular gastronomy: the science of taste and flavour" and Dr William Proud's lecture entitled "The history of high-speed photography".

The committee also hosted a well attended conference on summer work for students. This was an ideal opportunity for graduates to explain how they have used their degree in academia and industry, and for people to speak to their Institute of Physics representative.

A number of society members



Physics Society members enjoy a garden party in Deer Park at Peterhouse College, Cambridge.

also attended the International Conference for Physics Students in Krakow in August, which was a great way to meet other

students and to sample the plentiful food and drink.

This coming year brings the prospect of another entertaining

lecture series and an expansion of other activities. Details of the talks for next term will appear shortly at www.srcf.ucam.org/physics. The committee also hopes to organise a lively social scene to host more conferences and to help members attend larger physics-related events, nationally and internationally.

The physics society talks are held at the Pharmacology Lecture Theatre, Tennis Court Road, Cambridge, on alternate Wednesdays during term time. Each lecture is followed by a wine reception, normally with the speaker present. The talks are free of charge for members and cost £2 for non-members.

Hamish Gordon, student representative

Event prepares graduates for the job market

On Tuesday 10 June in the Pippard Lecture Theatre of the Cavendish Laboratory, the East Anglia Branch tried something new – an Interview Skills Day. This was aimed at student members, both undergraduate and postgraduate, to improve their CV writing and interview preparation, and provided an opportunity for live interviews between selected potential employers and volunteers.

The event was organised by Claire Kennedy to give a wide view of the interview and selection process, and it included a psychiatrist as well as employers and the University of Cambridge Careers Service.

Les Waters of the Careers Service gave an excellent

introduction to CV writing and the interview process. Copies of the university's publication *CV and Cover Letter Writing* were distributed. As well as the general version, there is a special edition for postgraduates.

Psychiatrist Dr Raschid Zaman of the University of Cambridge introduced practical ideas about preparation, rehearsal, stress management and dealing with the process of rejection, and the sometimes equally stressful process of success. The short section on cognitive-behavioural therapy was particularly well received and was recorded by the Careers Service. It will be uploaded on the service's website soon.

The event finished with

representatives from British Telecom, Deloitte and Boyes Turner publicly interviewing volunteers for roles in telecommunications research, financial services consultancy and company law respectively. Prior to the day, each company provided a description of the job for which the volunteers had applied. The students had agreed to be interviewed in front of their peers, which was no role for the timid. Each participant gave an excellent interview, although their style and content differed depending on the requirements of the job and the company involved.

Given the variety of company types represented, several main themes were apparent,

including having a positive approach, knowing the company, relaxing into the interview and anticipating questions, such as "Describe your main weakness", "Outline a recent example of teamwork" and "Why this company?".

The audience was fully involved and asked relevant questions throughout the event. For many there were no easy answers, so the resulting discussions were more fruitful as a result.

Overall the content of the afternoon was well constructed and the student input was invaluable. Feedback was overwhelmingly positive and we hope to organise this event again next year.

Cambridge Physics Centre plans a year of free lectures for members

The Cambridge Physics Centre (CPC) is working hard to put together its full slate of six talks for the 2008/2009 season. Not all of the speakers have been confirmed yet but there will be further information in the next branch newsletter.

The first lecture, entitled “The future of telecommunications”, will be given by Stephen Hearnden on 9 October 2008. He is director of telecommunications and technology at Intellect, the UK’s technology trade association.

Hearnden joined Intellect in March 2005 after a successful career as a telecommunications consultant. During that period he was an interim chief technical officer for a North American start-up company and programme manager for the Universal Mobile Telecommunications System Forum. Other roles in the mobile telecommunications sphere included due diligence and expert witness work. Prior to that, his career at British Telecom (BT) was as a general manager of the BT Wireless



Stephen Hearnden, the first lecturer in the new CPC series.

Futures Team responsible for R&D, collaboration, trials and engagements with start-ups focusing on new technology.

He has published a number of articles during his career in telecommunications and has spoken at many conferences around the world.

Hearnden’s interests are in understanding the relationship between technology and the people who use it. Until recently he was a visiting reader at

the University of Surrey in the Department of Human Sciences.

He received his degree in electronics in 1971 from the University of Kent, following which he joined BT. He is a member of the Institution of Electrical Engineers and a chartered engineer.

The next CPC talk, entitled “Earthquakes, volcanoes and continental drift”, will be given on 4 November by Dr Alan Smith from the University of Cambridge’s Department of Earth Sciences. Dr Phil Yates’ lecture entitled “Forensic science: all you ever wanted to know about drugs, but were afraid to ask!” will take place on 4 December. He works for the Forensic Science Service at Huntingdon Laboratory.

There is no need to book and lectures are free of charge to all Institute members. Talks will be held at the Pippard Lecture Theatre, Cavendish Laboratory at 6.00 p.m.

Contact William Proud (e-mail wgp1000@cam.ac.uk, tel 01223 337 205, fax 01223 350 266) for further information.

Members branch out in Cambridge

This year we are going to do a bit more “inreach” in the form of members’ outings. The first event will be “Cambridge and the Cavendish”, which will be held on Saturday 1 November 2008 at 10.30 a.m. – 4.00 p.m.

This promises to be a fun day out for members of the East Anglia Branch, their families and friends at the famous Cavendish Laboratory, Cambridge CB3 0HE (www.phy.cam.ac.uk). There will be a guided tour of the Cavendish Museum, followed by lunch at the University Centre, Mill Street, Cambridge (the cost of which will be included in the event fee). To burn off the calories there will be a walking tour of the Cambridge colleges followed by a visit to the

Fitzwilliam Museum to round off the day’s events.

Transport between the Cavendish Laboratory and the University Centre will be provided, as well as return transport to the Cavendish at 4.00 p.m. All locations have wheelchair access but remember to inform us in advance of any mobility issues.

You can leave your car at either the Clerk Maxwell Road car park (which is on the street one along from the Cavendish Laboratory) and follow the signs to the Cavendish, or the Maddingley Road park and ride (CB3 0EL), which is about 10 minutes’ walk from the Cavendish. There are a limited number of parking spaces in front of the laboratory. These can be used by those who hold blue parking permits. There is also a bus service between

Cambridge city centre and the Cavendish (Citi4).

To reserve your place, contact Alicia Kelleher (tel 01223 337 336 during weekdays, e-mail apk21@cam.ac.uk, marking your e-mail “Institute of Physics”, or write to AP Kelleher, Cavendish Laboratory, JJ Thomson Avenue, Cambridge CB3 0HE). Remember to include your Institute of Physics membership number and to state how many people will be accompanying you.

The event fee is £5 per person in advance (note that prepayment is not necessary) and £7.50 per person on the day. Children aged under five can attend free of charge. Payment can be made by cash, cheque or postal order payable to “IOP East Anglia Branch”, and will be collected on the day. Credit and debit cards will not be accepted.



Up close and personal: CHaOS at last year’s December Event.

Branch event is going for gold

This year’s December Event will attempt to reach new heights with “Olympus: physics of the gods”, focusing on how science can help athletes to improve their performance. It will be held on 14 December at 2.00–5.00 p.m. in the Cavendish Laboratory. The day promises to start with a bang with Dr David Ansell, from The Naked Scientists, whose talk entitled “Crisp-packet fireworks” will explore fun experiments that can be carried out at home.

There will be lots to see and do, including some demonstrations from Imperial College’s Biomechanics Department, which has done a lot of impressive work in the area of sports medicine. We will also have something to make and take home, which is being kept secret until the day.

The ever-popular planetarium will guarantee to keep everyone entertained, and with luck there will be some archery demonstrations (to be confirmed later).

The day’s activities will end with “Call my sporting bluff”, where our underdog panel will attempt to gain their first medal this year.

Got an idea for a branch event? If so, e-mail jeanette.fine@finerandd.com

Physics outreach project is a big hit with visitors at regional show

Physics in the Field is an Institute of Physics initiative that aims to engage the general public with physics at venues throughout the UK. For the second year running, the Institute's outreach team appeared at the East of England Show, which was held on 13–15 June in Peterborough.

Regional officer Esther Haines, with help from the Institute's outreach officer Liz Jeavans and a group of volunteers, entertained children and their families with a selection of "physics tricks". The most popular activity was "Balloon kebabs", where passers-by were invited to put a bamboo skewer through a balloon. "Tame tornadoes", also known as "Vortex in a bottle", came a close second. Races to see who could get all of the water from the top bottle into the bottom one in the fastest time entertained the public and volunteers. Other popular activities included "Potato straws", "Waterproof hanky" and "Straw oboes".



Top trick: a "balloon kebab".

Visitors who performed two tricks and left some feedback were rewarded with either a Physics in the Field frisbee or a bubble-pot, plus a Marvin and Milo cartoon. All of the activities are described in *Physics Tricks*, which can be downloaded from www.iop.org/activity/outreach/Resources/Putting_on_your_own_event/Things_to_do/page_19207.



Volunteers enjoying a "Vortex in a bottle" race at the show.

html. You can see all of the Marvin and Milo cartoons, another good source of physics tricks, at www.physics.org.

We estimate that about 1100 visitors watched or participated in the activities during the three-day show. Nearly 300 people left feedback. The positive comments included: "Wow, now I feel clever."

Physics in the Field is a fun

way of reaching people at an event where they might not expect physicists to be. If you are interested in being involved at next year's East of England Show, contact Esther Haines (e-mail esther.haines@iop.org, tel 07919 035 851).

For more information, visit www.iop.org/Media/Press%20Releases/press_30140.html.

Branch members are wowed by an explosive talk about the Big Bang

The AGM of the East Anglia Branch took place in the Pippard Lecture Theatre at the Cavendish Laboratory, Cambridge, on 3 June.

The highlight of the evening was a lecture about the Large Hadron Collider (LHC), entitled "Physics at the high-energy frontier: the Large Hadron Collider – our understanding of the universe is about to change". This talk was delivered by Dr Val Gibson, who is working at CERN with a worldwide team to investigate the differences between matter and antimatter by studying the beauty quark or b quark.

The LHC will be the world's most powerful particle accelerator when it becomes

fully operational later this year. Two beams of hadrons (either protons or lead ions) will travel in opposite directions inside the circular accelerator, gaining energy with every lap. Physicists will use the LHC to recreate the conditions that existed just after the Big Bang by colliding the two beams head on at very high energy. They will then analyse the particles created in the collisions using special detectors in a number of dedicated experiments.

The LHC is designed to answer fundamental questions about the elementary components of matter, the forces that bind them together and the evolution of the universe. There are many

theories about what will result from these collisions, but it is certain that a brave new world of physics will emerge from the LHC's experiments as scientists push the boundaries of particle physics, helping them to explain the universe.

After Dr Gibson's talk there was a report about the state of the branch given by William Proud, followed by a financial report by Mike Coleman. The branch is in good shape, both financially and in terms of outreach, but we need to do more for members.

After a lively discussion about the branch's position and the direction that it ought to be going in, a new committee was elected (see adjacent box).

NEW COMMITTEE

We would like to say a big thank you to our retiring members, Mike Coleman and Amyas Phillips, who have both given sterling service and will be greatly missed.

We welcome two new committee members: the student representative, Kitty Yeung, and our new treasurer, Sieglinde M L Pfaendler. We also welcome back John Clark, who has returned after having a well deserved break.

The new committee consists of William Proud, chair (wgp1000@cam.ac.uk), Paul Millar, vice-chair (paul.millar@btinternet.com), Jeannette Fine, secretary (jeannette.fine@finerandd.com), and Sieglinde M L Pfaendler, treasurer (iop@smlp.info).

Companies aim to show students real-life physics

This year the Cavendish Laboratory will host the 24th annual Physics at Work Exhibition in Cambridge. The main aim is to stimulate interest and encourage wider participation in physics among 14–16-year-olds by showcasing the ways in which physics is used in the real world.

The exhibition is based on interaction between active scientific researchers and potential scientists. This will help to spread the excitement of modern physics research to students who will soon be making career and examination choices, and it is a vital component in encouraging the next generation of scientists.

Run over three days, with two sessions per day, this year's event will include around 25 exhibitors. Some of them will be from research groups at the Cavendish Laboratory and others will be from industry, including Rolls-Royce, the Mathworks and Kodak.

Each half-day session

will have capacity for about 350 students. The participants will be split into small groups of about 15 and each will be accompanied by a teacher as it follows a route defined by the organisers, visiting six exhibits over a period of about three hours, including a short break halfway through.

The exhibits usually consist of a short presentation, practical demonstrations, an opportunity for hands-on involvement and time for a Q&A session. This approach has developed over time and allows students to engage thoroughly with the science on display. An information booklet will be provided to support the exhibition, allowing teachers to bring ideas back into their lessons later in the year.

Firms this year will include BAA Stansted (Department of Transit Electronics); the British Antarctic Survey; the Cambridge Computer Laboratory; the Department of Chemical Engineering; the

Department of Earth Sciences and Carrack Measurement Technology; the Department of Material Science; Domino Printing Sciences; Kodak (European Research Labs); LATEST, the School of Materials; The MathWorks; Nanoscience @ Cambridge; the Royal Air Force Police; Rolls-Royce; the Technology Partnership; and the Wolfson Brain Imaging Centre.

The Cavendish Laboratory will be represented by the following groups: Cavendish Astrophysics; the Biological and Soft Systems Group; the High Energy Physics Group; the Optoelectronics Group; the Quantum Matter Group (Superconductivity); the lab safety officer; the Semiconductor Physics Group; the Fracture and Shock Physics Group; Team Crocodile (which builds environmentally friendly cars for competitions); and the Theory of Condensed Matter Group.

College plans to hold a Hoyle Day

Sir Fred Hoyle (1915–2001) was one of the 20th century's most distinguished, colourful and controversial scientists.

In 2002 Lady Barbara Hoyle and Geoffrey Hoyle, Sir Fred's widow and son, donated his papers to the library of St John's College, Cambridge.

Last year the library secured funding from the Heritage Lottery Fund, the American Institute of Physics and the college, to employ a project associate to catalogue the papers and to organise a range of outreach events. The first of these events will be a free open day at the library, with an exhibition and talk, which will be held later in the autumn. See www.joh.cam.ac.uk/library/special_collections/hoyle/ for more information about the project, and for further details about Hoyle Day and other planned activities as they become available.

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Check out your branch website:

**[http://
anglia.
iop.org](http://anglia.iop.org)**

Lecture gazes into crystal ball

On 14 July we teamed up with the Anglia Branch of the Institute of Telecommunications Professionals for a talk at Adastral Park in Ipswich. We were treated to the thoughts of Prof. Peter Cochrane, a world-renowned futurologist and visionary, about the effect of advanced computing on the human condition.

Prof. Cochrane explored possible scenarios relating to the different roles of machines with built-in "intelligence" and the humans that will be sharing the planet with them. He gave a thought-provoking account of their effect on the lives and wellbeing of carbon-based life forms, and the possible change in relationships as silicon processing starts to match the reasoning power of humans (and, ultimately, exceeds it).

Prof. Cochrane is an excellent orator and he engaged with

the audience as he painted pictures of future societies in which people and machines could take more equal roles.

The talk was attended by about 120 people, but the Institute membership probably accounted for less than 10% of this. In principle it seems to be a good idea to try to collaborate with other Ipswich-centric organisations for this type of event, but it would be helpful if we can get some feedback from the membership as to future interest. We realise that it is still early days, but any comments that would help us to gauge the usefulness of such events and any ideas for new subjects would be very useful. Send any feedback to Paul Millar (e-mail paul.millar@btinternet.com).

Visit Prof. Cochrane's site at www.cochrane.org.uk/.

Society hopes for starry nights

One of the largest astronomical societies in East Anglia is the Norwich Astronomical Society (NAS). More than 60 years old, it is based at the Seething Observatory, about eight miles from Norwich. For a location so close to a city, it has amazingly dark skies and good viewing. It has public open nights, with a lecture followed by light refreshments and viewing through the several telescopes on site, weather permitting. There are also regular club nights and members-only events. For more information, visit www.norwich.astronomicalsociety.org.uk.

The society is planning the following talks:

12 and 13 September **The night sky, an introduction to observing**

By Dave Balcombe. This talk will introduce the night sky and how to find your way around it, and identify some of the more spectacular sights. It will also touch on advice for the beginner about choice of equipment. Afterwards there will be practical sessions, weather permitting, using various telescopes.

10 and 11 October **Through the eyes of a space telescope**

By Mark Thompson. For thousands of years we have peered at the universe through the limiting effects of the

Earth's atmosphere. In latter years, the damaging effects of lighting on the night sky have pushed astronomers to launch telescopes into space. Now, with exciting new developments, telescopes are orbiting high above our heads, allowing unprecedented views of the universe, from the high-energy gamma-ray observatories to the familiar Hubble Space Telescope. This talk will take us on a fascinating tour of the universe.

14 and 15 November **Rough guide to the rocky planets**

By Ivan Rukaber. This is a guide to the planets of the inner solar system (Mercury to Mars), looking back to ancient Greek and Roman myth and legend, as well as more recent knowledge and images gained from space probes – information no space tourist should be without.

12 and 13 December **The outer solar system**

Dave Cook.

9 and 10 January **Comets**

By Mark Turner.

13 and 14 February **Astronomy versus astrology**

By Mark Shephard.

6 and 7 March **Astronomy in the 21st century**

By Dave Balcombe. We will



A close-up of the Ring Nebula.

Martha Stiland

look at the major discoveries of the 20th century and then explore the range of satellites and telescopes available to professional astronomers, and then what data are obtainable from them.

3 and 4 April **Mysteries of the Moon**

By Mark Thompson. The Moon is probably the most well known astronomical object. Everyone knows about our incredible achievement in the late 1960s when we took our first steps on another world, but what else do we know about the Moon? How does it have a profound effect on the Earth's ecosystems? It's not made of cheese, but what is it made of? What are those vast dark patches visible from the Earth? What are the causes of phases and eclipses? These and many other questions will be answered.

20 and 21 June **6.00 p.m. (note the earlier time)** **Journey to the centre of the Sun**

By Mark Thompson. Looking directly at the Sun is very dangerous but, over the years, astronomers have developed

safe methods of observing it. With these new techniques, we have started to unravel some of the mechanisms that drive the Sun. Drawing analogies with other stars in our galaxy, Thompson will take us on a journey from the extreme temperatures and pressures in the very core of the Sun to the observation of it from the Earth.

Talks vary in length but last about 40 minutes and are aimed at those with a general interest in astronomy. Children are welcome to attend (eight years upwards).

All events are held at Seething Observatory. Doors open at 7.30 p.m. with talks starting at 8.00 p.m., unless the room fills up earlier, in which case talks will start sooner and be repeated. Admission for non-members is £2.50 (£1.50 for children). For members, admission is £1.50 for adults and £1.00 for children. There is no need to book – just turn up on the night.

Tea and coffee will be available at the end of the talk and there will be a chance to observe through the telescopes if the skies are clear.

For details, contact the secretary, Dave Balcombe (e-mail drbalcombe@tiscali.co.uk, tel 01953 602 624).

The NAS is located at the Seething Observatory, Toad Lane, Thwaite St Mary, Norfolk NR35 2EQ.

Branch lecture celebrates icon

The branch collaborated with the Anglia Branch of the Institute of Telecommunications Professionals (ITP) for a lecture about the life and works of Sir Fred Hoyle.

The talk was delivered by Dr Simon Mitton (a fellow of St Edmund's College, Cambridge), and given in the John Bray

Auditorium, Adastral Park, Martlesham, on 15 May. In addition to the Institute and ITP membership, local astronomical societies were invited.

The evening was a success, covering Sir Fred's life, from his upbringing as the son of a wool merchant and a teacher in Yorkshire, through his academic life and seminal work on cosmic element synthesis at Cambridge, to his later thoughts on the origins of life

and his science fiction work.

Dr Mitton spoke to an audience of about 130, all of whom were extremely interested in the narrative and the anecdotes that he was able to give about one of the most iconic UK scientists of the last century. As an author and biographer, Dr Mitton was able to walk through the key milestones and influences that shaped Sir Fred as a man and a scientist. The fact that he had

worked with Hoyle for many years added to the richness with which he could give an insight into the scientist's life.

An enjoyable evening was had by everyone who attended. Appreciation was confirmed by the fact that Dr Mitton sold all of the books he had brought.

For further information about Dr Mitton and a download of the talk, visit www.totalastronomy.com/about/index.php.

The deadline for contributions to the next newsletter is Friday 31 October
E-mail your material to jeannette.fine@finerandd.com

2008/2009 programme of events

CAMBRIDGE NETWORK

13 October 5.00 p.m.

Ideas that could change the world

Law Faculty, University of Cambridge (UC)

Speakers will include Prof. David JC Mackay, Physics Department, UC, "Sustainable energy: arithmetic in the context of energy discussions"; Dr Julian Allwood, Engineering Department, UC, "Energy-demand reduction and climate change"; Prof. Chris Lowe, Institute of Biotechnology, UC, "Biotechnology". The chair will be Prof. Ian Leslie, pro-vice chancellor for research, UC. For details see www.cambridgenetwork.co.uk/news/article/default.aspx?objid=49777. The East Anglia Branch is a member of the Cambridge Network.

1 November 10.30 a.m. – 4.00 p.m.

Cambridge and the Cavendish

Cavendish Laboratory, UC
This is a day out for physicists, family and friends, including a tour of the Cavendish Museum, lunch, a tour of the UC colleges and a visit to the Fitzwilliam Museum. Contact Alicia Kelleher (e-mail apk21@cam.ac.uk, marking your e-mail "Institute of Physics", tel 01223 337 336 weekdays, or write to A P Kelleher, Cavendish Laboratory, JJ Thomson Avenue, Cambridge (CB3 0HE). Include your Institute membership number and the number of guests. The fee will be £5 each if booked in advance (advanced payment is not necessary) or £7.50 per person on the day. Children under five go free.

17–18 November (all day)

TechnologyWorld speed meeting for high-technology firms

Ricoh Arena, Coventry
This will be organised by UK

Trade International. For details, see www.cambridgenetwork.co.uk/news/article/default.aspx?objid=50792.

HORIZON SEMINARS

These one-day meetings are organised by the research services division, UC, with support from Cambridge Enterprise. They aim to unite academics and industry in exciting areas of research.

1 October (all day)

Bioengineering

Centre for Mathematical Sciences, Cambridge

9 December (all day)

Materials

Department of Material Science, UC
For details, see www.rsd.cam.ac.uk/events/horizon/sixthseries/index.html.

SCI TALKS

Department of Chemistry, Lensfield Road, UC
For details, see <http://talks.cam.ac.uk/>.

9 October 7.00 p.m.

Molecules of murder

By Dr John Emsley.

6 November 7.00 p.m.

Fireworks and waterworks

By Dr Andy Szydio, Highgate School, London.

CAMBRIDGE PHILOSOPHICAL

SOCIETY LECTURES

For details, see <http://talks.cam.ac.uk/>.

13 October 5.30 p.m.

Seeing nano: optics on the smallest scales

Bristol-Myers-Squibb Lecture Theatre, Department of Chemistry, Lensfield Road, Cambridge
By Prof. Jeremy J Baumberg, NanoPhotonics Centre, Department of Physics, UC.

27 October 5.30 p.m.

Writing the future: opportunities and challenges in inkjet printing

Bristol-Myers-Squibb Lecture Theatre, Chemistry Department, Lensfield Road, Cambridge
By Prof. Ian Hutchings FEng, Institute for Manufacturing.

5 November 5.30 p.m.

Honorary fellows prize lecture: Who owns science?

Lady Mitchell Hall, Sidgwick Avenue, Cambridge
By Prof. Sir John Sulston FRS.

10 November 5.30 p.m.

Lost in translation: challenges in applying society's risks to individuals

Bristol-Myers-Squibb Lecture Theatre, Chemistry Department, Lensfield Road, Cambridge
By Prof. David Spiegelhalter OBE, FRS, Winton professor of the public understanding of risk.

CAMBRIDGE PHYSICS CENTRE

For details, see <http://www-outreach.phy.cam.ac.uk/cpc/>.

9 October 6.00 p.m.

The future of telecommunications

Pippard Lecture Theatre
By Stephen Hearnden, director of telecommunications and technology at Intellect.

4 November 6.00 p.m.

Earthquakes, volcanoes and continental drift

Pippard Lecture Theatre
By Alan Smith.

4 December 6.00 p.m.

Forensics

Pippard Lecture Theatre
By Phil Yates.

14 December

Olympics: the physics of winning

Cavendish Laboratory
Activities will include "Crisp-packet fireworks", a talk by David Ansell (2.00 p.m.), hands-on demonstrations and

planetarium (3.00 p.m.), and "Call my sporting bluff" panel game (4.00 p.m.).

NORWICH ASTRONOMICAL SOCIETY
All events are at Seething Laboratory, Toad Lane, Thwaite St Mary, Norfolk NR35 2EQ. Admission for non-members is £2.50 for adults and £1.50 for children. For members, admission is £1.50 for adults and £1.00 for children. There is no need to book. For details, contact Dave Balcombe (e-mail drbalcombe@tiscali.co.uk, tel 01953 602 624).

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Mysteries of the Moon

By Mark Thompson.

20 and 21 June 6.00 p.m.

Journey to the centre of the Sun

By Mark Thompson.

Physics pupils try out university

The University of Cambridge ran the third Senior Physics Challenge on 29 June–3 July in the Cavendish laboratory. This is intended for students

who have already shown some aptitude for physical and mathematical thinking, who have shown promise at GCSE and during their AS year, and who must also be taking A2 physics and mathematics.

There were three general physics/research lectures,

but the emphasis was on the physics problem solving and practical classes which helped develop problem-solving and experimental skills. The group stayed and ate in colleges during their visit. In the evening, students were given information about studying

physics at university level and the university application and admission process in the UK. Evening entertainment was provided, including quizzes.

It was an intensive but rewarding week for the participants. We wish them well with their A-level exams.