

NEWSLETTER

May 2009

Scotland is stargazing



Schools count their lucky stars during the International Year of Astronomy.

Scientists, teachers and amateur astronomers gathered at the Royal Observatory Edinburgh on 25 February to launch the International Year of Astronomy (IYA) 2009 in Scotland.

Events are being hosted by universities, schools, astronomy societies and environmental groups to celebrate the fact that 400 years have passed since Galileo's first observations of the night sky with a telescope. Prof. Ian Robson, who is chair of the IYA 2009 UK committee and is based at the observatory, said: "The year is a global celebration of astronomy as one of humankind's greatest achievements."

As part of the Telescopes for Schools project Prof. John Brown, Astronomer Royal for Scotland, will award telescopes to teachers and pupils from Galashiels Academy in the Scottish Borders and Liberton High School in Edinburgh. Suzanne Pritchard, a physics teacher at Galashiels Academy, said: "This is perfect timing for us. With the freedom of the new Curriculum for Excellence, the

telescope gives our pupils a fantastic opportunity to have a go at real observing, guided by a real astronomer."

In all, 90 schools in Scotland will receive telescopes as part of the project, which aims to inspire the next generation of scientists and engineers. The project is led by the Society for Popular Astronomy.

From dark-sky observing to public talks and exhibitions, IYA 2009 will offer something for everyone. "Scotland has a tremendously vibrant and exciting programme of events for the public and schools, led by researchers, amateur astronomers and science communicators," said Prof. Brown.

The voluntary community will lead the way. Bill Leslie from SIGMA, the astronomy club for Moray, will be running activities in the Highlands and Islands. He said: "The year will really highlight the fantastic range of events run by Scotland's amateur astronomy groups."

Prof. Anne Glover, chief scientific adviser for Scotland said: "The Scottish government

is providing more than £100000 to help fund a range of public astronomy events across Scotland this year. This includes a grant of £49000 for projects co-ordinated by the Royal Observatory Edinburgh. Stargazing is a great way to encourage our young people to engage with science and I'm delighted that many of the events planned for IYA 2009 have families and young people at their heart."

IYA 2009 is a global effort initiated by the International Astronomical Union and UNESCO. In the UK, the Science and Technology Facilities Council, the Royal Astronomical Society and the Institute are supporting co-ordination of IYA 2009 and many of the activities through their public engagement schemes.

Further information

- IYA 2009 UK – www.astronomy2009.co.uk
- Telescopes for Schools and Moonwatch – www.popastro.com/moonwatch
- Dark Sky Scotland – www.darksksotland.org.uk

2009 AGM gets astronomical

The International Year of Astronomy 2009 is now in full swing. Even with the lighter nights there are lots of great events in which to take part.

On the subject of astronomy, the 2009 branch conference, AGM and dinner will take place at the Royal Observatory Edinburgh on Saturday 23 May. This year's subject will be space physics and we are honoured to have the Institute's president, Dame Prof. Jocelyn Bell Burnell, as our key speaker. It promises to be an exciting day. Delegates will have a chance to tour the Royal Observatory and see its world-famous collection of astronomical books, the spectacular building and its telescopes.

The AGM will form a very short but important part of the day. You are encouraged to come along to find out about the activities of the branch. We are always looking for new people to join the committee and nomination details are given on p6. I look forward to seeing you at the meeting.

Alison McLure

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The first Dark Sky Discovery sites are Scottish



Left: Stargazers at Newbattle Abbey College. Right: Rebecca MacKinnes makes a night-sky umbrella at the Glen Nevis Visitor Centre.

As part of International Year of Astronomy 2009, the world's first two Dark Sky Discovery sites were unveiled on 25 March.

The Dark Sky Scotland partnership identified the sites as Newbattle Abbey College in Dalkeith and the Highland Council's Glen Nevis Visitor Centre grounds, near Fort William. The two sites – which are relatively free from light pollution or tall buildings and are safe and accessible – were chosen following a winter of community astronomy activities led by the John Muir Trust, the Highland Council Countryside Rangers and Forestry Commission Scotland.

The announcement took place at Newbattle Abbey College, Scotland's only adult education residential college. Norah Fitzcharles, deputy principal, said: "We are delighted that the college is being designated as a Dark Sky Discovery site. We hope that this will encourage students, staff and members of local community groups who live in an urban environment to discover the night sky. As a college, our main function is to

Energy debate explores options

The future of Scotland's energy needs continues to be a burning and controversial question. Scottish Engineering and Unite set out to explore this issue again through the lens of security of supply.

Colin Imrie from the Scottish government started with an overview of the current and

provide learning experiences that engage, inspire and educate people, helping them to develop an enquiring mind."

Participants at the launch carried out simple light pollution measurements and fed their findings into the international Globe at Night survey.

Dan Hillier from the Royal Observatory Edinburgh Visitor Centre, which is supported by the UK Science and Technology Facilities Council and the University of Edinburgh, and which leads the Dark Sky Scotland partnership, said: "Many of us live in light-polluted towns and cities yet in every community there is somewhere to go to look up and discover the stars. From these places, which might be a park or playing field, you can see planets, stars, satellites and other wonders. The organisations that have identified these first two Dark Sky Discovery sites have taken a world-leading role in helping people to discover the universe that is on their doorsteps."

Jeremy Thompson of Forestry Commission Scotland, which works closely with Newbattle

Abbey College to benefit the local community, said: "Woodlands are fantastic places to view the stars from. Not only do you get a still silence but it adds a natural feel to the experience of stargazing. This project is a great example of adding a new and exciting dimension to visiting a woodland at night."

"Many people visit Glen Nevis from developed areas with lots of light pollution and are often amazed to see shooting stars, the Milky Way and entire constellations," commented Alison Austin, Nevis conservation officer for the John Muir Trust. "It is great that Dark Sky Discovery can highlight places like this and help people to discover the night sky."

Iain Ross, a member of the Highland Council's Planning, Environment and Development Committee, said: "There are wonderful opportunities in the Highlands to view, and to experience the fascination with, planets and space. Glen Nevis is an accessible location that is free from light pollution and where people can enjoy a range

measures were high on the government agenda.

Bill Coley, chief executive officer of British Energy, was next and put forward the case for nuclear power as part of the Climate Change Bill. He said that Scotland is in an enviable position because it has world-leading projects in all of these technologies and in carbon capture and storage. He also said that building up a skill base and energy-efficiency

of community activities."

Catriona Morrison, communities and green spaces officer for Scottish Natural Heritage – which, along with the Scottish government and the branch, is funding Dark Sky Scotland – said: "This might, at first, seem to be an odd thing for us to fund but it isn't. We are very keen to encourage people in urban areas to get out and enjoy the green spaces near where they live. Looking up into the night sky and wondering at the beauty of the stars is one way of doing that and the night sky is an often forgotten part of our local heritage. I hope that this initiative will be a great success and give many more people the opportunity to have an enjoyable time outdoors."

More Dark Sky Discovery sites will be identified during 2009 by organisations involved in Dark Sky Scotland and similar programmes throughout the UK and Ireland. A Dark Sky initiative is being set up in the US.

Public stargazing events also took place around the UK as part of Spring Moonwatch between 28 March and 5 April.

national borders".

A number of other speakers put forward further cases for carbon capture and storage technology; clean coal, oil and gas; marine power; and a revised grid infrastructure to handle future developments.

There were lively debates around all of these themes and the case was made, from the floor, for micro-renewables to be part of the energy mix as well.

Alison McLure

Physicists debate renewables

As a physicist, you may wonder what renewable-energy devices have to do with you. Physicists have long been associated with the nuclear industry within the energy sector, but increasing numbers are working in renewable energy and these numbers are likely to increase.

As branch representative, I went to the Scottish Renewables Conference in March to find out more.

The organiser, Scottish Renewables, is a trade body that strives to represent the whole renewable-energy sector, be it in electricity, heat or transport. The conference delegates were predominantly from private companies involved with renewable projects, but there was a fair sprinkling of policy people from government and non-departmental public

bodies, plus a few researchers from universities.

The event had a mix of plenary sessions, panel discussions, workshops and networking breaks. One of the most interesting debates was about how a low-carbon economy can be delivered.

Richard Dixon of World Wildlife Fund Scotland, who was originally an astrophysicist, was clear that the negotiations in Copenhagen were crucial and that 2009/10 held the last chance to mitigate against climate change. He said that the strong climate change acts now in place in Scotland and the rest of the UK were a step in the right direction but we need to deliver and put in place the processes to meet those acts. Renewables would be essential to that.

The chief executive of

Scottish and Southern Energy, Ian Marchant, spoke next and was essentially in agreement with Dixon. He stated that climate change was also a challenge to society. The change in the last 150 years has been phenomenal, especially in the most recent 50 years, and society has to reverse a lot of that change within a much shorter time.

Iain Gray, leader of the Scottish Labour Party, gave some insight into the dilemmas that politicians deal with when making decisions. While politicians are well aware of the urgency and importance of climate change, the economic downturn was more prominent in the minds of voters and, as representatives of these people, they had to take account of this.

One of the workshops

concentrated on the skills required for the future scaling up of the renewables sector. There are currently around 4000 jobs in the sector, but this is forecast to rise to 60000 within 20 years. There are already acute shortages of appropriately skilled people, especially for positions that require a high degree of experience and responsibility.

The National Skills Academy for Power is charged with supplying skills for the renewables sector and for updating and maintaining the National Grid. It has a big challenge ahead to persuade enough young people to take science and engineering and to assist older people to change careers. It looks like there will be plenty of opportunities for people trained in physics.

Alison McLure

Defence science is world-leading

In March, members of the branch committee visited SELEX Galileo – world leader in defence electronics – in Edinburgh. The site is home to the radar, electro-optics and advanced projects sectors of the company.

The Edinburgh arm is built from the foundations of Ferranti Defence Systems, which developed the world's first monopause radar used in service for the Royal Air Force. SELEX Galileo has built on this history to produce hi-tech devices that are fitted to many airborne platforms.

The site also boasts the microelectronics and laser technology Centres of Excellence and it leads the way in developing the next generation of laser targeting.

Committee members had the chance to ask questions, not all of which were answered due to the sensitive nature of some of the military applications, but even so the variety of applications and facilities available was fascinating.

Alison McLure

Pupils enjoy eco awareness events

Schools from Glasgow and Inverclyde were invited to send pupils to one of this year's Ecodays, which were held on 10, 11 and 12 March at Glasgow Science Centre. Pupils from Glencoats Primary School in Renfrewshire also attended, with a view to more Renfrewshire schools being involved in any future events.

Ecodays are run on behalf of the Glasgow STEM group* and this year's events were sponsored by ScottishPower Renewables, the Institute of Physics in Scotland, Glasgow City Council, Inverclyde Education Services and the Scottish Government National Science and Engineering Week Grant Scheme.

The aim is to raise awareness of the importance of:

- saving energy and water;
- reducing waste and pollution;
- using environmentally friendly transport;
- learning about the natural world around us;
- learning about science and engineering relating to environmental issues.

The Ecodays were attended

by 1993 pupils from 88 schools. The P6–S2 pupils were given a chance to learn about environmental issues by taking part in two structured activities and following the Eco-Trail.

This involved visiting Science Mall exhibits and an interactive stand provided by the Bat Conservation Trust to answer questions. The question form included a comments section and a competition to win family tickets to the science centre. This not only provided structured activity for pupils but also enabled us to collect useful feedback. The competition encouraged people to hand in their forms.

Structured eco-activities were provided by Careers Scotland, Glasgow Science Centre, the WISE group, Glasgow City Council Countryside Rangers, STOW College, Strathclyde Police, Glasgow University Science Festival, the University of Strathclyde and Community Arts: Open Space, Clydebank.

Excellent feedback from teachers and pupils confirms that the Ecodays were

"It was a joyful day and I learned a lot."
Joseph, aged 10, Kelbourne Primary School

"It was super, thank you!"
Martine, aged 11, St Peter's Primary School

enjoyable and effective in their aim to inform and inspire pupils about environmental issues and the science and engineering surrounding them.

*The Glasgow STEM (Science, Technology, Engineering and Maths) Group partners are: Glasgow Science Centre; Strathclyde, Glasgow, Caledonian and West of Scotland universities; Stow College; Careers Scotland; Scottish Enterprise; Scottish Council for Development and Industry; Glasgow City Council; STEMNET; Science and Engineering Ambassadors; Glasgow University Science Festival and the British Science Association.

Gillian McNicholas

Do something creative: do science

The Scottish government has launched a campaign to persuade more young people to consider a career in science. As part of the project, Techfest Setpoint organised a subject choice event for pupils at S2-level in Perth High School.

Many young people make their subject choices with very little information about what a career in that subject might involve. For example, pupils associate scientists with a particular stereotype and they perceive the subjects to be difficult. This puts many of them off choosing sciences.

The event was designed to give an accurate picture of the benefits of a science career and included a variety of stands



Science with balloon kebabs.

from science and engineering ambassadors, including myself, representing the Institute. This gave the pupils a chance to talk to scientists with interesting and exciting careers. There was also literature for them to take away to facilitate discussion of their choices with their parents.

The pupils were asked

to fill in a questionnaire with information about the exhibitors. This encouraged the youngsters to get into conversation with the scientists and engineers.

The star of the show was Ken Skeldon from the University of Aberdeen. He hoped to spark the pupils' interest with a short part of his show on high-voltage electricity, "Arcs and sparks". The pupils enjoyed seeing their teachers being put into a Faraday cage and having half a million volts connected across them.

The event had a great buzz about it. Let's hope that it helped the sciences to be the subjects of choice.

Alison McLure

Get involved in Dark Sky plans

The Dark Sky Scotland partnership has been running successfully for a couple of years now. Many of the events in the International Year of Astronomy 2009 have been based on those originally run by Dark Sky Scotland.

The team is looking for hosts and venues for events in the autumn. If any members would like to see Dark Sky Scotland coming to their community or area, let me know by the end of May (e-mail alison.mclure@iop.org).

For more information about Dark Sky Scotland and lots of stargazing ideas, visit www.darkskyscotland.org.uk.

Alison McLure

Scheme helps women succeed

A new scheme called Interconnect was launched on 25 March by the Scottish Resource Centre for Women in Science, Engineering and Technology (SET) at Napier University. It aims to provide a support network for women in SET by linking students, universities and businesses.

The idea is to give women studying these subjects a glimpse at the career options that are open to them. Interconnect is also looking for ambassadors from leading businesses to work with students, acting as role models and encouraging them into their chosen career.

Information for employers and career advice for students forms a prominent part of the Interconnect website at www.interconnect.org.uk.

All together now

The latest meeting of the Scottish Parliament Cross Party Group on Science and Technology, held on 3 February, highlighted the work of NESTA's Carbon Crucible programme.

This project has been set up to encourage interdisciplinary collaboration between early- and mid-career researchers from diverse fields to find new

interconnect.org.uk.

Jenny Tizard, manager of the Scottish Resource Centre for Women in SET, said: "Interconnect is all about linking skilled students with business and their peers in an environment of mutual support."

Allison Johnstone, coordinator of Interconnect, commented: "Interconnect is a really exciting network, and a first for Scotland. We will help industries to provide students with opportunities to get a good start in their careers, as well as raising the profile of women studying and working in these fields."

Interconnect is a three-year project funded by the Scottish Funding Council and supported by the National Union of Students Scotland and Equality Forward. It has been developed by the Scottish Resource Centre for Women in SET.

and innovative solutions to big issues in energy research. These include demand reduction and environmental sustainability.

Attendees heard four short talks on the kinds of project that the researchers have been working on. These ranged from microgeneration of energy in Scotland to ways of using the recession as an opportunity to invest in a low-carbon future.

Alison McLure



RSE and IOP organisers with chief scientific adviser, Anne Glover.

Physicists get positive

The Institute of Physics and the Royal Society of Edinburgh (RSE) held a joint Christmas lecture in Arbroath in December. The lecture was part of a series of events organised by the RSE in Arbroath in 2008.

Prof. Anne Glover, the chief scientific adviser for Scotland, delivered a lecture on how science informs us about climate change, how climate change could impact

on communities like Arbroath, what local people can do about it and how scientists can make a positive difference.

Around 120 pupils from Arbroath High School were enthralled by the lecture during the afternoon and nearly 70 people from the community turned out on a chilly evening to listen to Prof. Glover and ask some excellent questions.

Alison McLure

Got an idea for a branch event? If so, e-mail us at a.walker@ed.ac.uk



Alison McLure

Physics in the (Scottish) Field: at the Highland Games in 2008.

Tricks are a treat

Following up on the success of Physics Buskers at last year's Inverness Highland Games, the branch is helping to organise two similar Physics in the Field events for 2009.

This year we will be attending the Currie Games (near Edinburgh) on 9 May and the Lochaber Highland Games on 25 July. We aim to raise the profile of physics (and science in general) by performing a variety of eye-catching physics-related tricks and experiments for the public.

These tricks are hand-held demonstrations using things

that can be found at home. Some are messy, some are noisy, but all of them are crowd pleasing and help to illustrate different areas of physics.

Visitors will be encouraged to find out how to do the tricks themselves and give on-the-spot performances to their friends and families.

If you are interested in visiting our stall or getting involved, contact Bill MacPherson (e-mail w.n.macpherson@hw.ac.uk, tel 0131 451 3733) or Alison McLure (e-mail alison.mclure@iop.org) for further details.

Grants are available for physics

The Institute of Physics in Scotland actively encourages its members and others to communicate exciting aspects and applications of physics to a wide audience. The branch's grant scheme is designed to give financial support of up to £2000 to individuals and organisations running physics-based events and activities. Examples of the kinds of events that the branch has funded are highlighted in most branch newsletters.

The aim of the grant scheme is to encourage and support projects that:

- raise public awareness of, and engagement with, contemporary physics;
- inspire and enthuse young

people, especially those not previously interested in physics;

- develop the relevant communication skills of individuals;
- reach audiences beyond the classroom and workplace.

The committee has recently developed guidelines for these grants and it would encourage all members to see whether their great ideas might be able to attract funding.

Further details and an application form can be found on the branch website, at www.iopscotland.org/activity/Engaging%20the%20Public/page_25699.html, or from Alison McLure (e-mail alison.mclure@iop.org).

CPD helps teachers up

The Institute's Teacher Network delivers continuing professional development (CPD) network meetings throughout Scotland, to much acclaim from the science teaching profession. Successful meetings take place on a regular basis and the network is widely seen by the science teaching profession as a mechanism for the dissemination of good practice across the science teaching community.

The Scottish government has committed more than £2m to CPD for science education over three years, to support the implementation of the Curriculum for Excellence. This budget is managed by the Scottish Schools Equipment Research Centre (SSERC) – a registered charity owned by the 32 Scottish local authorities – to support health and safety, and to give advice on practical work and equipment. Recently the role of the SSERC has expanded to include designing and delivering CPD for science teachers.

Science-teaching CPD sessions are now usually held in collaboration with local authority CPD event days. Increasingly the Teacher Network is closely involved as a partner of the Association for Science Education (ASE), contributing sessions to the ASE's one-day regional conferences and assisting it in its partnership with the SSERC. This involves supporting national events, such as the residential school for trainee science teachers and the Supporting Science Education Conference held in early March in Dunblane, and residential courses for science teachers (primary and secondary level).

With financial support from the Institute of Physics in Scotland, the network was able to deliver workshops at every session open to science teachers at the SSERC conference, so physics teachers had a more diverse range of sessions to choose from than in previous years.

At the time of going to press, not all of the feedback



from the conference has been collated, but initial analysis shows that Institute sessions were very well received by the teaching profession and plans are afoot to develop a similar contribution for the conference in 2010.

The Optoelectronics College (OEC) initiative is a pilot programme funded by the Rank Trust Foundation. The project is led by Prof. Ian Shanks, with able assistance from Rona Goss, Stuart Farmer and Bob Kibble – all well known and respected figures in the physics teaching community.

The Teacher Network supports the development of the OEC and the associated delivery of CPD events across Scotland. Teachers who attend OEC sessions are given equipment to take away with them so that they can deliver optoelectronics learning experiences in their own schools.

The first workshop in the project has taken place in several locations across Scotland. The plan for the pilot phase is to have approximately 100 teachers attend OEC workshops. Three topics are being developed initially:

- solar cells in action;
- optoelectronics displays;
- illumination and communication.

A talk on the progress of the OEC is planned for the Stirling Teachers meeting on 3 June. For more information, visit www.opto.org.uk/index.php?module=home.

It appears that the Teacher Network is a great success in Scotland and, through close collaboration with partners, it is gaining access to and supporting more physics teachers than ever before.

Branch conference is coming

The 2009 AGM of the Institute of Physics in Scotland will be held at the Royal Observatory Edinburgh, Blackford Hill, Edinburgh EH9 3HJ at 4.30 p.m. on Saturday 23 May.

The meeting will be preceded by a series of talks on space physics and followed by a tour of the Royal Observatory and then a buffet dinner. All members, together with their partners and guests, are most welcome to come to the talks and/or the dinner even if they are unable to attend the AGM. See events programme below for more details.

The branch general meeting is held annually to elect the committee and to transact other business. Any branch member wishing to bring forward business of a character suitable for consideration at the meeting should give notice of his/her intention in writing to the honorary secretary at least seven days before the meeting.

Minutes of the 2008 AGM are available online at www.iopscotland.org/activity/Annual%20General%20Meeting/Archive/2008/file_30525.pdf.

The 2009 AGM agenda includes reports from the chair, honorary secretary, honorary treasurer, outreach coordinator, education representative, industry representative and Seniors Group coordinator.

There will also be a

discussion of the branch constitution and the election of committee members. The current committee is shown at the top of this page. The chair and honorary secretary are standing down this year.

The committee, according to the branch constitution, is making the following nominations for the new committee, which can have a maximum of 16 members (including officers):

- Prof. Andrew Long, as chair;
- Dr Bill MacPherson, as honorary secretary;
- Eric Yao, as an ordinary member;
- Allan Colquhoun, as an ordinary member.

All branch members are invited to make further nominations, which have to be proposed by not less than two branch members and must be accompanied by the consent of the nominee. Nominations should be sent to the honorary secretary, Iain Ross (e-mail iain.ross@btconnect.com), not later than 22 May.

In addition all co-opted members must stand down at the AGM. These are currently:

- Prof. Derryck Reid;
- Bob Kibble;
- Michael McVey.

The committee intends to co-opt the following onto the committee at the September committee meeting:

- Bob Kibble;

BRANCH COMMITTEE

Branch officers

chair	Prof. Julian Jones
deputy chair	Prof. Andrew Long
honorary secretary	Iain Ross
honorary treasurer	Dr David Keeble

Ordinary members

business, industry and engineering coordinator	Stephen McGeoch
Seniors Group coordinator	Dr John Higinbotham
outreach coordinator	Dr Gillian Lang
ordinary member	Alan Walker
ordinary member	Iain Glennie
ordinary member	Prof. Duncan Hand
ordinary member	Stuart Farmer
Grampian local area coordinator	Dr Carol Trager-Cowan
ordinary member	Dr Charles Wang
Fife local area coordinator	Dr Bill MacPherson
	Dr Graham Turnbull

- Michael McVey.

The committee has the following ex-officio observers:

- student representative and NEXUS representative: Jamie Wilson;
- IOP national officer for Scotland: Alison McLure;
- Scottish education manager: Tom Dickson.

Only members of the branch are eligible for membership of the committee (including the branch officers). In accordance with the bye-laws of the Institute, the majority of the ordinary members of the committee must be Corporate Members of the Institute unless council otherwise determines.

Officers of the branch must be Corporate Members of the Institute unless council otherwise determines.

Officers are normally elected for a period of no more than three years. No one may be a member of the committee in any capacity for more than nine consecutive years in any period of 13 years without specific prior approval of the Nations and Regions Committee.

If you have any queries about the election process or if you would like to make a nomination, contact Iain Ross (e-mail iain.ross@btconnect.com).

Iain Ross, honorary secretary

Calendar of branch events summer 2009

An up-to-date listing of branch meetings can be found by searching for "Scotland" at <http://whatson.iop.org> and at www.iopscotland.org.

Saturday 23 May Conference and AGM 2009

Royal Observatory Edinburgh, Blackford Hill, Edinburgh EH9 3HJ

The theme will be space physics. Costs are subsidised by the branch. There is no

charge to attend the AGM only. Tickets for members will be £10 for the day only (free for students), £20 for dinner only or £30 for the day and dinner. For non-members, tickets cost £10 for the day only (free for students), £30 for dinner only or £40 for the day and dinner. **2.00–2.30 p.m.** Arrival and welcome. Refreshments served. **2.30–3.30 p.m.** Dame Prof. Jocelyn Bell Burnell, University of Oxford.

3.30–4.00 p.m. "Good gear in small bulk: Scotland's first advanced micro-spacecraft"
– A talk given by Craig Clark of Clyde Space.

4.00–4.30 p.m. "MRI imaging"
– A talk by Prof. Alan Heavens, University of Edinburgh.

4.30–4.45 p.m. Tea and coffee.

4.45–5.30 p.m. AGM.

5.30–7.00 p.m. Tour of the Royal Observatory.

7.00–10.00 p.m. Buffet dinner in the Gallery.

Further details and a booking form can be found at www.iopscotland.org/activity/Annual%20General%20Meeting/file_33781.doc.

Information about the Royal

Observatory Edinburgh can be found at www.roe.ac.uk.

3 June
Stirling Physics Teachers Meeting
University of Stirling

Friday 12 June
Royal Meteorological Society (Scotland) summer visit

Forth Ports, Leith
A coach will depart from Edinburgh at 2.00 p.m. Please reserve a place. Further information can be obtained from the secretary, Richard Tabony (23 Pendicle Road, Bearsden, Glasgow G61 1PT; tel 0141 943 0523; e-mail rtabony@btinternet.com).