

**The Institute of Physics**

Report and Financial Statements

Year Ended

31 December 2013

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This is the trustees’ annual report and financial statements for the year ended 31 December 2013 for the Institute of Physics.

The trustees have prepared this report in accordance with the Institute’s Royal Charter and Bylaws, the Charities Act 2011 and the Statement of Recommended Practice, Accounting and Reporting by Charities (SORP 2005 2nd edition).

## REVIEW OF THE YEAR

2013 has been another successful year for the Institute of Physics. We are fortunate to have an engaged membership willing to contribute to the Institute's many activities through branches and groups, and through other programmes. Our membership numbers continue to rise, with an overall increase of five percent to 50,392 and the establishment of new international branches in India, Nigeria and south-eastern USA.

In September, we launched *Opportunity Physics*, the Institute's fundraising campaign, which aims to raise £10m within the next five years to help support the important work we do for physics, and donations have now started to come in.

Physics education remains one of the Institute's main priorities. The Teacher Training Scholarships scheme made 100 awards to new trainee teachers out of 663 applications, and its success in attracting top graduates into physics has been recognised with an increase in funding for 2014. The Stimulating Physics Network continues to have a positive effect on progression to physics A -level. Our report on girls in physics was launched by the Parliamentary Under-Secretary of State for Education and Childcare, Elizabeth Truss MP, in December and attracted wide media coverage.

The Institute continues to produce publications aimed at demonstrating the value of physics to the economy and to society more widely. A series of case studies, *Transforming lives*, was launched at an event in the House of Commons. The Institute also published reports on physics in the transport industry and on the importance of physics to economic growth.

In another positive sign of recognition of the importance of physics to the future of the UK, the IOP Innovation Awards were presented by the Secretary of State for Business, Innovation and Skills, The Right Honourable Dr Vince Cable MP.

IOP Publishing remains a key part of the Institute and plays a significant role in our mission through the dissemination of leading-edge scientific research. In 2013 more than 28,000 articles were published and more than 33 journal titles recorded an increase in citations. Meanwhile, *Physics World* published a special 25th-anniversary issue in October.

In 2013 the Institute purchased a freehold property on Balfe Street, close to King's Cross station, just over a mile away from our current location in Marylebone, where we have occupied 76 and 80 Portland Place since 1995. The purchase guarantees the Institute a long-term home and a sound financial asset for the future.

The new building is part of the exciting regeneration of the King's Cross area and will be refurbished with members in mind, but will also be much more public-facing, with the space to showcase physics from academia, industry and our community outreach programmes with the arts and humanities. The Institute is planning to move into its new home at the end of 2015.

In 2013 Council began developing a new strategy and five year business plan for the Institute which will be approved in 2014. Alongside this will be a framework for prioritising our activities and rigorously reviewing performance and risk, so that we can deliver our projects and activities in a more efficient and joined-up way with a strengthened management team.

On behalf of Council I would like to thank members and staff who have all continued to provide such excellent service to the Institute as well as to physics generally.

**Professor Stuart Palmer FEng CPhys FInstP**  
**Honorary Secretary**

## REFERENCE AND ADMINISTRATIVE DETAILS

The Institute of Physics a corporate body governed by a Royal Charter and Bylaws.

It is a charity registered in England & Wales (No. 293851) and Scotland (No. SC040092). The members of Council are the trustees of the charity.

### Registered office

Institute of Physics  
76 Portland Place  
London  
W1B 1NT

### Bankers

**HSBC Bank Plc**  
62 George White Street  
Cabot Circus  
Bristol  
BS1 3BA

### Legal adviser

**Eversheds LLP**  
1 Callaghan Square  
Cardiff  
CF10 5BT

### Auditor

**BDO LLP**  
2 City Place  
Beehive Ring Road  
Gatwick  
RH6 0PA

### Investment Advisers

**Newton Investment Management Limited**  
160 Queen Victoria Street  
London  
EC4V 4CA

**Ruffer LLP**  
80 Victoria Street  
London  
SW1E 5JL

## STRUCTURE, GOVERNANCE AND MANAGEMENT

### COUNCIL (THE BOARD OF TRUSTEES)

As set out in the Royal Charter, the Institute is governed by Council which consists of 18 members elected from, and by, the corporate membership; and up to 3 co-opted members who are appointed by Council itself. The Institute's Council is its board of trustees and therefore Council members are the trustees of the charity.

Council has the ultimate responsibility for directing the affairs of the Institute, ensuring that it is solvent, well-run, and delivering the charitable outcomes for the benefit of the public for which it has been set up. Council sets and monitors the Institute's strategy which delivers these charitable outcomes.

Council currently meets four times a year, normally in January, April, July and November. All Council members give their time voluntarily and are not remunerated for their work on behalf of the Institute beyond the reimbursement of reasonable expenses.

### COUNCIL MEMBERS IN 2013

<b>President</b>	Dr Frances Saunders CB FREng CEng CPhys FInstP	From 1 Oct 2013
	Professor Sir Peter Knight FRS CPhys FInstP	Until 30 Sep 2013
<b>President-elect</b>	Professor Roy Sambles FRS CPhys FInstP	From 1 Oct 2013
	Dr Frances Saunders CB FREng CEng CPhys FInstP	Until 30 Sep 2013
<b>Honorary Secretary</b>	Professor Stuart Palmer FREng CPhys FInstP	
<b>Honorary Treasurer</b>	Professor Julian Jones OBE FRSE CPhys FInstP	
<b>Vice-president, Science</b>	Professor Tom McLeish FRS CPhys FInstP	
<b>Vice-president, Education</b>	Mr Philip Britton MBE CPhys FInstP	
<b>Vice-president, Business</b>	Professor Alison McMillan CPhys FInstP	
<b>Vice-president, Membership</b>	Dr Mike Worboys CEng CPhys FInstP	From 1 Oct 2013
	Mrs Jenny Richards CPhys FInstP	Until 30 Sep 2013
<b>Ordinary Members</b>	Mr Graham Bone MInstP	
	Professor Robert Bowman CPhys FInstP	Until 30 Sep 2013
	Dr Michael Duncan FInstP	From 1 Oct 2013
	Professor Brian Foster OBE FRS CPhys FInstP	Until 30 Sep 2013
	Dr Barbara Gabrys CPhys FInstP	From 1 Oct 2013
	Mrs Rhona Goss MInstP	Until 30 Sep 2013
	Professor James Hough OBE FRS FRSE CPhys FInstP	
	Professor Gordon Love CPhys FInstP	
	Professor Averil Macdonald CPhys FInstP	Until 30 Sep 2013
	Dr David McPhail CPhys MInstP	
	Dr Vladimir Vishnyakov MInstP	
	Dr Steven Watt CEng CPhys FInstP	
	Mrs Mary Whitehouse CPhys MInstP	
	Ms Elizabeth Whitelegg CPhys FInstP	Until 30 Sep 2013
	Dr Nicola Wilkin MInstP	Until 30 Sep 2013
Professor John Zarnecki CPhys FInstP	From 1 Oct 2013	
<b>Co-opted Members</b>	Mr Kevin Gell MInstP	
	Professor Geoff McFarland MInstP	
	Dr Ade Ogunsola CEng CPhys FInstP	

## **ELECTIONS TO COUNCIL**

The rules governing the election of Council members are set out in the Bylaws. Council members serve four year terms, with the exception of co-opted members who are appointed annually for a maximum of three years. The President serves a two-year term plus two years immediately preceding as President-elect. The Honorary Treasurer and the Honorary Secretary are eligible for election to a second four-year term.

## **INDUCTION AND TRAINING OF COUNCIL MEMBERS**

Formal induction is given to all new Council members who are invited to attend meetings with relevant Institute staff and advisers as part of the induction process. Council members are encouraged to attend recommended external training courses for charity trustees. Trustees have a legal duty to avoid conflicts of interest so that they can focus exclusively on the best interests of the Institute. The Institute maintains a register of interests which is updated annually by trustees and as any changes are reported. Procedures are in place for managing conflicts of interest that may arise during Council meetings.

## **COMMITTEES**

Council has a number of standing committees with delegated powers, thus ensuring that the required time and attention is applied to overseeing specific areas of interest. The terms of reference, delegated powers and membership of these committees are set by Council. Committee membership is not limited to Council members, thus allowing for both wider representation from the membership and receipt of specialist external advice where appropriate. Standing committees are also empowered to set up sub-committees or their own mechanisms for wider consultation. The terms of reference, delegated powers and membership of sub-committees are normally set by the parent committee. The current standing committees are:

- Senior Officers' Committee
- Resources Committee
- Audit & Risk Committee
- Remuneration Committee
- Nominations Committee
- Awards Committee
- Honorary Fellows Committee
- Membership Committee
- Science Committee
- Education Committee
- International Committee
- Diversity & Inclusion Committee

## **RISK MANAGEMENT**

Council is responsible for ensuring that proper arrangements are in place for adequate risk management and control. The Audit and Risk Committee, which meets three times a year, advises Council on these matters and has the following remit, to:

- Identify major areas of risk for Institute and its subsidiary companies and to ensure processes exist to manage risk in these areas
- Ensure risk management, internal audit and external audit processes are administered effectively
- Bring to the attention of the Council any areas of high risk and/or any anomalies brought to light through the audit process
- Be available to 'whistle blowers' regarding risk areas or audit anomalies who are not satisfied with the outcomes of the normal management processes in respect of the issues they have raised.

The Institute maintains a register of significant risks and maintains systems to control and manage them. The register is reviewed by the Audit & Risk Committee throughout the year and by Council on an annual basis. The three main risks facing the Institute are:

- Increased liabilities for the defined benefit pension scheme
- Relocation and property developments
- Decline in profit from publishing activities.

## MANAGEMENT AND STAFFING

The day-to-day management of the Institute and its activities is delegated to the group's Chief Executive, supported by an executive board of senior staff. The day-to-day management of publishing activities is further delegated to the Managing Director of IOP Publishing Ltd, one of the Institute's subsidiary companies. IOP Publishing Ltd has its own board of directors..

Overall, across the group, the Chief Executive leads a staff of 489 people.

### SENIOR MANAGEMENT TEAM IN 2013

Professor Paul Hardaker FInstP	Chief Executive
Mr Michael Bray FCMA	Group Finance Director
Mr John Brindley	Director, Membership & Business
Professor Peter Main CPhys FInstP	Director, Education & Science
Mrs Karen O'Flaherty	Group HR Director
Dr Elizabeth Taylor MInstP	Director, Communication & International Relations
Mr James Walker	Group IT Director
Mr Steven Hall	Managing Director, IOP Publishing Ltd

### VOLUNTEERS

The Institute could not achieve its charitable objectives without the commitment and hard work of our members, many of whom give freely of their time to act as committee members and volunteers to support our events and activities. The Institute wishes to thank all those who have supported it over the last year.

### STATEMENT OF TRUSTEES' RESPONSIBILITIES

Council members (who are the trustees of the Institute) are responsible for preparing the trustees' annual report and the financial statements in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice).

Charity law requires the Council to prepare financial statements for each financial year, which show a true and fair view of the state of affairs of the group and the Institute at the end of the year and of the financial activities of the group during the year then ended. In preparing those financial statements, Council is required to:

- Select suitable accounting policies and then apply them consistently;
- Make judgements and estimates that are reasonable and prudent;
- State whether applicable accounting standards and statements of recommended practice have been followed, subject to any material departures disclosed and explained in the financial statements;
- Prepare the financial statements on the going-concern basis unless it is inappropriate to presume that the charity and the group will continue in operation.

Council is required to act in accordance with the Royal Charter and Bylaws of the Institute of Physics within the framework of charity and trust law. It is responsible for keeping proper accounting records that disclose with reasonable accuracy at any time the financial position of the group and the Institute and that enable them to ensure that the financial statements comply with the Charities Act 2011 and accord with applicable accounting standards, including the Statements of Recommended Practice 2005 Accounting and Reporting by Charities. It is also responsible for safeguarding the assets of the group and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

## OBJECTIVES AND ACTIVITIES FOR THE PUBLIC BENEFIT

The object of the Institute as stated in the Royal Charter is:

- To promote the advancement and dissemination of a knowledge of and education in the science of physics, pure and applied, for the benefit of the public and the members of the Institute.

As charity the Institute must have purposes all of which are exclusively charitable (as defined by the Charities Act 2011) and are for the public benefit.

The trustees confirm that they have referred to the Charity Commission's guidance on public benefit when reviewing the Institute's aims and objectives and in planning future activities. The Institute works to advance physics research, application and education, and engages with policy makers and the public to develop awareness and understanding of physics. The public benefit which our many and varied activities provide can be summarised as follows:

- Through our support for teachers and curriculum development, by improving the quality of teaching of physics in schools and the diversity of students who are able to access the many benefits of a high quality physics education.
- Through the publication of journals, eBooks, magazines and websites, and the organisation of scientific meetings and conferences, by enabling the dissemination of high quality physics research, so that researchers and research organisations are able to reach the widest possible audience.
- By connecting physicists across all sectors to promote the application of physics and drive innovation and development of new technologies for the benefit of the economy and wider society.
- By organising an exciting programme of activities and events to engage the public and raise awareness of physics, its impact on society and the opportunities it provides for everyone.
- By ensuring the competence and ethical commitment of those practising as physicists through the regulation of professional standards and support for continuing professional development.

Provisions are in place for those on low incomes. Our membership fees are reduced or waived for students and for those from developing countries. As part of our commitment to supporting scientific research globally, we participate in a number of key programmes that offer several ways for researchers in developing countries to gain access to our journals for little or no cost. Private benefits, where they occur, are incidental and mainly consist of prizes for exceptional scientific or education achievements.

More details of many of the specific activities undertaken by the Institute to carry out its charitable purposes for the public benefit are set out in the following section on achievements and performance during the year.

The Institute's activities are focused around seven goals:

- Research
- Application
- Education
- Advocacy & awareness
- Scientific communication
- Membership
- Capability



## ACHIEVEMENTS AND PERFORMANCE DURING THE YEAR

### RESEARCH

**Our goal:** To ensure the strongest research base in physics within universities, industry and other institutions – so as to advance science and develop skilled physicists and other scientists and engineers.

Total incoming resources for this goal were £1,215k (2012: £1,010k), with expenditure of £2,407k (2012: £2,077k) to give a net expenditure of £1,192k (2012: £1,071k).

#### Performance against 2013 objectives

##### ***Produce strategic guidance for the higher education sector regarding major changes in policy and funding of research and teaching in the UK.***

The Institute published statistical bulletins on student-staff ratios and the continuation status of students and a statistical report on physics academic staff, and also published a follow-up report from YouthSight on the impact of tuition fees on prospective physics students.

The Institute submitted a report to the Higher Education Funding Council for England to inform its position on strategically important vulnerable subjects, produced an exclusive report for physics departments on research concentration in physics, and submitted several high-level consultation responses including several on the UK's open access policy, on the Triennial Review of the research councils, and on scientific infrastructure.

The Institute also published a report on the importance of physics research to economic growth, describing how it plays a crucial role in driving innovation from energy generation to novel medicines.

##### ***Provide evidence to benchmark the health and vitality of domestic physics research against international norms.***

The Institute liaised with the Science and Technology Facilities Council (STFC) to discuss implementing the recommendations from the IOP's review of UK nuclear physics, which the Science Minister, David Willetts, has taken a keen interest in. Jointly with the Engineering and Physical Science Research Council (EPSRC) and STFC, the Institute commissioned a bibliometric study to benchmark UK physics against international competitors.

##### ***Generate material to support the Institute's contribution to future Government funding reviews and in particular the Spending Review.***

A series of case studies, *Physics: Transforming Lives*, showing how physics has been instrumental in the development of everyday technologies, was produced jointly with STFC and the EPSRC, and launched at a high-profile event at the House of Commons.

The Institute submitted a response to the Department for Business, Innovation and Skills' consultation on forthcoming spending decisions for the science budget for the extended Spending Review period of 2015-6.

##### ***Organise high-level research meetings on major topical themes in physics, and increase the number of international conferences.***

The Institute hosted two high-level topical research meetings in 2013. 'The Violent Universe' was attended by 98 participants and 'Prospects in neutrino physics' by 129 participants.

The Institute successfully bid for three international conferences. The 9th International Workshop on Neutrino-Nucleus Interactions in the Few-Ge region will be held in 2014, the 28th Nuclear Physics Division Conference in 2015, and the 27th International Conference on Neutrino Physics and Astrophysics in 2016. Applications were also begun for a further three international conferences.

## APPLICATION

**Our goal:** To ensure the strongest application of knowledge in physics by industry government universities and other institutions, and the most productive links between these sectors - so as to create economic value and resolve major societal challenges.

Total incoming resources for this goal were £274k (2012: £221k), with expenditure of £828k (2012: £741k) to give a net expenditure of £554k (2012: £518k).

### Performance against 2013 objectives

#### ***Broaden engagement through the IOP Business Forum with additional meetings, topical research and external partnerships.***

Business Forum meetings took place in Sedgefield, Cardiff and Guildford on topics ranging from access to finance to the commercialisation of space technologies. The Institute developed partnerships with the National Physical Laboratory and a number of Knowledge Transfer Networks to research and develop policy recommendations to further the UK's commercialisation of graphene.

#### ***Raise the profile of the IOP Innovation Awards, increase the number and level of entries and recognition of the winners.***

The 2013 Innovation awards were presented by the Secretary of State for Business, Innovation and Skills, Vince Cable at a well-attended reception held in the House of Commons in November. The 2013 awards saw both an increased number of entries and also greater subsequent local and trade media coverage for the winners.

#### ***Develop the IOP-sponsored undergraduate work placements scheme in partnership with employers and universities.***

The work placements scheme expanded to offer a wider range of placements, and attracted a larger number of applicants, than in 2012.

#### ***Expand the series of short case studies of the use of physics in non-physics industries to show how physics solves problems, adds value and contributes to society.***

One addition was made to the case studies series with the publication of *Physics in motion*, which included the physics of the transport industry, the technology behind GPS, and fast payments such as those in Transport for London's Oyster cards. Further cases studies of companies that have derived wealth from physics were developed and included in a publication to highlight the role of physics in driving UK economic growth.

## EDUCATION

**Our goal:** To enable access for all to physics education of the highest quality – so as to develop skilled scientists and engineers, expand personal opportunities, and create an informed population for the benefit of the economy and society at large.

Total incoming resources for this goal were £2,438k (2012: £2,764k), with expenditure of £5,832k (2012: £6,006k) to give a net expenditure of £3,394k (2012: £3,242k).

### Performance against 2013 objectives

***Manage the major education projects (including those externally funded such as the Stimulating Physics Network and the IOP Initial Teacher Training Scholarships), making the case for further funding and sustainability as well as using the success from these projects to make a case for their introduction in other Nations.***

The Institute's Teacher Training Scholarships Scheme continued, and made 100 awards to new trainee teachers, from 663 applications. Its success has been recognised with increased funding for 2014 – there will now be more scholarships available, and each had a higher value.

Data from the National Pupil Database indicate that the Stimulating Physics Network is having a very positive effect on achievement at GCSE and progression to physics A-level, as well as sustainable impact even after IOP stops working with the schools. The mentoring scheme for teachers has more than 1000 early-career teachers registered, and high levels of satisfaction have been recorded. There are now 1,800 schools affiliated to IOP – a record number.

***Influence the major curriculum changes across the UK by providing advice and guidance and by lobbying Government and other relevant bodies.***

The Institute has continued to respond to public consultations on education policy and to lobby policymakers directly, and has exerted considerable influence on GCSE curriculum reforms. IOP has also established a Curriculum Committee, which will develop criteria for the curriculum at all stages of physics education, beginning with A level and Scottish (Advanced) Highers.

***Increase the extent of our work in diversity and inclusion, particularly in the area of combatting stereotyping in schools, and further expanding our education programme in developing countries.***

The Institute's Project Juno, which recognises university physics departments taking steps to address the underrepresentation of women, now has nine departments that have attained Champion status, 12 Juno Practitioners and 23 Supporters. These figures include five universities in Ireland.

The Institute's Closing Doors report, showing how the participation of girls in physics depends on the culture of the whole school, was launched in December. The report attracted a great deal of media interest as well as support from Ofsted.

***Improve links with universities on education matters and increase the impact of subject-based research in university physics departments and in schools.***

The Institute has established a Schools Outreach Officers Network, bringing together outreach officers from physics departments and government laboratories, and has strengthened its ties with SEPnet to improve schools links in the South East.

The Higher Education Fellowships scheme, which is investigating possible routes for higher-education, subject-based research, is complete and will report in 2014.

Two research fellows were appointed to lead a research project designed to foster improvements in how physics is taught in universities.

The Institute produced a new online resource for teaching quantum mechanics to undergraduates, and IOP's film series Physics Lives won a 2013 Learning on Screen Award.

## SCIENTIFIC COMMUNICATION

**Our goal:** To enable access for all involved in the physics community to professional scientific communications of the highest quality and provide assurance of their objectivity and rigour – so as to support the exchange of knowledge and facilitate scientific research, application and education.

Total incoming resources for this goal were £47,716k (2012: £44,023k), with expenditure of £37,032k (2012: £36,196k) to give a net income of £10,684k (2012: £7,827k).

### Performance against 2013 objectives

***Continue to enhance our electronic services to authors, editors, reviewers and readers through the further development of our content platform, IOPscience extra, and the replacement of our editorial management and production systems.***

The transition to our new editorial management system, ScholarOne, was completed in November 2013, and good progress has been made on replacing IOP Publishing's production system, which will be completed in 2014. IOPscience was significantly enhanced by the integration of a highly functional platform for ebooks alongside journals.

***Increase business development activities in the Americas, Asia and the Indian sub-continent to position us to increase subscription and licence sales, attract high-quality authors and win profitable partner journals.***

IOP Publishing increased business-development resources in Asia and the Americas, and signed a contract with the Japanese Society of Applied Physics to publish its two journals from 2014.

***Continue with the refinement and extension of our open-access policies, enabling us to work closely with funding agencies while maintaining income and services.***

There was substantial growth in IOP Publishing's open-access publishing in 2013, both in fully open-access journals and under the hybrid model in subscription journals. The company also agreed to include three journals in the SCOAP3 project, which seeks to convert publishing in high-energy physics to open access.

***Launch our eBooks programme.***

IOPP's new eBooks programme was launched at the Frankfurt Book Fair in October 2013, and commissioning goals for 2014 publication were met.

***Further review processes and costs to improve efficiency and decision-making.***

New and more efficient editorial processes were introduced alongside the implementation of *ScholarOne*. More efficient open access management procedures were introduced across the business.

## ADVOCACY AND AWARENESS

**Our goal:** To engage with all policy makers and the public developing awareness and understanding of the central importance of physics - so as to influence decision makers, respond to concerns, and shape the agenda.

Total incoming resources for this goal were £22k (2012: £18k), with expenditure of £2,267 k (2012: £1,996k) to give a net expenditure of £2,245k (2012: £1,978k).

### Performance against 2013 objectives

#### ***Successfully complete the series of agreed campaigns, demonstrating impact.***

During 2013, the Institute's communications continued to promote two primary campaign themes – girls in physics, and the value of physics to the economy. National and local media coverage was obtained for the report *Closing doors: Exploring gender and subject choice in schools*, published on 9 December, highlighting the issue of gender stereotyping in a number of A-level subjects including physics. The publication of a number of reports on commercial applications of physics was the focus of media activity, and two events were held in the House of Commons – the launch of *Transforming lives*, a series of case studies showing how the output of fundamental research has shaped our everyday world, and the celebration of the IOP Innovation Awards with the Secretary of State for Business and Innovation, Vince Cable.

#### ***Ensure that IOP engages with Government on the Spending Review, the Triennial Review of the Research Councils, changes to the National Curriculum, and on other key policy issues.***

The Institute submitted responses to government consultations on 30 issues during 2013, including the strategic priorities for science and research funding, the Triennial Review of the Research Councils and – generally in collaboration with other societies as part of the SCORE grouping – a range of issues relating to the national curriculum. IOP trustees and staff also met with Government Ministers and officials on these and related issues.

#### ***Obtain enhanced value from the Institute's international relationships (such as those with IUPAP, EPS and other national societies).***

Together with other national societies, the Institute has worked with the European Physical Society (EPS) during 2013 to help them enhance their role as an advocate for physics and related policy issues within the EU. EPS is planning to establish a Brussels office during 2014 to carry out this role.

#### ***Deliver an integrated approach to communications with members, Council and staff.***

Following a series of focus groups with members, a new format for The Institute's monthly electronic bulletin was introduced in September 2013. For recent issues, the proportion of members opening the bulletin has been over 31%, compared to an average of 23% for other membership newsletters. Council receives fortnightly updates in a similar format. A new strategy for internal communications was also introduced in mid-2013, and a programme of regular staff briefings is being implemented.

## MEMBERSHIP

**Our goal:** To engage with physicists from all sectors and all those interested in physics providing relevant services and opportunities to become involved in physics, attracting a larger broader and more diverse membership, and contributing to the development of the profession.

Total incoming resources for this goal were £1,510k (2012: £1,435k), with expenditure of £2,685k (2012: £2,404k) to give a net expenditure of £1,175k (2011: £969k).

### Performance against 2013 objectives

#### ***Increase membership numbers in all grades both in the UK and internationally.***

Membership increased by five percent overall, with increases in every grade. There was significant growth internationally in India and Nigeria with the establishment of IOP Branches in those countries.

#### ***Enhance major member services, improve means of communication, provide more opportunities for member involvement and lower the practical barriers to member recruitment.***

The digital newsletter for members was relaunched with a new design in September and has seen significantly increased member engagement. A new online portal for production of Branch publicity materials has been introduced. The Membership Committee is undertaking a review of all member services.

#### ***Increase the number of accredited company training schemes and entries to the Best Practice in Professional Development Awards.***

There was a 30% increase in entries for the Institute's Best Practice in Professional Development Awards and a small net increase in accredited company training schemes due to changes in the companies taking part.

#### ***Introduce more efficient membership administration processes and systems that are better placed to deal with the growth in membership and our ability to increase membership engagement.***

The new online application system has increased applications and significantly reduced processing times. The new administration database project is scheduled for delivery in April 2014.

## CAPABILITY

**Our goal:** To provide the strongest capability required for the Institute to achieve its strategic goals – including secure and diverse sources of finance, a skilled and motivated workforce, effective systems, sound governance and good principles of environmental practice.

### Performance against 2013 objectives

***Conduct a review of staff pay structures, related benefits and subsidies, to ensure pay and benefits are fit-for-purpose, proportionate, cost effective and aligned to the Institute's strategy.***

A full review of the staff benefits, and in particular the pension schemes, is in operation. As a result, the defined-benefits pension scheme is being reviewed with the pension trustees; the current defined-contributions scheme remains operational for existing staff, and a new scheme will be launched for all new staff with effect from February 2014 with lower employer contributions. A review of the remaining benefits will take place 2014.

A review of the pay structures has also been undertaken, resulting in a simplified grading structure proportionate to the Institute's size, and market-led salary scales to reflect the job market within which the Institute operates.

***Complete the implementation of the Fusion project to realise the business case benefits and efficiencies for the Institute and its membership.***

Progress on what has been a large and complicated project has been positive, if a little slower than anticipated. The new Epicor software went live as planned in January 2013 with a number of key benefits realised during the year. However, some benefits that were expected to be realised during 2013 will not now be fully realised until during the first half of 2014.

***Continue to develop and enhance efficiencies in IT through capitalising on group-wide synergies.***

IT staff continued to cooperate on the selection of technologies, including the provision of Mobile Device Management and Virtual Desktop Infrastructure, both of which will assist with more flexible working practices across the Group in the future.

***Complete the final phase of the governance review and implement its recommendations in order to improve the effectiveness of both Council and the board and committee structures.***

The recommendations of governance review and revised committee structure approved in 2012 have now been fully implemented.

***Continue to develop the in-house fundraising capability as an important strand in providing income to allow the Institute to tackle new, emerging challenges for physics, and to scale-up existing successful prototype projects in order to achieve much greater impact.***

2013 saw a high-profile launch of *Opportunity Physics*, the Institute's fundraising campaign. An active fundraising pipeline is now in operation, along with a long-term strategy to keep the momentum of the campaign alive. The first legacy strategy was also launched, and membership donations are being received, which we hope will set a precedent for the future.

## OBJECTIVES FOR 2014

Each year Council reviews its strategic implementation plan and defines a prioritised series of objectives and a budget to deliver these. The objectives for 2014 are outlined below.

### RESEARCH

- Provide bibliometric evidence to benchmark the health and vitality of domestic physics research against international norms.
- Influence Government funding policy through the production of reports on the economic significance of the UK science base, the finances of physics departments, and by responding to the Department for Business, Innovation and Skills inquiry into long-term capital investment for science and research.
- Support the creation of opportunities and resources for physicists to interface with other disciplines by engaging with the recommendations of the Maxwell review of the importance of engineering and the physical sciences to the health and life sciences.

### APPLICATION

- Improve connections between physicists in businesses and academia through an expanded IOP Business Forum, with a local, regional as well as national focus; holding meetings focussing on key enabling physics research and technology and its role in broader industrial and societal sectors.
- Support the personal development of physicists working in physics based industries, through working towards the introduction of PhysTech, and the organisation of relevant CPD activities and meetings for those already at CPhys level. These events will be planned and held regionally, and in liaison with other relevant institutions, to enable greater inclusion.
- Develop and disseminate, through the IOP Business Briefing programme, authoritative policy recommendations on how to break down the barriers to the commercialisation of physics research.
- Celebrate the successful application of physics through an increased number of entries to the IOP Innovation Awards, from all parts of the UK and Ireland, and a refreshed PhysicsWorks series focusing on the economic value of physics-based technologies.

### EDUCATION

- Develop our curriculum work so that we can provide examples of best practise for teaching that contribute to creating a world class evidence-based curriculum and assessment framework.
- Improve our data on teachers, tracking their training, professional development and career trajectory, building towards an improved professional structure and accreditation.
- Explore external funding routes, including a renewal of the Stimulating Physics Network in England and across the nations, making links with school networks and improve participation and achievement in physics qualifications.
- Work with government and other professional bodies to increase numbers entering teacher training, award 150 IOP Teacher Training Scholarships, build the network of scholars to increase our influence in the classroom and to offer peer mentoring.
- Build upon our 'girls in physics' work to initiate a suite of evidence-based pilot projects as well as extending our diversity programme to include greater focus on ethnicity, disability and socio-economic background.



## **SCIENTIFIC COMMUNICATIONS**

- Further improve services to authors through the completion of the new production system, providing even faster publication times, and the continuing development of our content platform for journals and books, providing even greater visibility and utility.
- Extend our initiatives in support of open access publication, with funders, researchers and their institutions.
- Build on the successful launch in 2013 of our three new materials science journals – Materials Research Express, 2D Materials and Translational Materials Research – to make them a natural home for researchers publishing in these fields.
- Enhance our services to other physical science societies and institutes, to become the pre-eminent publishing partner in our discipline.

## **ADVOCACY AND AWARENESS**

- Work with organisations representing other areas of science, engineering and mathematics to provide input to party manifestos in advance of the 2015 general election.
- Complete reviews of IOP's digital presence and branding in the light of the new strategy being developed for 2015-19 and agree an implementation plan.

## **MEMBERSHIP**

- Increase membership numbers across all grades and in particular grow Corporate Members by 5% and iMembers by 50% while maintaining retention rates.
- Ensure the successful renewal of our Chartered Engineer license.
- Step up the marketing of member services and benefits to existing members to ensure that every member understands the opportunities available to engage with the Institute and utilise those services and benefits.
- Introduce a new membership database and fully implement an online application system for all membership grades to allow us to process applications and subscriptions more efficiently and effectively.
- Focus IOP funded undergraduate work placement bursaries on SMEs and universities but work with other employers to promote their paid work placements to undergraduates.
- Add a range of 'round table' careers events to the existing programme of showcase evenings.

## **CAPABILITY**

- Complete the implementation of the Institute's new finance system.
- Introduce a new executive structure based more directly on programme management, and implement a new appraisals process and deliver a management development programme against the new competency framework.
- Review and implement a refresh of our current IT infrastructure to deliver greater efficiencies and ensure that it meets the requirements of the organisation in light of the move to new premises in 2015.
- Continue to develop the in-house fundraising capability as an important strand in providing income to allow the Institute to tackle new, emerging challenges for physics, and to scale-up existing successful prototype projects in order to achieve much greater impact.

## MEMBER ACTIVITIES IN OUR GROUPS AND BRANCHES

All IOP members have the opportunity to get involved in the Institute's activities through their local Branch or through specialist subject-interest Groups. The Groups and Branches are listed on the IOP website.

### Groups

The Institute has 49 Groups covering a wide variety of subjects and interests.

One of the larger meetings in 2013 was the biennial EMAG conference, organised by the Electron Microscopy and Analysis Group and held at the University of York. The four-day event was attended by more than 180 people and featured opportunities for young researchers to present their work through both symposia and poster sessions. There was once again a large trade exhibition to showcase developments in microscopy and nanotechnology, and there was a special symposium marking the 80th birthday of Professor Archie Howie and focusing on in-situ microscopy.

The Plasma Physics Group continued their Spring Conference series organising its 40th meeting, also in York, which was attended by more than 100 people. Invited speakers included Clive Challis and Timo Gans, as well as the winner of the Culham Thesis Prize, Charlotte Palmer. The conference also had a comprehensive social programme including the dinner held at the National Railway Museum.

The Higher Education Group continued their 'Teaching of...' series of workshops this year with a meeting on the teaching of environmental physics, organised jointly with the IOP Environmental Physics Group and supported by the Higher Education Academy. The meeting focused on ways to include environmental physics into degree programmes, with teaching staff from institutions in the UK and the US sharing practical examples and experiences of teaching environmental to help promote good practice of teaching in this area.

The Nuclear Industry Group hosted an evening lecture titled 'PRISM reactor – Generating low carbon electricity from the UK's plutonium stockpile', given by David Powell, a vice-president at GE Hitachi. The event proved to be so popular that the lecture, originally given in London was repeated a few months later in Warrington.

### Branches

The Institute operates locally throughout the UK and Ireland through a network of member-led Branches and through its National and Regional Officers.

#### Highlights in 2013

The East Midlands Branch sponsored a student to attend the UK Astrobiology Academy, a NASA-affiliated residential course for 16–18-year-olds based at the University of Edinburgh, at which participants compete for a six-week placement at NASA's Ames Research Centre.

The East Anglia Branch held a three-day event, 'Physics at Work', together with the University of Cambridge, aimed at stimulating interest and encouraging wider participation in physics amongst 14–16 year olds by showcasing the many and varied ways in which physics is used in the real everyday world. The event attracted companies and schools from across the UK.

The Manchester Branch hosted a performance of musical comedy *Albert Einstein – Relatively Speaking* as part of the Manchester Science Festival.

A public lecture was given at the University of Leeds by Nigel Macknight, who is aiming to set a new water-speed record.

The South Central Branch and the University of Surrey's physics society took a group of 18 students to visit the Large Hadron Collider at CERN.

Physics in the Field events took place in 28 different venues during 2013, taking physics demonstrations to outdoor festivals and helping to engage an audience that doesn't typically encounter the discipline. More than 26,000 people were reached through these events, and this was made possible by more than 250 branch volunteers.

## **Scotland**

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 during 2013 as part of the Lab in a Lorry programme. As part of the Physics Enhancement Programme seven teacher network co-ordinators are employed in Scotland, as well as a Scottish Education Manager.

We have a national branch, 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-education issues. Of a total membership of more than 50,000, around 2,800 members are based in Scotland, while 124 schools in Scotland are part of the Institute's Affiliated Schools programme.

A separate annual report for IOP Scotland is available from [iopscotland.org](http://iopscotland.org).

### Highlights in 2013

Alex Salmond, Scottish First Minister, visited the Institute's Lab in a Lorry at Meldrum Academy.

A Glasgow-based company, Coherent Scotland Ltd, was one of the winners of IOP's Innovation Awards for its development of a laser system that is transforming doctors' and biologists' ability to take quick and accurate medical images.

A series of school talks and public lectures was given by former NASA shuttle pilot Duane Carey in September.

IOP Scotland responded to a number of policy consultations, including Scottish Science Council's consultation on the possible implications that Scottish independence may have for science and engineering.

At a meeting of key influencers in Edinburgh, convened in association with Scottish Council for Development and Industry, representatives of IOP Scotland discussed the current and future strengths of the photonics sectors in Scotland.

## **Wales**

IOP Wales has more than 1,000 members and employs one full-time and one part-time member of staff. Three physics network co-ordinators are also based in Wales.

### Highlights in 2013

IOP Wales participated in the annual 'Science in the Assembly' event at the Welsh Assembly, including a presentation from Wendy Sadler about the STEM agenda in Wales and the gender imbalance in physics.

The Institute was awarded a competitive grant from the Welsh Government's National Science Academy to run Lab in a Lorry during April to June. We engaged with 2933 pupils from 16 schools all over the country. As a result of this successful tour, we applied for and won another grant to run a longer second tour from January 2014 – March 2015, aiming to visit 60 schools and 12,000 pupils.

The 12th annual Welsh Physics Teachers Conference, organised by the Welsh IOP Teachers' Network, took place in Brecon in October. The conference included a range of lectures and workshops, and was opened by Ceri Brenner discussing her work with super-high-power lasers.

IOP Wales was among the sponsors of the Semiconductor and Integrated Optoelectronics conference at Cardiff University.

In March the Institute launched the 'Importance of physics to the Welsh economy' report at the Senedd, home of the Welsh National Assembly.

### **Ireland and Northern Ireland**

IOP Ireland, with a membership of more than 2,000, represents physics in both Ireland and Northern Ireland. It is active in education, outreach and policy matters in both jurisdictions, with five teacher network co-ordinators working closely with government agencies to support professional development, and two consultants providing input across a range of activities.

Annual events include awarding medals to the top students in Leaving Certificate and GCE physics, and the Rosse Medal for the best postgraduate communicator of physics research, the schools Tyndall lecture tour, which attracts hundreds of students to a range of venues across the island, the IOP exhibition at the BT Young Scientist Competition, the physics teachers Frontiers conference and the colleges lecture programme.

#### Highlights in 2013

IOP Ireland exhibited at the annual 'Science at Stormont' event, attended by around 80 scientists and policymakers.

A physics teachers' evening was held at the Northern Ireland Science Park looked at links between physics teaching and the development of a knowledge-led economy in Northern Ireland.

At an event in Dublin organised by Women in Science and Technology featured former IOP President Jocelyn Bell Burnell, who commented on worrying figures on the proportion of women who leave science after graduating.

There was a small increase in the number of students choosing to take the Leaving Certificate course in physics; applications for university physics courses have also now risen by 17% over the past five years.

Campaigning from the Institute saw a partial restoration of Ireland's science funding following a severe cut.

## **SUBSIDIARY COMPANIES**

The Institute has five subsidiary companies.

- IOP Publishing Ltd
- IOP Publishing Inc.
- IOP Enterprises Ltd
- IOP Business Publishing Inc. (a subsidiary of IOP Publishing Inc.)
- IOP Educational Publishing Ltd (a subsidiary of IOP Publishing Ltd)

The three main subsidiary companies are directly owned and controlled by the Institute which is the sole shareholder. The two second-tier subsidiary companies are owned and de facto managed by the respective parent company, although the ultimate parent undertaking and controlling entity for both is the Institute.

### **IOP PUBLISHING LIMITED (IOPP)**

IOP Publishing Ltd is a wholly owned subsidiary of the Institute and has its registered office at Temple Circus in Bristol.

The principal activity of IOP Publishing Ltd is the publication and distribution of high-quality scientific journals and magazines.

### **IOP ENTERPRISES LTD (IOPE)**

IOP Enterprises Ltd is a wholly owned subsidiary of the Institute and has its registered office at the Institute's headquarters in London. Its principal activity is to promote the use of the events, catering and room hire facilities at the Institute's headquarters, and to organise exhibitions, courses and conferences.

### **IOP PUBLISHING INC.**

IOP Publishing Inc. is a not-for-profit corporation of which the Institute is the sole corporate member. It is incorporated in the USA with its principal place of business at 150 South Independence Mall West, Suite 929, Philadelphia. The principal activity of IOP Publishing Inc. is the sale and distribution of scientific journals and magazines.

### **IOP BUSINESS PUBLISHING INC.**

IOP Business Publishing Inc. is a wholly owned subsidiary of IOP Publishing Inc. It is incorporated in the USA with its principal place of business at 150 South Independence Mall West, Suite 929, Philadelphia. The principal activity of IOP Business Publishing Inc. is to provide advertising sales services.

### **IOP EDUCATIONAL PUBLISHING LTD**

IOP Educational Publishing Ltd is a wholly owned subsidiary of IOP Publishing Limited and has its registered office at Temple Circus in Bristol. The company is currently dormant and is not trading.

## FINANCIAL REVIEW

### FINANCIAL STATEMENTS

The financial statements for the year ended 31 December 2013 are set out on pages 26–48. These were prepared applying the accounting policies and comply with the Statement of Recommended Practice, Accounting and Reporting by Charities (SORP 2005 2nd edition).

### FUNDING SOURCES

The majority of the Institute's incoming resources from charitable activities are generated from the activities of its trading subsidiary, IOP Publishing Limited. Other significant sources of income include income from members either as membership fees or for additional services, grants from government and other grant-awarding bodies, and from IOP Enterprises Ltd, a smaller trading subsidiary.

Total incoming resources in the year were £63.1m (2012: £53.1m).

### TRADING SUBSIDIARIES

#### IOP Publishing Limited (IOPP)

The turnover for the year to 31 December 2013 was £48.6m (2012: £46.5m). The company will remit to the Institute of Physics, by gift aid, the sum of £12.3m (2012: £10.9m).

As the publishing arm of the Institute, IOP Publishing's role is to provide high-quality publishing services to the global scientific community, helping researchers to communicate their work effectively. IOPP also gift-aids its net profit to the Institute, enabling the latter to fulfil its wider mission.

In 2013 there was a strong focus on improving author services by implementing a new editorial management system, expanding our product portfolio through new launches and partnerships, and continuing to evolve how we do business in order to respond to changes in scholarly communications.

#### **Ebooks**

In October 2013, IOPP unveiled both the company's new eBooks platform and the first two published titles from the series at [iopscience.iop.org/books](http://iopscience.iop.org/books).

Two initial collections were announced in 2013: *IOP Expanding Physics*<sup>™</sup> and *IOP Concise Physics*<sup>™</sup> (the latter produced in partnership with Morgan & Claypool Publishers). There were 35 books commissioned for publication in 2014.

The eBooks platform has received much praise for its innovation. It provides multiple options for reading on different devices (HTML, PDF and ePub3) and includes embedded multimedia, interactive charting and MathML. It has also been fully integrated with IOPscience making it possible for researchers to search across journal, magazine and book content.

#### **Journals**

In 2013 IOPP journals published more than 28,000 articles.

The company also successfully completed the transition to a new editorial management system, ScholarOne Manuscripts. This change was made to support the continuing growth in submissions to journals, and to provide publishing partners, and authors and referees, with the best possible experience during the peer-review process.

The new editorial system also enables authors to include their ORCID<sup>®</sup>s with submissions. ORCID is an acronym for Open Researcher and Contributor ID system. The goal of the ORCID project is clearly to attribute scholarly output to an individual, by giving each researcher a unique identifier that will stay with them regardless of changes of name, job role or institution. IOP Publishing is a platinum sponsor of the project.

We have also worked with the American Astronomical Society (AAS) to launch the Astronomy Image Explorer service, designed to aid researchers in their discovery and use of all types of graphic resources and available free online to scientists and the public alike.

In January 2013, IOPP jointly announced with colleagues at the American Institute of Physics the gift of a new astronomy thesaurus called the Unified Astronomy Thesaurus to the AAS. Its creation is a result of the combination of two separate initiatives to develop thesauri as part of semantic enrichment projects. The donation to the AAS will help improve future information discovery for researchers.

### ***New launches and partnerships***

In June 2013 IOPP announced a new partnership with the Japan Society of Applied Physics for the publication of Applied Physics Express and the Japanese Journal of Applied Physics. As a result of this agreement, these two prestigious English-language journals, which collectively publish more than two thousand articles, reviews and letters a year, will be published from 2014 under a partnership arrangement for the first time in their history.

Over the course of the year we launched four new journals in the field of materials science, Surface Topography: Metrology and Properties, Translational Materials Research, 2D Materials and Materials Research Express. These new additions bring the total number of journals published by IOPP to more than 70. The IOPscience database now contains more than 530,000 articles.

IOPP also renewed its publishing partnership with the National Institute for Materials Science for the continued publication of the open access journal Science and Technology of Advanced Materials.

In May, IOPP launched a new online service called Physics Connect on physicsworld.com. The new service helps anyone planning a scientific or engineering project to source products, services and expertise from both commercial suppliers and research institutes.

### ***Measuring impact and usage***

Impact Factors continue to be used as an important measure of the influence and prestige of a journal. This year's Impact Factor results for journals published by IOPP once again showed a significant growth in citations – 33 titles had an increase in citations from last year, and 26 of these had an increase of more than five per cent. Just over half of IOP's journals have Impact Factors above 2.000.

Alternative measures at an article level are also becoming important. IOPP launched article-level metrics in 2012. In addition to the increase visibility through new channels such as social media, the number of articles downloads, another way to measure usage and impact, also increased by 7.8%.

### ***Physics World***

It was a milestone year for Physics World, which notched up 25 years as the members' magazine of the Institute. The event was marked by a 25th-anniversary issue in October, featuring the editorial team's choice of the top five discoveries in physics over the last quarter century, the top five spin-offs, as well as the top five unanswered questions, images and people in physics. The digital version also included three videos on physics spin-offs. Meanwhile, the magazine's website, physicsworld.com, hosted a set of five physics puzzles created by the UK Government Communication Headquarters, which were successfully completed by almost 10,000 people. Physics World also published five successful technology-related focus issues in 2013 as well as a special report on physics in the Republic of Korea.

### ***Open access***

Open access remains the biggest driver for change in the scholarly publishing landscape. IOP Publishing has always been committed to providing long term, sustainable access to quality scientific research for everyone, while maintaining high value, trustworthy author and reader services that enhance scientific communication and progress. In 2013, nearly 30% of the new research we published was made available on an immediate open access basis.

All of IOPP's wholly owned titles and many partner titles continue to be available at no or very low cost to developing nations.

In October, we introduced a new referee reward scheme designed to recognise the contribution made by reviewers to the peer-review process. Under the new programme, referees will be granted a 10% credit towards the cost of publishing on a gold open access basis.

In December we signed the contracts to confirm the participation of three of our journals in SCOAP (Sponsoring Consortium for Open Access Publishing in Particle Physics). The journals are the Chinese Physics C, Journal of Cosmology and Astroparticle Physics and New Journal of Physics.

Under the terms of this agreement, authors of qualifying high-energy physics articles in these journals will be able to publish on an open access basis without paying any fee. The article publishing charges will be paid by the SCOAP consortium using funds redirected from library subscription budgets.

In June we endorsed CHORUS (the Clearinghouse for the Open Research of the United States), which is a publisher-led solution for the Federal Agencies who are required to implement the US government's public access policy announced in February 2013.

### **IOP Enterprises Ltd (IOPE)**

The turnover for the year to 31 December 2013 was £1.9m (2012: £1.8m). The company will remit to the Institute of Physics, by gift aid, the sum of £296k (2012: £431k).

During 2013, IOP Enterprises delivered an increased turnover of £1.9m, compared with £1.8m during the previous year.

Highlights from 2013 included the introduction of Molecular Tasting Menus, the result of months of experimentation in our kitchens, pushing the boundaries of event catering in terms of innovation and sustainability. We launched a Real Food campaign to promote the importance of locally sourced food to our clients and event organisers.

The venue at 76 Portland Place received the silver award from Green Business Tourism, the first independently audited green accreditation scheme for the meeting industry in London.

As the Institute vacated 76 Portland place in March 2014 ahead of a move to new premises in 2015, IOPE is reviewing its operations and opportunities to increase its gift-aid contribution to the Institute.

### **RESERVES AND INVESTMENT**

The Charter and Bylaws confer power on the Institute to maintain income reserves. Council reviews at least annually both the Institute's continuing need for reserves and their appropriate level. The reserves policy set out below is based on and consistent with guidelines on the subject issued by the Charity Commission.

The strategic reasons for the Institute to retain reserves, rather than simply spend all of its income as it arises, are, as stated in the Investment Policy:

- To be able to make short- and medium-term expenditure commitments without the risk of short-term fluctuations in income forcing reduction in, or cancellation of, planned activity;
- To reduce the level of dependence on income from publishing; and
- In the event of a material and sustained fall in income from other sources, to provide sufficient reserves to enable the Institute to make the changes in its organisation and activities necessary to respond to this in an orderly and planned way.

The overall investment objectives of the Institute are to achieve a minimum net total return of 12 month LIBOR +3.5%, after payment of fees over rolling three-year periods, using a diversified strategic asset allocation approach to minimise the risk for this level of return.



During the year the investments held by the Institute generated gains of £1.6m (2012: £363k). In spite of these gains, the total market value of investments held decreased from £19.5m as at 31 December 2012 to £18.4m as at 31 December 2013 due to the sale of £3m of investments in order to fund the property purchase in the year.

Council has considered the level of reserves appropriate to meet the above purposes and has determined that total reserves should ideally be of the order of three years of planned expenditure, excluding projects funded by external grants or fees (on the basis that fee-based activities such as conferences would not continue if no attendees were attracted). The required level of reserves on 31 December 2013 based on the current long-term plan, as modified by the 2014 budget, is approximately £35m. On this basis, current reserves are slightly in excess of the required level although (because of the sale of the leases during the year) this is a rather artificial position.

Council will undertake a significant review of its reserves policy in 2014.

The current level of unrestricted reserves is £45.6m (2012: £33.6m) before taking account of the pension deficit of £8.7m (2012: £14.5m). Due to the extremely long-term nature of the pension reserve, the unrestricted reserves excluding the pension deficit are considered a more appropriate measure.

## **ETHICAL INVESTMENT POLICY**

The Institute is a charity established with the objective of promoting the advancement and dissemination of a knowledge of and education in the science of physics, pure and applied.

The trustees would not want the investment decisions of the Institute to result in activities that compromise this objective. In the event that the trustees consider that any particular classes of investment choices conflict with this objective, they will provide a written list of such classes, or specific investments, to the investment managers and will require them to take such steps as are practicable and cost-effective so as not to invest in these areas.

## **FUNDS**

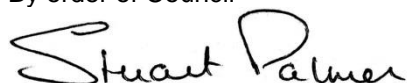
The balances on the individual funds of the Institute at 31 December 2013 are considered adequate to meet their respective commitments.

## **AUDITORS**

A resolution to appoint BDO LLP as auditors will be proposed at the next annual general meeting.

All of the current trustees have taken all of the steps necessary to make themselves aware of any information needed by the charity's auditors for the purpose of their audit and to establish that the auditors are aware of that information. The trustees are not aware of any relevant audit information of which the auditors are unaware.

By order of Council



**Professor Stuart Palmer**  
**Honorary Secretary**

76 Portland Place  
London  
W1B 1NT

## INDEPENDENT AUDITOR'S REPORT

We have audited the financial statements of The Institute of Physics for the year ended 31 December 2013 which comprise the Group Statement of Financial Activities, the Group and Parent Charity Balance Sheets, the Group Cash Flow Statement and the related notes. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice).

This report is made solely to the charity's trustees, as a body, in accordance with the Charities Act 2011 and the Charities and Trustee Investment (Scotland) Act 2005. Our audit work has been undertaken so that we might state to the charity's trustees those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the charity and the charity's trustees as a body, for our audit work, for this report, or for the opinions we have formed.

### Respective responsibilities of trustees and auditor

As explained more fully in the Statement of Trustees' Responsibilities, the trustees are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view. We have been appointed as auditor under section 44(1)(c) of the Charities and Trustee Investment (Scotland) Act 2005 and under section 144 of the Charities Act 2011 and report in accordance with regulations made under those Acts. Our responsibility is to audit and express an opinion on the financial statements in accordance with applicable law and International Standards on Auditing (UK and Ireland). Those standards require us to comply with the Financial Reporting Council's (FRC's) Ethical Standards for Auditors.

### Scope of the audit of the financial statements

A description of the scope of an audit of financial statements is provided on the FRC's website at [www.frc.org.uk/auditscopeukprivate](http://www.frc.org.uk/auditscopeukprivate).

### Opinion on financial statements

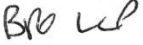
In our opinion the financial statements:

- give a true and fair view of the state of the group's and the parent charity's affairs as at 31 December 2013 and of the group's incoming resources and application of resources for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Charities Act 2011, the Charities and Trustee Investment (Scotland) Act 2005 and regulations 6 and 8 of the Charities Accounts (Scotland) Regulations 2006 (as amended).

### Matters on which we are required to report by exception

We have nothing to report in respect of the following matters where the Charities Act 2011 and the Charities Accounts (Scotland) Regulations 2006 (as amended) requires us to report to you if, in our opinion:

- the information given in the Trustees' Annual Report is inconsistent in any material respect with the financial statements; or
- proper and sufficient accounting records have not been kept; or
- the parent charity financial statements are not in agreement with the accounting records or returns; or
- we have not received all the information and explanations we require for our audit.

  
**BDO LLP**  
*Statutory Auditor*  
Gatwick, United Kingdom  
Date: 20 June 2014

BDO LLP is eligible to act as an auditor in terms of section 1212 of the Companies Act 2006. BDO LLP is a limited liability partnership registered in England and Wales (with registered number OC305127).

**CONSOLIDATED STATEMENT OF FINANCIAL ACTIVITIES INCORPORATING AN  
INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 DECEMBER 2013**

	<b>Note</b>	<b>2013</b> Restricted £'000	<b>2013</b> Unrestricted £'000	<b>2013</b> <b>Total</b> <b>£'000</b>	<b>2012</b> <b>Total</b> <b>£'000</b>
<b>Incoming resources</b>					
Incoming resources from generated funds					
Voluntary income		51	-	<b>51</b>	6
Activities for generating funds		-	3,315	<b>3,315</b>	3,314
Investment income		-	437	<b>437</b>	358
Incoming resources from charitable activities					
Research		1	1,214	<b>1,215</b>	1,010
Application		-	274	<b>274</b>	221
Membership		-	1,510	<b>1,510</b>	1,435
Education		293	2,145	<b>2,438</b>	2,764
Advocacy and Awareness		-	22	<b>22</b>	18
Scientific Communications including share of incoming resources of joint venture		-	47,716	<b>47,716</b>	44,023
Other incoming resources					
Profit on disposal of property	<b>9</b>	-	7,325	<b>7,325</b>	-
Other incoming resources			20	<b>20</b>	-
Less: share of incoming resources of joint venture	<b>10</b>	-	(1,270)	<b>(1,270)</b>	-
<b>Total incoming resources</b>		<b>345</b>	<b>62,708</b>	<b>63,053</b>	<b>53,149</b>
<b>Resources expended</b>					
Cost of generating funds					
Fundraising trading cost		-	(1,070)	<b>(1,070)</b>	(1,242)
Investment management costs		-	-	<b>-</b>	(31)
Charitable activities					
Research	<b>2</b>	(107)	(2,300)	<b>(2,407)</b>	(2,077)
Application	<b>2</b>	-	(828)	<b>(828)</b>	(740)
Membership	<b>2</b>	-	(2,685)	<b>(2,685)</b>	(2,397)
Education	<b>2</b>	(383)	(5,449)	<b>(5,832)</b>	(5,997)
Advocacy and Awareness	<b>2</b>	-	(2,267)	<b>(2,267)</b>	(1,988)
Scientific Communications	<b>2</b>	-	(37,032)	<b>(37,032)</b>	(36,193)
Governance	<b>4</b>	-	(453)	<b>(453)</b>	(470)
Other resources expended		-	(7)	<b>(7)</b>	(39)
<b>Total resources expended</b>		<b>(490)</b>	<b>(52,091)</b>	<b>(52,581)</b>	<b>(51,174)</b>
<b>Net incoming resources</b>		<b>(145)</b>	<b>10,617</b>	<b>10,472</b>	<b>1,975</b>
<b>Net interest in results for the year of joint venture</b>		-	230	<b>230</b>	-
<b>Other recognised gains/losses</b>					
Gains on investments (realised)	<b>11</b>	-	149	<b>149</b>	881
Gains / (losses) on investment (unrealised)	<b>11</b>	-	1,427	<b>1,427</b>	(518)
Actuarial gains/ (losses) on defined benefit pension	<b>18</b>	-	5,380	<b>5,380</b>	(1,119)
Exchange difference on retranslation of net assets of subsidiary undertakings		-	12	<b>12</b>	-
<b>Net movement in funds</b>		<b>(145)</b>	<b>17,815</b>	<b>17,670</b>	<b>1,219</b>
Fund balances brought forward	<b>18</b>	732	19,112	<b>19,844</b>	18,625
<b>Fund balances carried forward</b>	<b>18</b>	<b>587</b>	<b>36,927</b>	<b>37,514</b>	<b>19,844</b>

All amounts relate to continuing activities. All gains and losses recognised in the year are included above. The notes on pages 29 to 48 form part of these financial statements.

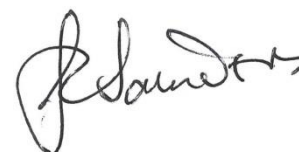
## BALANCE SHEET AT 31 DECEMBER 2013

	Note	Group 2013 £'000	Group 2012 £'000	Charity 2013 £'000	Charity 2012 £'000
<b>Fixed assets</b>					
Tangible assets	9	16,424	13,618	11,574	8,754
Investments in subsidiary undertakings	10	-	-	3,001	3,001
Investment in joint venture	10	-	244	-	-
Share of gross assets of joint venture		1,727	-	-	-
Share of gross liabilities of joint venture		(1,467)	-	-	-
Share of net assets of joint venture	10	260	-	-	-
Investments	11	18,380	19,800	18,380	19,800
		<b>35,064</b>	<b>33,662</b>	<b>32,955</b>	<b>31,555</b>
<b>Current assets</b>					
Stocks and work in progress	12	5	22	-	15
Debtors	13	21,451	8,951	13,643	1,402
Cash at bank and in hand	14	14,015	14,155	4,232	6,790
		<b>35,471</b>	<b>23,128</b>	<b>17,875</b>	<b>8,207</b>
<b>Creditors: amounts falling due within one year</b>	15	<b>(23,316)</b>	<b>(21,826)</b>	<b>(2,996)</b>	<b>(3,881)</b>
<b>Net current assets</b>		<b>12,155</b>	<b>1,302</b>	<b>14,879</b>	<b>4,326</b>
<b>Provisions</b>	16	<b>(1,042)</b>	<b>(656)</b>	<b>(1,042)</b>	<b>(656)</b>
<b>Pension scheme funding deficit</b>	17	<b>(8,663)</b>	<b>(14,464)</b>	<b>(8,663)</b>	<b>(14,464)</b>
<b>Net Assets</b>		<b>37,514</b>	<b>19,844</b>	<b>38,129</b>	<b>20,761</b>
<b>Restricted funds</b>					
Restricted funds	18	587	732	587	732
<b>Unrestricted funds</b>					
General fund	18	45,590	33,576	46,205	34,493
Pension reserve	19	(8,663)	(14,464)	(8,663)	(14,464)
<b>Total charity funds</b>		<b>37,514</b>	<b>19,844</b>	<b>38,129</b>	<b>20,761</b>

These financial statements were approved by Council and authorised for issue on **9 June 2014** and were signed on its behalf by

**Dr Frances Saunders CB FREng CEng CPhys FInstP**

**President**



**Professor Julian Jones OBE FRSE CPhys FInstP**

**Honorary Treasurer**



The notes on pages 29 to 48 form part of these financial statements.

**CONSOLIDATED CASH FLOW STATEMENT FOR THE YEAR ENDED  
31 DECEMBER 2013**

	Note	2013 £'000	2013 £'000	2012 £'000	2012 £'000
<b>Net cash inflow from operating activities</b>	<b>20</b>		<b>6,646</b>		<b>2,887</b>
<b>Dividends from joint ventures</b>	<b>23</b>		<b>214</b>		<b>-</b>
<b>Capital expenditure and financial investment</b>					
Purchase of tangible fixed assets		(11,346)		(2,981)	
Disposals of tangible fixed assets		1,350		37	
Purchase of investments		(8)		(20,229)	
Sale of investments		3,004		20,180	
			<b>(7,000)</b>		<b>(2,993)</b>
<b>Management of liquid resources</b>					
Decrease in cash on term deposit	<b>14</b>		<b>1,500</b>		<b>1,500</b>
Increase in cash on investments	<b>11</b>		<b>-</b>		<b>(330)</b>
<b>Increase in cash</b>	<b>21</b>		<b>1,360</b>		<b>1,064</b>

The notes on pages 29 to 48 form part of these financial statements.

## NOTES FORMING PART OF THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2013

### 1 Accounting policies

The financial statements have been prepared under the historical cost convention, as modified by the revaluation of investments, and are in accordance with applicable accounting standards and the Statement of Recommended Practice, Accounting and Reporting by Charities (the SORP 2nd edition) published in March 2005.

#### *Basis of consolidation*

The consolidated financial statements incorporate the results of the Institute of Physics and all its subsidiary undertakings as at 31 December 2013 using the acquisition method of accounting. Under this method, the results of subsidiary undertakings acquired or disposed of are included in the consolidated profit and loss account from the date of acquisition or up to the date of disposal.

The Institute of Physics has a network of member-led branches. The income and expenditure of these branches is accounted for as part of the charity's own accounts.

A separate Statement of Financial Activities for the charity itself is not presented as allowed by paragraph 397 of SORP 2005 2nd edition. The income of the parent charity was £14,464k (2012: £6,612k) and the expenditure was £17,261k (2012: £16,819k). During the year the Institute sold its leasehold interest in 76 Portland Place and 80 Portland Place generating a profit on disposal of £7.3m which has been recognised as income for the year ended 31 December 2013.

#### *Joint Ventures*

An entity is treated as a joint venture where the group holds a long term interest and shares control under a contractual agreement.

In the group accounts, interests in joint ventures are accounted for using the gross equity method of accounting. The consolidated profit and loss account includes the group's share of the joint venture's turnover and includes the group's share of the operating results, interest, pre-tax results and attributable taxation of such undertakings based on unaudited financial statements. In the consolidated balance sheet, the group's share of the identifiable gross assets (including any unamortised premium paid on acquisition) and its share of the gross liabilities attributable to its joint ventures are shown separately.

#### *Fixed assets and depreciation*

Assets with a value less than £500 are not capitalised.

The value of leasehold property is amortised over the remaining periods of the relevant leases.

Temple Circus, Bristol (expires 2021)

The freehold property which was purchased during the year has not yet been brought into use and is therefore not being depreciated.

Depreciation is provided to write off the cost or valuation less the estimated residual value of tangible fixed assets by equal instalments over their estimated useful economic lives as follows:

Office machinery	-	4 - 5 years
Fixtures and fittings	-	4 - 10 years
Computers	-	3 - 4 years

#### *Investments*

Investments are included in the balance sheet at the value of the individual unitised holdings. Gains and losses are included in general reserves.

#### *Income*

Income is recognised when receivable, net of VAT if applicable. Membership income is recognised when received and attributed to the financial years to which it relates. Sundry income is recognised when received. Income from production of in-house and external partner journals with a majority of the income received in advance is recognised in line with the fair value of content delivered. Other income streams include fees received for publishing articles recognised upon publication, and sales of access to historic archives recognised upon invoice, when permanent access is granted.

#### *Institute of Physics Retirement Benefits Plan 1975*

The Institute operates the Institute of Physics Retirement Benefits Plan 1975 providing pension benefits based on final pensionable pay. This scheme was closed to new members on 31 December 2001. The assets of the scheme are held separately from those of the group in an independently administered fund. This defined benefit scheme is accounted for in accordance with FRS 17 'Retirement Benefits'. The service cost of pension provision relating to the year, together with the cost of any benefits relating to past service if the benefits have vested, is charged to the statement of financial activities. A charge equal to the increase in the present value of the scheme liabilities (because the benefits are closer to settlement) and a credit equivalent to the group's long term expected return on assets (based on the market value of the scheme assets at the start of the year), are also included in the statement of financial activities.

The difference between the market value of the assets of the scheme and the present value of the accrued pension liabilities is shown as an asset or liability on the balance sheet. Any differences between the actual and expected return on assets during the year are recognised in the statement of financial activities along with differences arising from experience or assumption changes.

Contributions to the group's defined contribution pension scheme are charged to the statement of financial activities in the year in which they become payable.

#### *Institute of Physics Group Personal Pension Scheme*

A group personal pension scheme was established from 1 January 2002. This is a defined contribution pension scheme with assets held in the names of the individual members and managed by Standard Life Assurance Co Ltd. For those members of staff who choose to join the scheme the Institute contributes 10% of basic salary. The contributions are charged to the statement of financial activities as incurred.

#### *Foreign currencies*

Foreign currency transactions of individual companies are translated at the average rates of exchange during the period. Foreign currency monetary assets and liabilities are translated at the year-end spot rate unless subject to a foreign exchange contract, in which case they are translated at the appropriate contracted rate. Any differences are taken to general reserves.

#### *Foreign currencies (continued)*

The results of overseas operations are translated at the average rates of exchange during the year and the balance sheet translated into sterling at the rate of exchange ruling on the balance sheet date. Exchange differences which arise from translation of the opening net assets and results of foreign subsidiary undertakings are taken to reserves.

#### *Fund accounting*

General funds are unrestricted funds which are available for use at the discretion of the trustees in furtherance of the objectives of the charity and which have not been designated for other purposes.

Restricted funds are funds which are to be used in accordance with specific restrictions imposed by the donors. The aim and use of each restricted fund is set out in the notes to the financial statements.

#### *Resources expended*

All expenditure is accounted for on an accruals basis and has been classified under headings that aggregate all costs related to the category. Where costs cannot be directly attributed to particular headings they have been allocated to activities on a basis consistent with use of the resources. Support costs, such as general management, payroll administration, information technology, human resources and financing, are allocated across the categories of charitable expenditure, governance costs and the costs of generating funds. The basis of the cost allocation has been explained in note 3 to the accounts.

#### *Governance costs*

Governance costs are the costs associated with the governance arrangements of the charity which relate to the general running of the charity as opposed to those costs associated with fundraising or charitable

activity. Included within this category are costs associated with the strategic as opposed to day-to-day management of the charity's activities.

*Stock and work in progress*

Raw materials, work in progress and publications are valued at cost. Specific provision has been made, where necessary, to reduce the value of work in progress and publications to net realisable value.

*Liquid resources*

For the purposes of the cash flow statements, liquid resources are defined as current asset investments and short term deposits.

*Operating leases*

Rentals payable under operating leases are charged through the statement of financial activities on a straight-line basis over the terms of the leases.



## 2 Expenditure on charitable activities

	Activities undertaken directly £'000	Grant funding activities £'000	Support costs £'000	2013 £'000	2012 £'000
Research	1,673	-	734	2,407	2,077
Application	408	-	420	828	740
Membership	968	-	1,717	2,685	2,397
Education	3,619	62	2,151	5,832	5,997
Advocacy & Awareness	654	-	1,613	2,267	1,988
Scientific Communications	36,606	-	426	37,032	36,193
<b>Total</b>	<b>43,928</b>	<b>62</b>	<b>7,061</b>	<b>51,051</b>	<b>49,392</b>

Grant funding represents 86 (2012: 134) STFC grants made to schools to help them run physics and astronomy related activities.

## 3 Support costs

	Management Costs (Directorate + Staff) £'000	Central Costs (IT, HR, Facilities) £'000	Finance Costs £'000	Total £'000
Research	275	387	72	734
Application	256	138	26	420
Membership	852	768	97	1,717
Education	994	980	177	2,151
Advocacy & Awareness	786	757	70	1,613
Scientific Communication	65	334	27	426
<b>Total</b>	<b>3,228</b>	<b>3,364</b>	<b>469</b>	<b>7,061</b>

### Basis of allocation

Management costs (directorate + staff)  
Central costs (IT, HR, Facilities)  
Finance costs

IOP charity staff time spent on activity  
IOP charity staff time spent on activity  
IOP charity total costs in the activity

**4 Governance costs**

	<b>2013</b>	2012
	<b>£'000</b>	£'000
Direct Expenditure	<b>106</b>	191
Fees payable to the charity's auditor for the audit of the charity's annual accounts	<b>33</b>	31
Fees payable to the company's auditor and its associates for other services:		
The audit of the company's subsidiaries pursuant to legislation	<b>32</b>	30
Other services	<b>37</b>	-
Other taxation services	<b>7</b>	7
Support Costs	<b>238</b>	211
	<hr/>	<hr/>
<b>Total</b>	<b>453</b>	470
	<hr/>	<hr/>

**5 Staff**

	<b>2013</b>	2012
	<b>£'000</b>	£'000
Wages and salaries	<b>17,818</b>	17,032
Social security costs	<b>1,651</b>	1,746
Pension costs	<b>2,316</b>	1,994
	<hr/>	<hr/>
	<b>21,785</b>	20,772
	<hr/>	<hr/>

The number of employees earning more than £60,000 per year can be analysed in the following bands:

	<b>2013</b>	2012
£60,000 - £69,999	<b>8</b>	6
£70,000 - £79,999	<b>15</b>	15
£80,000 - £89,999	<b>5</b>	1
£90,000 - £99,999	<b>1</b>	-
£100,000 - £109,999	<b>4</b>	2
£110,000 - £119,999	<b>-</b>	3
£120,000 - £129,999	<b>2</b>	4
£130,000 - £139,999	<b>1</b>	1
£140,000 - £149,999	<b>2</b>	1
£150,000 - £159,999	<b>1</b>	2
£160,000 - £169,999	<b>1</b>	1
£180,000 - £189,999	<b>1</b>	-
£190,000 - £199,999	<b>1</b>	-
£250,000 - £259,999	<b>-</b>	1
£290,000 - £299,999	<b>1</b>	-

The above banding includes 22 (2012: 19) staff for whom retirement benefits are accruing under defined contribution schemes and 9 (2012: 11) staff for whom retirement benefits are accruing under defined benefit schemes.

Contributions for the year for the provision of defined contribution schemes amounted to £328k (2012: £234k).

The financial statements for the year ended 31 December 2013 include a redundancy provision in respect of the estimated costs of the restructuring programme which was formally announced to those affected on 28 November 2013. The 2013 salary bandings above do not include the expected redundancy payments that are included in the redundancy provision as at 31 December 2013. These payments will be included in the 2014 salary bandings.

## 5 Staff (continued)

The average number of full time equivalent employees was:

		<b>2013</b>	2012
Charitable work	- Institute of Physics	<b>71</b>	70
Business operations:			
	- IOP Publishing Limited	<b>222</b>	215
	- IOP Publishing Inc.	<b>32</b>	29
	- IOP Enterprises Limited	<b>5</b>	5
Management and administration:			
	- Institute of Physics	<b>36</b>	43
	- IOP Publishing Limited	<b>90</b>	89
		<hr/> <b>456</b> <hr/>	<hr/> 451 <hr/>

The President, honorary officers and members of Council give their time to the Institute on a voluntary basis and are paid no remuneration for this work. They are reimbursed the actual costs of travel and subsistence necessarily incurred on the official business of the Institute and/or its subsidiaries. In the year to 31 December 2013 total expenses reimbursed to 24 trustees (2012: 22) were £42k (2012: £14k).

## 6 Physics World

During the year the Institute contributed £466k (2012: £483k) to IOP Publishing Limited towards the cost of copies of Physics World supplied to members.

## 7 Taxation

As a registered charity, the Institute is not liable to taxation on the net revenue from its charitable activities.

The subsidiary companies make qualifying donations of all taxable profit to The Institute of Physics. No corporation tax liability on the subsidiaries arises in the accounts.

## 8 Irrecoverable VAT

There is a group VAT registration for the Institute of Physics and its subsidiaries. The VAT group is partly exempt and, because of this, there are restrictions on the amount of VAT recoverable.

**9 Tangible fixed assets**

<b>Institute of Physics - Group</b>	<b>Freehold property £'000</b>	<b>Long leasehold property £'000</b>	<b>Fixtures and equipment £'000</b>	<b>Total £'000</b>
<i>Cost or valuation</i>				
At 1 January 2013	-	12,830	10,350	<b>23,180</b>
Additions	9,185	211	1,950	<b>11,346</b>
Disposals	-	(10,654)	(517)	<b>(11,171)</b>
<b>At 31 December 2013</b>	<b>9,185</b>	<b>2,387</b>	<b>11,783</b>	<b>23,355</b>
<i>Depreciation</i>				
At 1 January 2013	-	(4,486)	(5,076)	<b>(9,562)</b>
Charge for the year	-	(671)	(1,694)	<b>(2,365)</b>
Disposals	-	4,479	517	<b>4,996</b>
<b>At 31 December 2013</b>	<b>-</b>	<b>(678)</b>	<b>(6,253)</b>	<b>(6,931)</b>
<i>Net book value</i>				
<b>At 31 December 2013</b>	<b>9,185</b>	<b>1,709</b>	<b>5,530</b>	<b>16,424</b>
At 31 December 2012	-	8,344	5,274	13,618

During the year the Institute sold its leasehold interest in 76 Portland Place and 80 Portland Place. Long leasehold property assets with a net book value of £6.2m have been disposed of in the year and a profit on disposal of £7.3m has been recognised in the consolidated Statement of Financial Activities for the year ended 31 December 2013. The Institute has entered into an operating leaseback transaction in respect of 80 Portland Place.

During the year the Institute also purchased a new freehold property. The property has not yet been brought into use, therefore freehold property assets of £9.185m (2012: £nil) are in the course of construction and are not being depreciated.

Included in fixtures and equipment are £867k (2012: £2,100k) of assets in the course of construction which relate to the elements of the implementation of new IT systems which is ongoing. These assets are not being depreciated.

These assets will begin to be depreciated upon being brought into use.

**9 Tangible fixed assets (continued)**

<b>Institute of Physics - Charity</b>	<b>Freehold property £'000</b>	<b>Long leasehold property £'000</b>	<b>Fixtures and equipment £'000</b>	<b>Total £'000</b>
<i>Cost or valuation</i>				
At 1 January 2013	-	12,807	1,078	<b>13,885</b>
Additions	9,185	209	179	<b>9,573</b>
Intercompany transfer	-	-	413	<b>413</b>
Disposals	-	(10,654)	(1)	<b>(10,655)</b>
<b>At 31 December 2013</b>	<b>9,185</b>	<b>2,362</b>	<b>1,669</b>	<b>13,216</b>
<i>Depreciation</i>				
At 1 January 2013	-	(4,470)	(661)	<b>(5,131)</b>
Charge for the year	-	(666)	(325)	<b>(991)</b>
Disposals	-	4,479	1	<b>4,480</b>
<b>At 31 December 2013</b>	<b>-</b>	<b>(657)</b>	<b>(985)</b>	<b>(1,642)</b>
<i>Net book value</i>				
<b>At 31 December 2013</b>	<b>9,185</b>	<b>1,705</b>	<b>684</b>	<b>11,574</b>
At 31 December 2012	-	8,337	417	8,754

**10 Investments in subsidiary undertakings**

	<b>2013</b>	2012
<b>Institute of Physics - Group</b>	<b>£'000</b>	£'000
Joint Venture	<b>260</b>	244

	<b>2013</b>	2012
	<b>£'000</b>	£'000
<i>Joint Venture</i>		
Share of gross assets	<b>1,727</b>	-
Share of gross liabilities	<b>(1,467)</b>	-

Net investment in joint venture	<b>260</b>	-
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In the prior year, audited accounts of Turpion Limited were unavailable at the time the consolidated financial statements were prepared. Therefore this investment was carried at cost in the consolidated financial statements for the year ended 31 December 2012 on the basis that any adjustments as a result of using the gross equity method of accounting as set out in the accounting policies would not be material.

	<b>2013</b>	2012
<b>Institute of Physics - Charity</b>	<b>£'000</b>	£'000
Investment in subsidiary undertakings – IOP Publishing Ltd	<b>3,000</b>	3,000
Investment in subsidiary undertakings – IOP Publishing Inc.	<b>1</b>	1
	<b>3,001</b>	3,001

**10 Investments in subsidiary undertakings (continued)**

<b>Name</b>	<b>Country of incorporation / registration</b>	<b>Class of shares held</b>	<b>Percentage held</b>	<b>Nature of business</b>	<b>Year end</b>
<i>Subsidiary undertakings</i>					
IOP Publishing Ltd	UK	Ordinary	100%	Publishing	31 Dec 2013
IOP Enterprises Ltd	UK	Ordinary	100%	Conference venue	31 Dec 2013
IOP Educational Publishing Ltd	UK	Ordinary	100%	Dormant	31 Dec 2013
IOP Publishing Inc.	USA	Ordinary	100%	Publishing	31 Dec 2013
IOP Business Publishing Inc.	USA	Ordinary	100%	Publishing	31 Dec 2013
<i>Joint ventures</i>					
Turpion Ltd	UK	Ordinary	50%	Publishing	31 Dec 2013

The authorised, issued, and paid up share capital of IOP Publishing Limited, IOP Enterprises Limited and IOP Publishing Inc. is £3,000,000; £2 and £645.16 respectively.

Details of the net assets and profit for the year of IOP Publishing Limited, IOP Enterprises Limited, IOP Publishing Inc. and IOP Business Publishing Inc. are as follows:

	<b>Net assets / (liabilities)</b>		<b>Result for the year</b>	
	<b>2013</b>	<b>2012</b>	<b>2013</b>	<b>2012</b>
	<b>£'000</b>	<b>£'000</b>	<b>£'000</b>	<b>£'000</b>
IOP Publishing Limited	<b>819</b>	983	<b>(164)</b>	-
IOP Enterprises Limited	<b>1</b>	1	-	-
IOP Publishing Inc.	<b>2,424</b>	1,973	<b>430</b>	367
IOP Business Publishing Inc.	<b>(874)</b>	(874)	<b>9</b>	(108)

**11 Investments**

	<b>Group and charity</b>	
	<b>2013</b>	2012
	<b>£'000</b>	£'000
Market value at beginning of the year	<b>19,800</b>	19,089
Purchases in year	<b>8</b>	20,229
Disposal proceeds in year	<b>(3,004)</b>	(20,180)
Realised / unrealised gains	<b>1,576</b>	363
Investment management cost	<b>-</b>	(31)
	<hr/>	<hr/>
Market value at end of the year	<b>18,380</b>	19,470
	<hr/>	<hr/>
Historical cost	<b>17,301</b>	19,819
	<hr/>	<hr/>

	<b>Group and charity</b>	
	<b>2013</b>	2012
	<b>£'000</b>	£'000
The analysis of investments by class is as follows:		
Hedge funds	<b>3</b>	7
CR Ruffer Absolute Return Fund	<b>18,377</b>	19,463
	<hr/>	<hr/>
Market value of investments	<b>18,380</b>	19,470
Ruffer cash	<b>-</b>	330
	<hr/>	<hr/>
Total value of investments and cash	<b>18,380</b>	19,800
	<hr/>	<hr/>

During the prior year amounts of £19.83m were transferred from Newton Investment Management Limited to Ruffer Absolute Return Fund in cash. As at 31 December 2013 an amount of £3k (2012: £7k) remained with Newton Investment Management Limited within the Hedge Fund.



**12 Stock**

	<b>Group 2013 £'000</b>	Group 2012 £'000	<b>Charity 2013 £'000</b>	Charity 2012 £'000
Raw materials	3	5	-	-
Publications	2	2	-	-
Other	-	15	-	15
	<hr/>	<hr/>	<hr/>	<hr/>
	<b>5</b>	22	-	15
	<hr/>	<hr/>	<hr/>	<hr/>

**13 Debtors**

	<b>Group 2013 £'000</b>	Group 2012 £'000	<b>Charity 2013 £'000</b>	Charity 2012 £'000
Trade debtors	5,594	3,294	414	67
Other debtors	13,204	3,661	12,708	1,035
Amounts owed by joint ventures	188	-	-	-
Prepayments and accrued income	2,465	1,996	521	300
	<hr/>	<hr/>	<hr/>	<hr/>
	<b>21,451</b>	8,951	<b>13,643</b>	1,402
	<hr/>	<hr/>	<hr/>	<hr/>

Included within other debtors of the Group and Charity as at 31 December 2013 is an amount of £12.15m due in respect of the sale of the leasehold interest in 76 Portland Place and 80 Portland Place.

**14 Cash at bank and in hand**

	<b>Group 2013 £'000</b>	Group 2012 £'000	<b>Charity 2013 £'000</b>	Charity 2012 £'000
Cash at bank and in hand	14,015	12,655	4,232	5,290
Cash on term deposit	-	1,500	-	1,500
	<hr/>	<hr/>	<hr/>	<hr/>
	<b>14,015</b>	14,155	<b>4,232</b>	6,790
	<hr/>	<hr/>	<hr/>	<hr/>

**15 Creditors: amounts falling due within one year**

	<b>Group 2013 £'000</b>	Group 2012 £'000	<b>Charity 2013 £'000</b>	Charity 2012 £'000
Trade creditors	1,476	1,562	413	616
Amounts owed to group undertakings	-	-	357	1,465
Amounts owed to joint ventures	919	987	-	-
Other creditors	1,373	2,816	61	65
Other taxes and social security	573	573	-	-
Accruals	3,832	2,393	1,740	1,259
Deferred income	15,143	13,495	425	476
	<hr/>	<hr/>	<hr/>	<hr/>
	<b>23,316</b>	21,826	<b>2,996</b>	3,881
	<hr/>	<hr/>	<hr/>	<hr/>

Deferred income represents income received in advance:

	<b>Group 2013 £'000</b>	Group 2012 £'000	<b>Charity 2013 £'000</b>	Charity 2012 £'000
Journals subscriptions	14,596	12,924	-	-
Membership subscriptions	352	371	352	371
Other	195	200	73	105
	<hr/>	<hr/>	<hr/>	<hr/>
	<b>15,143</b>	13,495	<b>425</b>	476
	<hr/>	<hr/>	<hr/>	<hr/>

**16 Provisions**

	<b>Group 2013 £'000</b>	Group 2012 £'000	<b>Charity 2013 £'000</b>	Charity 2012 £'000
Dilapidations provision	675	656	675	656
Provision for redundancy costs	367	-	367	-
	<hr/>	<hr/>	<hr/>	<hr/>
	<b>1,042</b>	656	<b>1,042</b>	656
	<hr/>	<hr/>	<hr/>	<hr/>

The redundancy provision relates to estimated costs in relation to the restructuring programme which was formally announced to those affected on 28 November 2013. It is expected that this process will be completed during the first half of 2014.

**17 Pension scheme funding deficit**

	<b>Group 2013 £'000</b>	Group 2012 £'000	<b>Charity 2013 £'000</b>	Charity 2012 £'000
Pension scheme funding deficit -see note 19	<b>8,663</b>	14,464	<b>8,663</b>	14,464

**18 Movement on reserves**

	<b>General fund £'000</b>	<b>Restricted funds £'000</b>	<b>Pension reserve (Deficit) £'000</b>	<b>Total £'000</b>
<b>Institute of Physics - Group</b>				
At 1 January 2013	33,576	732	(14,464)	<b>19,844</b>
Net incoming/(outgoing) resources	10,196	(145)	421	<b>10,472</b>
Net interest in results for the year of joint venture	230	-	-	<b>230</b>
Realised gains on investment sales during the year	149	-	-	<b>149</b>
Unrealised gains on investments	1,427	-	-	<b>1,427</b>
Exchange adjustments	12	-	-	<b>12</b>
Actuarial gains	-	-	5,380	<b>5,380</b>
Balances carried forward	<b>45,590</b>	<b>587</b>	<b>(8,663)</b>	<b>37,514</b>

	<b>General fund £'000</b>	<b>Restricted funds £'000</b>	<b>Pension reserve (Deficit) £'000</b>	<b>Total £'000</b>
<b>Institute of Physics - Charity</b>				
At 1 January 2013	34,493	732	(14,464)	<b>20,761</b>
Net incoming/(outgoing) resources	10,136	(145)	421	<b>10,412</b>
Realised gains on investment sales during the year	149	-	-	<b>149</b>
Unrealised gains on investments	1,427	-	-	<b>1,427</b>
Actuarial gains	-	-	5,380	<b>5,380</b>
Balances carried forward	<b>46,205</b>	<b>587</b>	<b>(8,663)</b>	<b>38,129</b>

**18 Movement on reserves (continued)**

	Balance at 1 Jan 2013 £'000	Incoming resources £'000	Resources expended £'000	Balance at 31 Dec 2013 £'000
<i>Restricted funds</i>				
Prize funds	164	1	(107)	<b>58</b>
Other funds	568	345	(384)	<b>529</b>
	<hr/> 732	346	(491)	<hr/> <b>587</b> <hr/>

Restricted funds are held by the Institute and were given to the Institute to spend towards specific projects and purposes. Prize funds are held by the Institute to give out as awards to individuals for their exceptional contribution towards Physics. Other funds are to be spent on specific projects. During 2013 incoming resources for other funds was made up as follows: £172,480 received for the Lab in a Lorry fund; £32,883 received from HE STEM for the National STEM Programme; and £84,699 received from the Department for Education Scholarships. £50,682 was received from the individual donors for the IOP for Africa project.

**Analysis of Net Assets by Fund**

	General fund £'000	Restricted funds £'000	Pension reserve (Deficit) £'000	Total £'000
<b>Institute of Physics Group</b>				
Tangible Fixed Assets	16,424	-	-	<b>16,424</b>
Investments	18,640	-	-	<b>18,640</b>
Current Assets	34,884	587	-	<b>35,471</b>
Current Liabilities	(23,316)	-	-	<b>(23,316)</b>
Non-Current Liabilities	(1,042)	-	(8,663)	<b>(9,705)</b>
	<hr/> 45,590	587	(8,663)	<hr/> <b>37,514</b> <hr/>

## 19 Pensions

The Institute of Physics Retirement Benefits Plan 1975 was closed to new members on 31 December 2001. The Institute continues to support the scheme for those who were members on the effective date of closure.

A group personal pension scheme was established to replace the defined benefit scheme with effect from 1 January 2002. The Institute has also designated a stakeholder pension scheme in compliance with the Pensions Act 1995.

The most recent FRS 17 valuation of Institute of Physics Retirement Benefits Plan 1975 dated 31 December 2013 showed that the value of the scheme's assets was £55,018k (2012: £48,134k) and that the actuarial value of those assets represented 86% (2012: 77%) of the benefits that had accrued to members, after allowing for expected future increases in earnings. It was assumed that the investment return would be 6.69% (2012: 6.02%) per annum, that salary increases would average 3.50% (2012: 3.90%) per annum and that present and future pensions would increase at the rate of 2.20% (2012: 2.10%) per annum.

The Institute's and employees' contributions are 18% and 7% respectively.

The next triennial valuation is due on 1 January 2014.

The principal actuarial assumptions used by the actuary at the balance sheet date were:

	<b>2013</b>	2012
	%	%
Discount rate	<b>4.60</b>	4.40
Expected return on Plan assets	<b>6.69</b>	6.02
Inflation (RPI)	<b>3.50</b>	2.90
Inflation (CPI)	<b>2.50</b>	2.30
Future salary increases	<b>3.50</b>	3.90
Rate of increase on pensions in payment		
Linked to inflation (PRI), subject to a cap of 5% per annum	<b>3.40</b>	2.90
Linked to inflation (PRS), subject to a cap of 2.5% per annum	<b>2.20</b>	2.10
	75% of	75% of
	members	members
	assumed to	assumed to
Cash Commutation	take	take
	maximum	maximum
	tax free	tax free
	cash	cash
Mortality assumptions	<b>AXC00</b>	<b>Nil</b>
Life expectancy of male aged 65 now	21.6 ('light' 23.2)	21.4 ('light' 23.0)
Life expectancy of male aged 65 in 20 years	23.5 ('light' 25.0)	23.3 ('light' 24.8)
Life expectancy of female aged 65 now	24.4 ('light' 24.7)	24.2 ('light' 24.5)
Life expectancy of female aged 65 in 20 years	26.2 ('light' 26.6)	26.0 ('light' 26.4)

**19 Pensions (continued)**

*The major categories of scheme assets as a percentage of total plan assets were:*

	<b>2013</b>	2012
	%	%
Equities	<b>63.7</b>	59.7
Annuities	<b>20.3</b>	25.2
Property	<b>7.9</b>	8.3
Corporate bonds	<b>7.5</b>	6.6
Cash	<b>0.6</b>	0.2
	<hr/>	<hr/>
<b>Total</b>	<b>100</b>	100
	<hr/>	<hr/>

Employee benefit obligations

*Amounts recognised in the balance sheet:*

	<b>2013</b>	2012
	£'000	£'000
Fair value of scheme assets	<b>55,018</b>	48,134
Actuarial value of scheme liabilities	<b>(63,681)</b>	(62,598)
	<hr/>	<hr/>
Deficit in the plan	<b>(8,663)</b>	(14,464)
	<hr/>	<hr/>
Pension liability recognised on the balance sheet	<b>(8,663)</b>	(14,464)

*Total expense recognised in profit or loss:*

	<b>2013</b>	2012
	£'000	£'000
Current service cost	<b>1,239</b>	1,143
Interest on obligations	<b>2,891</b>	2,684
Expected return on scheme assets	<b>(2,904)</b>	(2,668)
	<hr/>	<hr/>
<b>Total</b>	<b>1,226</b>	1,159
	<hr/>	<hr/>

**19 Pensions (continued)**

*Changes in the present value of the defined benefit obligation :*

	<b>2013</b>	2012
	<b>£'000</b>	£'000
Opening value of scheme liabilities	<b>62,598</b>	57,299
Service cost	<b>1,239</b>	1,143
Contribution by scheme members	-	199
Interest cost	<b>2,891</b>	2,684
Actuarial (gains) and losses	<b>(1,625)</b>	2,803
Benefits paid	<b>(1,422)</b>	(1,530)
	<hr/>	<hr/>
Closing Value of Scheme liabilities	<b>63,681</b>	62,598
	<hr/>	<hr/>

*Changes in the fair value of Scheme assets:*

	<b>2013</b>	2012
	<b>£'000</b>	£'000
Opening fair value of Scheme assets	<b>48,134</b>	43,838
Expected return	<b>2,904</b>	2,668
Actuarial gains and (losses)	<b>3,755</b>	1,684
Contribution by employer	<b>1,647</b>	1,275
Contribution by Scheme members	-	199
Benefit paid	<b>(1,422)</b>	(1,530)
	<hr/>	<hr/>
Closing fair value of scheme assets	<b>55,018</b>	48,134
	<hr/>	<hr/>
Actual return on Scheme assets	<b>6,659</b>	4,352

*Analysis of amounts recognisable within the Statement of Financial Activities gains and losses category*

	<b>2013</b>	2012
	<b>£'000</b>	£'000
Actual return less expected return on pension scheme assets	<b>3,755</b>	1,684
Changes in assumption underlying the present value of the scheme liabilities	<b>1,625</b>	(2,803)
	<hr/>	<hr/>
Actuarial gain/(loss) on defined benefit scheme	<b>5,380</b>	(1,119)
	<hr/>	<hr/>

## 19 Pensions (continued)

### *Movement in deficit during the year*

	<b>2013</b>	2012
	<b>£'000</b>	£'000
Deficit in scheme at beginning of the year	<b>(14,464)</b>	(13,461)
Movement in year:		
Current service cost	<b>(1,239)</b>	(1,143)
Contributions	<b>1,647</b>	1,275
Other finance income/(cost)	<b>13</b>	(16)
Actuarial gain/(loss)	<b>5,380</b>	(1,119)
	<hr/>	<hr/>
Deficit in scheme at end of the year	<b>(8,663)</b>	(14,464)
	<hr/>	<hr/>

### *Movements over previous five year period*

	<b>2013</b>	2012	2011	2010	2009
	<b>£'000</b>	£'000	£'000	£'000	£'000
Scheme liabilities	<b>(63,681)</b>	(62,598)	(57,299)	(58,489)	(54,854)
Value of Scheme assets	<b>55,018</b>	48,134	43,838	42,758	39,231
Surplus/(deficit)	<b>(8,663)</b>	(14,464)	(13,461)	(15,731)	(15,623)
Experience adjustments on Scheme liabilities	<b>(678)</b>	-	5,643	-	-
Changes in the assumptions for value of scheme liabilities	<b>2,303</b>	(2,803)	(1,319)	(953)	(10,719)
Experience adjustments on scheme assets	<b>3,755</b>	1,684	(2,198)	470	3,492

## 20 Reconciliation of net incoming resources before transfers to net cash inflow from operating activities

	<b>2013</b>	2012
	<b>£'000</b>	£'000
Net incoming resources before transfers	<b>10,472</b>	1,975
Profit on disposal of property	<b>(7,325)</b>	-
Depreciation of tangible fixed assets	<b>2,365</b>	1,694
Investment management fee	-	31
Movement in stocks	<b>17</b>	27
Movement in debtors	<b>(350)</b>	(160)
Movement in creditors	<b>1,490</b>	(584)
Movement in provisions	<b>386</b>	20
Difference between pension charge and cash contribution	<b>(409)</b>	(116)
	<hr/>	<hr/>
Net cash inflow from operating activities	<b>6,646</b>	2,887
	<hr/>	<hr/>



## 21 Analysis of changes in net funds

	<b>2013</b>	2012
	<b>£'000</b>	£'000
Increase in cash	<b>1,360</b>	1,064
Net cash outflow from changes in liquid resources	<b>(1,500)</b>	(1,500)
Net funds brought forward	<b>14,155</b>	14,591
	<hr/>	<hr/>
Net funds carried forward	<b>14,015</b>	14,155
	<hr/>	<hr/>

## 22 Commitments

At 31 December the Group was committed to making the following payments during the next year under non-cancellable operating leases as follows:

	<b>2013</b>	2012
	<b>£'000</b>	£'000
Operating leases which expire:		
Within one year	<b>19</b>	-
Between 2 and 5 years	<b>38</b>	56
In more than five years	<b>507</b>	507
	<hr/>	<hr/>
	<b>564</b>	563
	<hr/>	<hr/>

The Group has also planned to undertake capital development work over the next 2 years on the freehold property that was purchased during the year.

## 23 Related parties

During the year IOP Publishing Limited collected subscriptions of £2,359k (2012: £2,348k) on behalf of Turpion Limited and received income from Turpion Limited for management services rendered of £452k (2012: £400k). Turpion Limited is a joint venture company which is 50% owned by IOP Publishing Limited. A balance of £919k (2012: £987k) was due to Turpion Limited at year end and £188k (2012: £191k) was owed by Turpion Limited at year end. During the year IOP Publishing Limited received a dividend of £214k (2012: £145k) from Turpion Limited.

The charity has taken advantage of the exemption conferred by Financial Reporting Standard 8 'Related party disclosures' not to disclose transactions with its wholly owned subsidiaries.