Annual Report 2011

Physics at the heart of Scottish science

IOP Institute of Physics in Scotland
This report covers the period from January 2011 to June 2012. It is intended to highlight the many activities supported by IOP in Scotland (IOPS). Scottish members are encouraged to become involved in as many volunteering opportunities as they can, whether that is becoming a committee member, organising local lectures, volunteering for one of our Physics in the Field teams or Lab in a Lorry.

"The Institute of Physics in Scotland actively encourages its members and others to communicate exciting aspects and applications of physics to a wide audience."

All aspects of the physics community are of relevance in a modern Scotland and we are proud to continue to support the physics teaching community through our teachers’ network, support for the annual Scottish teachers’ conference, contribution to teacher development and representation on behalf of physics.

We look forward to supporting everyone’s contribution to our thriving physics community in Scotland.

Highlights of the year include:

• distributing our Manifesto for Physics to MSPs before the Scottish elections;
• engaging with thousands of people with the BBC’s Bang Goes the Theory team;
• celebrating further funding for Lab in a Lorry in Scotland;
• the largest meeting of teachers of physics in the UK.

Advocacy and awareness

To engage with all policymakers and the public, developing awareness and understanding of the central importance of physics.

A manifesto for physics

Influencing policy on physics depends on engaging with those responsible for making it in government and in parliament. The Scottish election in May 2011 marked a change in the personnel involved, with a large number of new MSPs being elected. To communicate the importance of physics to incoming MSPs and strengthen existing relationships, IOPS produced a Manifesto for Physics detailing the Institute’s key aims: access for high-quality physics teaching for every child; support for STEM subjects in higher education; funding for science that will keep Scotland at the forefront of research; and a fiscal and regulatory environment that fosters innovation.

Engaging with policymakers remains important and this has been rewarded with MSPs developing closer relationships with the Institute, including attending meetings organised by IOP in Scotland, jointly with other organisations, and visiting Lab in a Lorry.

The programme of visits to Lab in a Lorry continued to be a success, with 27 MSPs and five MPs seeing the lorry at work inspiring the scientists and engineers of the future. IOP held a successful event to celebrate further funding from the Scottish government for Lab in a Lorry. The event took place at Holy Rood High School in Edinburgh and local MSP Kenny McCaskill welcomed the guests. This gave us a chance to invite potential sponsors and to talk to MSPs.

The influencing of policymakers continued with three meetings of the Cross Party Group on Science and Technology and two Holyrood Seminars, organised by the Engineering Policy Group Scotland (EPGS). IOP is an influential member of these groups. As a result of our lobbying, questions were asked in the Scottish parliament on the impact of new curriculum structures.

An IOP response to the Scottish government’s Green Paper on Higher Education was submitted in February 2011. There were also numerous Scottish government consultations on the new school examinations, to which IOP responded. Prof. Peter Main, director, education and science, took the opportunity to respond to the Royal Society of Edinburgh’s consultation on “Lifting Barriers to Women in Science, Technology, Engineering
and Mathematics: A Strategy for Scotland”. IOP in Scotland and the Scottish Universities Physics Alliance (SUPA) responded jointly to the Scottish government’s consultation titled “Putting Learners at the Centre – Delivering our Ambitions for Post-16 Education” in December 2011.

Numerous members of IOP are on influential committees and had opportunities to put across our messages, and we would encourage all of our members to help to continue to highlight the importance of physics to our society by lobbying their local representatives, whether councillors, MSPs, MPs or MEPs.

IOPS had an excellent presence at the Science and the Parliament event again. Allan Colquhoun chaired a session on education, prizes were awarded to four youngsters who had outstanding results in Higher and Advanced Higher physics, and we had a prominent stand at the event. All of the award winners attended with parents and teachers.

Engaging with industry
An IOP Business Forum event was held in Scotland at SELEX Galileo during the first week of May 2012. IOPS chair Stephen McGeoch chaired the event, which brought together business people, academics and policymakers to discuss how physics supports sustainable economic development and what the future might hold for physics-based businesses in Scotland.

Public engagement
IOP in Scotland’s public engagement grant continues to attract a high quality of applications. 13 grants were awarded in 2011, amounting to a total of £13,250 being given to a variety of projects. 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 Institute in Scotland’s grant scheme is designed to give financial support of up to £2500 to individuals and organisations running physics-based events and activities.

Physics in the Field
The BBC’s Bang Goes the Theory team touched down at the Edinburgh International Science Festival during April and a 30-strong team of IOP volunteers from across central Scotland were on-hand with a range of Physics in the Field activities to entertain and enthuse an interest in science and engineering.

With activities based on the popular Marvin and Milo’s “Do try this at home” experiments, visitors were encouraged to do the experiments for themselves and try to come up with their explanations for what they were observing. Despite the apparent simplicity of the experiments, the underlying physics is fascinating, and it was great to be able to explore this with the visiting public. During the three-day event more than 10,000 visitors passed through the arena.

Physics in the Field teams also starred at the Galloway Country Fair, Currie local fair, SCDI’s Celebration of Engineering and Science, the SCDI Highlands and Islands Showcase, Moray Science Festival, the Perth Big Bang Fair and the Orkney Science Festival. These events combined attracted more than 2000 visitors.

Other highlights included the national officer presenting at the Caithness Science Festival and judging at the Big Bang Fair in Perth.

Media coverage
Our Lab in a Lorry continued to generate good coverage in the local press. IOP was mentioned in the Southern Reporter as sponsor of the Borders Science Festival. There were mentions in the Times Educational Supplement Scotland (TESS) – one on the Stirling Teachers’ Meeting and one on the increase of students taking a Higher in physics, following a press release from IOP. Gordon Doig was quoted in the Scottish Daily Mail and TESS on funding for practical lessons in schools. The Higher physics prize awarded at Science and the Parliament was mentioned in the Edinburgh Evening Telegraph. There was a photo of Alison McClure at the ASE Scotland Conference in The Courier. IOP was also mentioned in the John O’ Groats Journal for taking part in the Caithness Science Festival.

Membership
To engage with physicists from all sectors and all those interested in physics, attracting new members and developing the profession.

IOP in Scotland gained a new look to its website, which we now hope is more attractive and easier to navigate.

A young-persons’ section of IOP in Scotland was formed and held its first meeting in Edinburgh in January 2012. This group aims to bring together members who

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Looking forwards to 2012/13

A strong presence is planned at the British Science Festival in Aberdeen, including the unveiling of a blue plaque to GP Thompson by Prof. Brian Cox OBE at the University of Aberdeen. Lab in a Lorry will continue with its tour in Scotland and its programme of invitations to local political representatives. A report on physics in the Scottish economy will be published and presented at an event in the Scottish parliament. A “buddy” scheme between early-career members of IOP and civil servants will be launched.

Institute of Physics in Scotland

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