



Annual Report 2010

Physics at the heart of Scottish science



Busking on ski slopes, lectures in many parts of Scotland, advertising physics on buses in Glasgow, the largest meeting of physics teachers in the UK, meeting MSPs and government ministers – these are just a few of the highlights from the Institute of Physics in Scotland in 2010.

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Science and enterprise

The programme of MSPs visits to Lab in a Lorry continued to be a success. 11 MSPs saw the lorry at work, inspiring the physicists of the future. This led to a question being asked in parliament about the future funding of the initiative.

IOP featured in a debate about science in the Scottish Parliament. It is also a key partner in the Cross Party Group on Science and Technology.

The national officer, Alison McLure, is a member of the Engineering Policy Group Scotland, which held three successful briefings on energy at the Scottish Parliament. There was a good attendance at all events, including many MSPs.

“Science and the Parliament” was held in Our Dynamic Earth in November. IOP had a high-profile stand and the prize for higher physics was presented by the leader of the opposition, Iain Gray.

“Science and Engineering 21 – An Action Plan for Education” was launched by the Scottish government on 1 March 2010. Stuart Farmer and Heather Reid are on the steering group for the Action Plan, ensuring that physics will be well represented.

Opportunities

IOP Scotland continues to be influential in the debate over the new curriculum and qualifications, which are being introduced in Scottish schools. IOP also responded to the Scottish government’s proposals

for the new physics Higher examination and to the Review of Teacher Education in Scotland. Tom Clark, a teacher network co-ordinator, is on the Qualifications Development team and members of the IOP Education Committee for Scotland were involved in face-to-face consultations on the new Higher.

The Stirling Physics Teachers’ Meeting took place in early June, with around 200 teachers attending for the day of lectures and exhibitions. A Physics Summer School (a joint venture between IOP and the Scottish Schools Equipment Research Centre [SSERC]) was held in May. A grant from RCUK meant that costs were kept low for teachers.

The teacher network co-ordinators (TNCs) continued to run many successful and well attended events for physics teachers. The activities included a strong presence at the ASE meeting in Nottingham, two Girls into Physics events and a successful tour around Scotland with PASCO – a company selling science-education equipment. Ronna Montgomery has taken over the co-ordination of the Scottish team. Links with ASE and SSERC are very strong, they are developing with STEMNET and are strong with all ITE establishments and physics departments at all of the universities.

The TNCs have also worked closely with Learning and Teaching Scotland to develop new resources and the Scottish Qualifications Agency in developing the new qualifications for physics.



There has been a dedicated Lab in a Lorry in Scotland since April 2007.

Between April 2007 and December 2010 the numbers for Lab in a Lorry were:

Visitors (mostly 11–14 year olds)	33 174
Volunteers	595
Schools visited	206

The national officer, Alison McLure, continues to be active on a number of steering groups, including ESERO Scotland, which promotes space and astronomy, and Ingenious, which promotes public engagement with engineers working in astronomy.

IOP Scotland also continued to support the STEM Scotland network. Many IOP materials were distributed by their co-ordinators. The national officer also spoke at three schools as part of the Techfest Science Festival.

The national officer and Gregor Steele of SSERC ran an outdoor workshop at the Grounds for Learning Conference in March. There were around 200 delegates from primary and secondary schools, early years practitioners and local authority staff. A video of the workshop features on Learning and Teaching Scotland's outdoor learning website.

The national officer was the keynote speaker for the Great Caithness Weather Event, which launched a long-term study of the weather in Caithness. This was featured in the local paper, the *John O Groat Journal*.

The national officer was chief scientist on an expedition to Svalbard in the Arctic with the British Schools Exploring Society in May/June 2010. She also won the Royal Meteorological Society's James Paton Memorial Prize for an outstanding photograph of meteorological interest.

Communication and influence

IOP Scotland awarded grants totalling £15 775 to 10 organisations to support science engagement in a variety of ways.

There has been excellent coverage in local papers of the tour of Lab in a Lorry. The presentation of the prize for Advanced Higher physics featured in the *Edinburgh Evening Standard*. More unusual mentions for IOP were in *Trail* magazine, where the national officer, Alison McLure, was quoted on the subject of Brocken spectres; a geology magazine, which highlighted the launch of an IOP-sponsored geodial; and the *Caledonian Mercury* on the subject of the cold winter.

The national officer has developed an excellent working relationship with the Association of Graduate Careers Advisers Scotland and, as a result, IOP featured at two science fairs in 2010, plus the OPITO Careers Conference in Aberdeen.

IOP Scotland has continued to develop excellent relations with other organisations that promote science in Scotland. It has featured at three of the Scottish Council for Development and Industry's events for Science and Engineering Clubs, and IOP materials developed specifically for Science and Engineering Clubs have been snapped up enthusiastically.

Physics in the Field has continued to be a successful draw, especially when a team from Heriot Watt University braved the ski slopes on Cairngorm mountain.

Finally, there was a bus poster campaign with posters on public transport in Glasgow towards the end of the year.

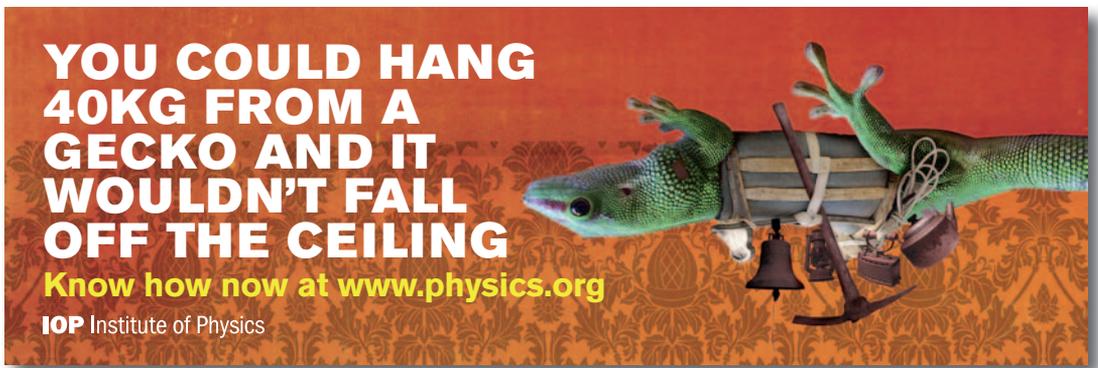
Members

Approximately 8% of IOP members are based in Scotland. In Scotland, 129 schools are part of IOP's Affiliated Schools programme.

Free membership of the Institute has attracted more than 1000 students from Scottish universities. This is partly due to the national officer, Alison McLure, visiting many universities to speak to students about IOP.

Image captions (left to right): Lab in a Lorry at Dundee Science Centre, where it had a two-week residence outside the city's science centre in July 2010; a rocket workshop at an outdoor learning conference; a seminar at the Scottish Parliament on energy issues; a tornado in a bottle at a Celebration of Science and Engineering in Inverness; 'physics on the slopes' at Cairngorm ski centre.

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One of the posters advertising physics on buses in Glasgow in December 2010.

“We have a national office, the Institute of Physics in Scotland, for members living or working in Scotland.”

Seniors events and the Edinburgh lecture series continued to be popular with members and an important part of the programme.

Capability

The Institute employs one full-time and one part-time member of staff to work exclusively on Scottish issues, particularly focused on relations with the Scottish Parliament. One additional member of staff

was based in Scotland throughout 2010 as part of the Lab in a Lorry programme. As part of the Physics Enhancement Programme, six part-time teacher network co-ordinators are employed in Scotland, for half a day per week.

We have a national office, the Institute of Physics in Scotland, for members living or working in Scotland and a sub-committee of the Education Board specifically focused on Scottish physics educational issues.

Targets for 2011

A Manifesto for the Scottish Election will be published, which will communicate our priorities to MSPs, prospective candidates and the media. Members will be encouraged to lobby their prospective parliamentary candidates on science-related issues.

Institute of Physics in Scotland

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