ACTIVITY REPORT 2015

presented to EPS Council, 01-02 April 2016

European Physical Society

more than ideas

ACTIVITY REPORT 2015

presented to EPS Council, 01-02 April 2016

Christophe Rossel, EPS President

INTRODUCTION FROM THE PRESIDENT

It is a privilege to introduce this 2015 Activity Report, which provides an introduction to the many and varied actions of the EPS over the last year. I would like to take the opportunity to express my appreciation and thanks to all EPS members who have contributed by their action and engagement to the progress of our Society. These are of course the members of our Executive Committee, those of the EPS Action Committees, Divisions and Groups and the staff of the EPS Secretariat in Mulhouse around our Secretary General David Lee.

Certainly one of the highlights of 2015 is the successful worldwide celebration of the International Year of Light, which started in Paris in January 2015 and closed officially with a colourful ceremony in Merida, Mexico, in early February of this year. My predecessor John Dudley has devoted a tremendous amount of energy and enthusiasm in this enterprise, which brought much visibility to EPS.

It is well recognized that EPS has an important role to play in the European landscape as a learned society but also as the federation of its 42 Member Societies. Via its Divisions and Groups (D&G) it keeps its leading role in promoting scientific excellence by organising conferences, publishing journals and statements, awarding prizes and grants and supporting education and outreach activities. You will find full details in this report.

Let me expand on a few particular issues and developments in 2015 since last Council in Bad Honnef (DE).

One of my concerns is to assure that all Divisions, Sections and Groups remain active. They are the core of the EPS, giving us our scientific credibility and spearheading many important activities including the organisation of conferences, awarding prizes and engaging in public outreach. Some are very successful, while others are dormant for different reasons. We were successful in reactivating the Statistical and Nonlinear Physics Divisions, the Technology and Innovation Group and the Physics for Development Group with new chairmen. Due to the evolution of the field, the Experimental Physics Control Systems Group decided to stop its activity and will be closed. Electronic communications is extremely important, and the EPS is actively updating and renovating the home pages of its D & G.

In terms of publication and communication, e-EPS, the online news bulleting and Europhysics News, the EPS's physics magazine, are complementary and are well read. As a special tribute to IYL2015, the last issue of EPN 46 was devoted to the science of light with six feature articles. Our flagship letters journal EPL is under strong pressure due to a competitive publishing environment,

CONTENTS

to the rise of open access and the dominant role of bibliometric indices. Its Editorial Board has been reorganised to strengthen the editorial decision process and bring support to the Editor in Chief, through the nomination of deputy editors. While not growing as fast as hoped, the situation remains positive, and a new production agreement has been finalised.

EPS statements and opinion papers are part of the responsibility of scientists and are essential contributions to policy debates and science advising. The position paper of the Energy group on European Energy Policy and Global Reduction of CO_2 emissions was an eye opener on the difficulty to achieve consensus within a group of experts on relevant policy issues. The existing submission procedure was simplified, given more weight to the final decision of the Executive Committee.

In outreach activities, our Young Minds project with its endeavour to support next generations of physicists is running very well and has grown to 35 sections in 20 countries. The EPS Historic Sites initiative is also very successful with the inauguration of 7 new places in 2015, among them the Einstein House in Bern, which is the first joint EPS-APS Historic Site. The initiative remains popular, and more ceremonies are planned in 2016.

In order to support activities that are not in the mainstream of EPS tasks or cannot be financed from the EPS budget, a Special Activity Fund has been created, which is based on donations from EPS individual Members, private sponsors and foundations. For example activities related to physics for development or aimed to ensure the next generation of researchers can be funded.

Awards and Prizes are important to recognise not only scientific excellence but also engagement towards our society and the physics community. For this reason an EPS Achievement Award has been created to recompense activities and achievements, which have favoured EPS internal collaboration and effectively promoted the image and the impact of the EPS within the scientific community, policy makers and other stakeholders. The first Achievement Awards will be attributed at Council 2016.

Now an important issue is our EPS Point-of-Presence in Brussels as first formulated in the EPS Strategy Plan 2010+ and to be reassessed by the new Strategy Working Group until Council 2016. The EPS has been active, opening an EPS Office in Brussels, hiring a new consultant for EU affairs and organising the first EPS Member Society Presidents' workshop in Brussels in October 2015. The turnout was quite good, with a balanced representation of over 20 Member Societies sharing their expectations about cooperation, areas of common interest and strategic initiatives. A similar meeting is scheduled in May 2016 with the D&G chairs to discuss future common strategy.

The EPS together with Initiative for Science in Europe (ISE) organised a workshop on Science Advice in Europe, which focused on identifying important structural features of scientific advice. The workshop took place at European Molecular Biology Laboratory (EMBL) in Heidelberg (DE) in January 2016. The EPS also sponsored a workshop on "Integrating Access to Pan-European Research Infrastructures in Central and Eastern Europe" (INARIE) organised by MTA Atomki, in Debrecen (H) in early December. A joint declaration on supporting access to European research infrastructures by scientists of small and medium size countries was signed and mailed to the EU organisations. EPS collected nominations for candidates to the High Level Group of the new Scientific Advice Mechanism (SAM) of the European Commission set up by commissioner C. Moedas. The EPS, together with the DPG are pleased that Rolf Heuer, past Director General of CERN, was chosen as one of the seven advisors.

EPS responded also to the open consultation for the next 6-year Strategic Plan of the International Council for Science (ICSU) with a document prepared by the EPS Quantum Electronics and Optics Division, regarding a project "Light up the World" for developing countries. EPS decided to contribute with a concrete proposal to the Mid -Term review of framework program Horizon 2020, specifically on aspects related to Energy.

Finally the EPS Executive Committee agreed to create an Advisory Board on Science Policies (ABSP) whose members will be consulted to provide scientific advice on specific policy issues. This board will enhance the links between EPS and the EU Commission by building a dialog with European policy makers and the SAM advisors.

The next step is now to work out a concrete action plan to make EPS more efficient in interacting with Brussels and to allocate the financial means to achieve its targets. One pilot project is to staff our office in Brussels, located in the headquarters of EuCheMS, with a professional policy officer, directed by the EPS President and the newly created ABSP.

In conclusion we should not be shy and have an ambitious vision for the EPS, welcoming novel initiatives to make it a well-regarded and active organisation in the European scientific landscape.

This being said, I wish you a pleasant reading of this report. ■

Lucia di Ciaccio, Honorary Secretary, Executive Committee

EXECUTIVE COMMITTEE ACTIVITIES 2015

The EPS Executive Committee develops and puts into practice the EPS policy. The Executive Committee holds at least four regular meetings per year where its members meet face-to-face and discuss on-going activities, future plans and financial matters. The EPS President, elected by the Council, chairs the Executive Committee meetings. In April 2015, Christophe Rossel started his mandate as EPS President taking over from John Dudley.

Since the Council meeting in April 2015, the Executive Committee has met three times: on the 19th of May in Karlsruhe (DE), on the 23rd of October in Brussels (BE) on the occasion of the Historic Site ceremony at the Hotel Metropole and on the 23rd of January 2016 in Athens (GR). Summaries of these meetings are published on the EPS-website (available to the EPS Members only). In 2015, in addition to the plenary meetings, three dedicated meetings took place (in June, September and October) where the Treasurer and the Secretary met with the Secretary General to assess staff organisation and financial issues. The activities of all Executive Committee members are reported monthly in the e-EPS newsletter.

Enhancing the visibility and the influence of the EPS in the European instances is a priority item. The EPS is already active in representing the physics community in Brussels, for example in providing names of potential members of the high level group to the new European Commission Science Advice Mechanism. The EPS has good contacts to many other learned societies in Europe, including European Association for Chemical and Molecular Societies (EuCheMS), the European Optical Society (EOS) the European Astronomical Society (EAS) and the European Mathematical Society (EMS). The EPS is also a founding member of Initiative for Science in Europe (ISE). The beginning of a network with European Committee policy makers exists with Science and Technology Option Assessment Committee of the European Parliament (STOA), the European Research Council (ERC) and SwissCore. Activities designed to maintain and strengthen these ties are being explored. Consultations with Member Societies (MS) and Division and Groups (D/G) are also on-going on specific areas where the EPS intervention would be beneficial.

The project of establishing a Special Activity Fund rather than a Foundation was found more attractive and flexible. It is now successfully pursued. The possibility to donate to this fund is operational on the EPS website. The website also has the description of the goals, governance and financing of the fund.

The Executive Committee discussed also the benefits of increasing the number of Individual Members (IM) and Associated Members (AM). Increasing the number of IMs adds to the attractiveness of the EPS, as well as to the credibility of the EPS towards policy makers. AMs are important since more commercial companies would render the EPS more representative. The Executive Committee would like to focus on commercial companies, and research organisations and proposed the idea of developing "innovation fairs". The innovation fair would offer to young researchers the possibility to present their innovative ideas to universities and companies and would promote a reciprocal free and open exchange facilitating as an example, the students' access to the technology transfer expertise of the companies.

CONTACT FOR MEMBER SOCIETIES	MEMBER	DIVISION/GROUP
Belgium, Italy, Poland	Bracco, Angela Dudley, John	Accelerators Group
France, Luxembourg, the Netherlands	di Ciaccio, Lucia	High Energy and Particle Physics Division, Experimental Physics and Control Systems Group
Denmark, Finland, Iceland, Norway, Sweden	Friberg, Ari	Division of Physics in Life Sciences, Statistical and non-linear Physics Division
Bulgaria, Hungary, Moldova	Fülöp, Zsolt	Nuclear Physics Division, Computational Physics Group
Portugal, Russia, Spain	Hidalgo, Carlos	Joint European Solar Physics Division, Plasma Physics Division, Energy Group
UK	Saunders, Frances	Environmental Physics Division
Belarus, Georgia, Ukraine	Leuchs, Gerd	Quantum Electronics and Optics Division, Technology Group
Austria, Germany, Liechtenstein, Switzerland	Müller, Thomas	Physics for Development Group
Estonia, Latvia, Lithuania	Rachlew, Elizabeth	Atomic Molecular and Optics Division
Albania, Croatia, Czech Republic, Macedonia, Montenegro, Romania, Serbia, Slovakia, Slovenia	Reiffers, Marian Rossel, Christophe *EPS President*	Condensed Matter Division, History of Physics Group
Armenia, Cyprus, Greece, Israel, Turkey	Sotiriou, Sofoklis	Physics Education Division, Environmental Physics Division

The Strategy Review Group (SRG) appointed by the Executive Committee with the mandate of reviewing the EPS projects in view of the EPS planned 2010+ Strategy, began its work. One of its major tasks is to put forward recommendation for the future. The conclusion is expected in the Spring 2016.

In 2015 a Financial Review Group, composed of Executive Committee members, was also established. Following the recommendations of the FRG, documented in a written note, a new budget presentation is being elaborated, where current administrative expenses, especially staff costs, are attributed directly to the corresponding activity item. A mechanism leading to budgeting on a two-year horizon is also under consideration. This procedure will offer more opportunities to Council to fix priorities.

In 2015 the Executive Committee formally approved the Position Paper from the EPS Energy Group: European Energy Policy and Global Reduction of CO_2 emissions: Towards an effective sustainable electricity production in Europe.

The Executive Committee adopted the procedure for statements established at the Council. In general, statements should be short and to the point. In order to be approved, the motivation behind the statement and the target audience for the statement need to be clearly identified in the request for approval. The EPS has to be able to react quickly, in order to produce timely statements. In the near future the Executive Committee considers the preparation of an EPS statement on the need to teach physics as a specific topic at the upper secondary school level, as well as the need to ensure an adequate supply of qualified physics teachers at the secondary school level.

The Executive Committee decided to combine the Cecil B. Powell Memorial Medal and the EPS Public Understanding of Physics Prize into a single prize of the EPS in recognition of outstanding achievement in public understanding of physics and outreach. A new name for this Prize is being considered. The Prize will be managed and financed from EPS central funds.

At its meetings, the Executive Committee invites representatives of national physical societies, representatives from other learned societies, policy makers, and Chairs of D/G. E. van Groningen (NL), the new Chair of the Physics for Development Group (PDG) was invited at the October plenary meeting to present on-going actions and future plans of the Group. The Executive Committee encouraged the establishment of new action plans. Once this is done, then it is necessary to consider how to involve young researchers (Young Minds, the International Association of Physics Students) in PDG activities.

The EPS Executive Committee also met with J. Ongena, the Chair of the EPS Energy Group, with L. Bergé, the Chair of the Quantum Electronics and Optics Division as well as with C. Beck, the newly appointed Chair of the Statistical and Nonlinear Physics Divisions. They illustrated the main activities and the future projects of their Division or Group.

Members of the EPS were strongly involved in the many events organised for the International Year of Light 2015. All the initiatives were well attended and successful. Many meetings are being organised to celebrate the close of IYL2015.

The Executive Committee followed closely the evolution of the EPN magazine. After the decision of Jo Hermans, EPN Science Editor to retire, the Executive Committee was engaged in the process of searching for a new Editor, and appointed Ferenc Iglói as the new EPN Science Editor. The Executive Committee endorsed new EPL co-editors and discussed effective strategies to improve the impact factor of the journal.

The members of the Executive Committee play an important role in establishing and maintaining contacts to MS and D/G. Every Executive Committee member is the direct contact person for a very small number of MS. The same principle has been introduced to install privileged contacts with the D/G as shown in the table.

HIGHLIGHTS FROM 2015

THE INTERNATIONAL YEAR OF LIGHT AND LIGHT-BASED TECHNOLOGIES 2015

INTERNATIONAL YEAR OF LIGHT 2015

The International Year of Light and Light-based Technologies 2015 (IYL 2015) has been a tremendous success in bringing together academic and industry organizations around the world to join forces to raise awareness of the many ways in which the physics and applications of light impacts our lives in areas such as energy, education, climate-change, and health. Their efforts have resulted in IYL 2015 being amongst the most successful and visible of any of UNESCO's international observances, with well over 5,000 officially recognized activities, including scientific conferences, art projects and exhibitions, active learning workshops, festivals and many more, in 148 countries, reaching tens of millions of people. The international impact has also been shown by the over 150 partners involved in its organization and more than 15,000 media mentions in 120 countries. The success of IYL2015 crowns six years of hard work by EPS since the first discussions of the idea in 2009.

The IYL 2015 celebrations officially started with the Opening Ceremony at UNESCO HQ in Paris, France, on 19-20 January 2015. During the two-day ceremony, organized by EPS (staff, Graphic Designer and its Conference Department) together with UNESCO, over a thousand participants gathered to discuss different aspects related to light. The programme included lectures by five Nobel Prize laureates: Ahmed Zewail, Steven Chu, William Phillips, Serge Haroche and Zhores Alferov.

One important aspect of the Year was the empowerment of people around the world through education. For this purpose, there were many events organized by IYL 2015 partners, universities and student societies around the world, with special focus on young people, involving hands-on science outreach activities for the general public. Moreover, research organizations such as the Abdus Salam International Centre for Theoretical Physics (ICTP), together with UNESCO, have kept working to implement long-term programmes such as the Active Learning on Optics and Photonics (ALOP). Programme in many countries to train teachers at both university and high school levels. An important legacy of the Year is to ensure the continuation of this programme in the future.

A fundamental goal of IYL 2015 was building bridges between scientists, industry and policy-makers to raise awareness of the importance of photonics to offer solutions to problems of global importance. For this purpose, many specific IYL 2015 high-level events were organized to be part of, among others, the UNESCO Executive Board, the World Science Forum 2015 and the (EPS co-organised) World of Photonics Congress 2015. These events allowed policy-makers to learn about the opportunities that photonics technologies can bring to developing countries. For instance, the need for reliable and safe lighting for education and improved quality of life is now clear at political level. A number of initiatives are underway involving non-governmental organizations and industry to put long-term programmes into place.

Another major legacy of the IYL 2015 has been to highlight the contributions of Arab scholars in the Islamic golden age, in particular the work of Ibn Al-Haytham. For this purpose, leading optics and photonics scientists as well as historians and philosophy of science scholars from all around the world have formed an International Working Group (IWG). The IWG has helped organize regional events and produced materials on the contributions of Arab scholars to optics in the Islamic Golden Age. These activities will continue beyond 2015 through the creation of the "Ibn al Haytham International Society".

The IYL 2015 was officially closed on 4-6 February 2016 in the city of Mérida, Mexico. During three days, over 300 participants reviewed the activities and major outcomes of the IYL 2015 as well as discussed potential legacies of the Year. The programme of the conference included lectures and panel discussion by eminent specialists, comprising two recipients of the Nobel Prize in Physics: Shuji Nakamura and John Mather.

However, the IYL 2015 spirit is very much alive, with many activities still happening around the world taking advantage of all resources produced during the Year as well as the strengthening of the collaborations between the main organizations involved in the organization of IYL 2015.

▸ **For more information, please see: www.light2015.org**

▾William Phillips during his lecture at the IYL2015 opening ceremony.

LIGHT2015

LIGHT2015 PHOTONICS
DISCOVER THE POWER OF LIGHT

LIGHT2015 is a European project – coordinated by EPS - funded through the European Union's Horizon 2020 research and innovation programme of the European Commission. It aims to promote the importance of photonics to young people, entrepreneurs, members of the Industry and the general public around Europe during the International Year of Light and Light-based Technologies 2015 (IYL 2015).

Running from January 2015 until June 2016, the project has a total budget of around €1 million (€170,875 corresponding to EPS) and brings together a multi-stakeholder partnership, including the European Physical Society (EPS), the European Optical Society (EOS), the Institute of Photonics Sciences (ICFO) (Spain), the Politecnico di Milano (POLIMI) (Italy), the National University of Ireland Galway (Ireland), Universiteit Leiden (the Netherlands), and EYESTvzw (Belgium).

So far, the LIGHT2015 project has organized around 110 activities in 27 European countries including:

- LIGHTtalks, a series of inspirational events, which are taking place throughout Europe for the whole duration of the project in order to bring photonics closer to students, entrepreneurs and members of the industry. These activities have been possible thanks to the vast networks of EPS and EOS, involving directly several EPS Member Societies as well as Young Minds Sections.
- The iSPEX-EU campaign was the 1st pan-European citizen science campaign where thousands of European citizens carried out optical measurements of the sky using smartphones to yield information related to air pollution in 11 European cities.
- To aid teachers and to inspire student, over 250 Photonics Explorer kits were distributed to schools in 11 European

countries together with teacher training to around 500 teachers to support the scientific education at secondary schools.
- The organization and support of several Flagship events involving high-level participants such as the IYL 2015 Opening and Closing Ceremonies and the Opening Ceremony of the World of Photonics Congress.
- The production of two videos that depict the endless power of photonics have been produced and are freely available to use in 24 official EU languages.
- The organization of the LIGHT2015 Awards to highlight early-career women researchers and entrepreneurs in photonics.

▸ **For more information, on on-going LIGHT2015 activities please visit:**
Website: **www.europe.light2015.org**
Twitter: **LIGHT2015Europe**
Facebook: **Light2015Europe**

INSPIRING SCIENCE EDUCATION

inspiring SCIENCE education

Inspiring Science Education (Inspire) is an EU funded project which began running in April 2013. It brings together 30 partners in 15 countries. The main aim is to provide digital science teaching resources and opportunities for teachers to help them make science education more attractive and relevant to students' lives. Through the Inspiring Science Education website and the activities organised by the partners, teachers can help students make their own scientific discoveries, witness and understand natural and scientific phenomena and access the latest, interactive tools and digital resources from within their classrooms.

Inspirational science teachers are at the heart of successful science teaching. In addition to teaching material, Inspire will also explore other elements involved in helping teachers to motivate students in studying science. To help in this process, regular workshops will be organised throughout Europe. In addition, exchanges for teachers, communities of practice and learning opportunities for science teachers and teacher trainers aimed at helping them find ways to make their teaching of science more inspirational will also be organised. The European Physical Society will work with the Inspire consortium, and regularly inform its Members about Inspire activities. Teachers and teacher networks at the national level will be encouraged to participate in Inspire training activities.

ISE workshop on Science Advice in Europe

The Initiative for Science in Europe has held an expert workshop on science advising in Europe on 19th and 20th of January 2016 at the EMBL campus in Heidelberg, Germany. The workshop focused on important structural features of scientific advice in Europe, taking into account the need for transparency; the ecosystem of current advisory bodies; and the desire to construct reliable policies to meet global challenges.

Only issues related to Science for Policy were explored. The workshop did not explore how should a Chief Science Advisor Office be run, rather it was asked, what are all sources of possible science advice; which of these sources, if any, are useful for what types of decision-makers (including the public); and how would these various sources be synthesized and advice implemented?

The workshop is meant as a contribution to the improvement of science advising particularly at the European level by identifying and discussing any gaps in the current policy debate, and anticipating discussions that may occur about science advising particularly under the next Commission presidency (*i.e.*, starting 2019).

The workshop included 24 experts representing robustly (but not comprehensively) the views of practitioners, analysts, and academics with interest in science advising in Europe. The workshop was held under the Chatham House Rule.

Prior to the workshop, the organisers interviewed briefly several (but not all) of the participants, and as well additional experts who could not attend the workshop.

At the workshop, each major session included short expert talks or other less-formal interventions. A few discussions were open (*i.e.*, not structured), but most of the work was done in structured discussions. This was both to interrogate the participants to understand their views and how they evolved during the workshop discussions, and as well for the participants to conduct an exercise in drafting options for science advising in Europe.

Post-workshop, the organisers will go back to individual participants as needed to follow up on any gaps in our understanding, and we will add longer descriptions to contextualise the discussions.

A report is currently being prepared.

▸ **The webpage for the workshop is:**
www.i-se.org/2016scienceadvice

HORIZONS IN PHYSICS EDUCATION

HOPE network

Lifelong Learning Programme

The academic network Horizons of Physics Education [HOPE] was launched in October 2013. This three-year project is supported by the Life Long Learning Programme of the European Union. It is the 6th thematic network in physics education in a series of networks beginning in 1995 with European Physics Education Network [EUPEN].

HOPE is the de facto successor to EUPEN (established 1995) and the subsequent Stakeholders Tune European Physics Studies [STEPS] (2005-08) and STEPS TWO (2008-11) projects. Among other activities, these investigated new teaching methods and student centred learning, graduate skills sought by industry, physics teacher training and their low numbers in some countries, and novel degree courses. The new project is designed to capitalise on the previous success and will concentrate on the heart of the problem - the physics student - via inspiration in schools, recruitment to university and competences for employment.

Objectives

HOPE's ultimate goal is to enhance the impact of physics on the European economy and its visibility and consequence in society in general. Since the project is promoted by academic institutions, there are four interlinked aims which form the basis of the work programme:

- **Inspiring Young People to Study Physics:** to investigate and report on the factors that influence young people to choose study physics
- **New Competences for Physics Graduates – Fostering Innovation and Entrepreneurship:** to recommend ways by which physics degrees can be enhanced so that the competences of graduates enable them better to contribute more effectively to new needs of the European economy and society, particularly through innovation and entrepreneurship
- **Improvements in Physics Teaching – Meeting Future Global Challenges in Physics Higher Education:** to improve the effectiveness and attractiveness of physics teaching in Europe's university physics departments to help ensure their competitiveness in the global student
- **Improvements in the Training and Supply of Physics School Teachers:** to recommend strategies for increasing the supply of well-trained physics school teachers and to enhance the role of university physics departments in helping the teaching of physics in schools.

The project

The 71 full partners are from 31 countries of the European Union along with Norway, Serbia, Switzerland and Turkey; they comprise 65 academic partners and 6 non-academic partners including the European Physical Society. The consortium is further enriched by 10 associated partners including the Institute of Physics, the American Physical Society, IBM Zurich Laboratory, the Groupe International de Recherche sur l'Enseignement de la Physique [GIREP], and various universities in both North and South America.

HOPE is coordinated by Nadine Witkowski (Pierre et Marie Curie, Paris, France), Marisa Michelini (Udine, Italy) and Ivan Ruddock (Strathclyde, Glasgow, United Kingdom).

▸ **Further information:**
http://hopenetwork.eu/

INARIE

Integrating Access to Pan-European Research Infrastructures in Central and Eastern Europe Debrecen,
Hungary, 30 November – 2 December 2015

The INARIE workshop (Integrating Access to Pan-European Research Infrastructures in Central and Eastern Europe) took place in Debrecen, Hungary from 30 November to 2 December 2015. INARIE was organised by the Institute for Nuclear Research (Atomki), the Hungarian Academy of Sciences, the Wigner Research Centre for Physics, and the European Physical Society in frame of the International Year of Light. The workshop was part of the INARIE project of the EPS Committee of European Integration (EPS-CEI) and concluded a series of previous EPS-CEI workshops in Bucharest, Sofia and Trieste. The workshop was attended by 84 participants, 34 of which came from 25 institutions of 17 countries.

Following the idea of the EPS-CEI INARIE project, the organisers of the workshop aimed to bring together research infrastructures (RIs), policy-makers of the European Commission, and of European governments, the directors of major light sources and similar RIs with representatives of interest groups of scientists from Central and Eastern Europe as well as elsewhere in Europe in order to foster, in a combined bottom-up and top-down approach, forming consortia of shareholders from small and medium-size countries to pan-European RIs in physical and engineering sciences. Indeed, as a rule, governments of these countries cannot afford to pay the high minimum membership fee and, therefore, their scientists are handicapped in using the best European RIs. Accordingly, the main objective of the workshop was to discuss the possibility of organising consortia of countries in Central and East European region to obtain access to major Pan-European and networks of existing RIs.

A highlight of the workshop was an inspiring round-table discussion focusing on the modalities of solving acute problems in the access of scientists from small and medium-size countries to major pan-European RIs. Participants of the discussion moderated by Dénes Lajos Nagy, Wigner Research Centre for Physics, Hungarian Academy of Sciences, Budapest were Hartmut Abele (Atominstitut, TU Wien), Ferenc Friedler (Vice President, National Research, Development and Innovation Office, Budapest), Philippe Froissard (European Commission, DG Research & Innovation), Dmitry Kamanin (JINR, Dubna), Zbyněk Souřek (Institute of Physics, Academy of Sciences of the Czech Republic, Prague) and Ioan Ursu (Horia Hulubei National Institute of Physics and Nuclear Engineering, Bucharest-Magurele). The round table was marked by an active participation from the audience.

The results of the round table were in full accordance with the Debrecen Declaration, the main document of the workshop on supporting the access to pan-European research infrastructures by scientists of small and medium-size countries (**www.epsnews.eu/2016/01/declaration-at-the-inarie-workshop/**). The Debrecen Declaration has been signed by László Lovász, President of the Hungarian Academy of Sciences, Christophe Rossel, EPS President and John Womersley, European strategy Forum on Research Infrastructures (ESFRI) Chair.

The closing remarks of the workshop were delivered by Christophe Rossel, President of the European Physical Society. He recalled some of the key ideas that emerged during the workshop: that the impact of research needs to be quantified, that it is good that large infrastructures have a multidisciplinary spectrum and that the various RI roadmaps show that the community is prepared for the future.

▸ **More details and pictures are available at the workshop website:**
http://w3.atomki.hu/inarie/

HISTORIC SITES PROGRAMME

The EPS HS Committee are: Alan Chodos (representing the American Physical Society, APS), Luisa Cifarelli (Chair), Martin Huber, Maciej Kolwas, Ove Poulsen, Peter Maria Schuster, Fritz Wagner. Observer: Antigone Marino (EPS Young Minds).

Until 31 December 2015, 51 proposals of Historic Sites were received, either spontaneous or channelled through National Member Societies. Let us recall that proposals can be made at any time from the EPS web site: **http://www.eps.org/?page=distinction_sites**

The HS Committee examines the proposals typically three times per year.

Until 31 December 2015, 47 proposals of EPS Historic Sites were accepted and concern the following 20 Countries (one of them outside geographical Europe):

Austria, Belgium, Bulgaria, Czech Republic, Denmark, France, Germany, Hungary, Italy, India, The Netherlands, Poland, Portugal, Russia, Serbia, Spain, Sweden, Switzerland, United Kingdom, United States.

Through 28 February 2016, 27 EPS Historic Sites have been inaugurated in 16 different Countries:

- The Goldfish Fountain of the Physics Institute of Panisperna Street – *Fermi Centre, Rome, Italy, 20 April 2012*
- The Laboratory "Les Cosmiques", *Col du Midi, Chamonix, France, 23 July 2012*
- Hoza 69, *Warsaw, Poland, 10 January 2013*
- The Study of Bruno Pontecorvo – *JINR, Dubna, Russia, 22 February 2013*
- The Hill of Arcetri, *Florence, Italy, 17 May 2013*
- The Villa Griffone in Pontecchio Marconi, *Bologna, Italy, 26 May 2013*
- The Observatory of Tycho Brahe, *Hven Island, Landskrona, Sweden, 11 September 2013*
- The LAL-LURE Accelerator Complex, *Orsay, Paris, France, 13 September 2013*
- The PTB, Formerly PTR, The National Metrology Institute, *Berlin, Germany, 8 October 2013*
- The Cathedral, *Kamien Pomorski, Poland, 11 October 2013*
- The Neutrino Experiment at MTA Atomki, *Debrecen, Hungary, 25 October 2013*
- The Niels Bohr Institute, *Copenhagen, Denmark, 3 December 2013*
- The AdA Storage Ring at the INFN Frascati National Laboratory, *Frascati, Rome, Italy, 5 December 2013*
- The European Birthplace of the Atomic Timekeeping – *NPL, Teddington, UK, 31 January 2014*
- The Blackett Laboratory, *London, UK, 30 April 2014*
- The Fabra Observatory, *Barcelona, Spain, 9 May 2014*
- The Study of Georgi Nadjakov, *Sofia, Bulgaria, 23 May 2014*
- The Synchro-Cyclotron, *SC – CERN, Geneva, Switzerland, 19 June 2014*
- The Kamerlingh Onnes Laboratory and Lorentz Institute, *Leiden, The Netherlands, 9 February 2015*
- The Milan Milankovic Climate Research Centre, *Belgrade, Serbia declared on 3 October 2014*
- The Hungarian Lutheran Church, *Budapest, Hungary, 23 April 2015*
- The Ludwig Maximilian University, *Munich, Germany, 6 May 2015*
- The Students Residence, *Madrid, Spain 13 May 2015*
- The Mount Vesuvius Observatory, *Hercolaneum, Naples, Italy 23 May 2015*
- The Institute for Radium Research, *Vienna, Austria 28 May 2015*
- The Einstein House, *Bern, Switzerland, as Joint APS-EPS Historic Site 14 September 2015*
- The Hotel Metropole, *Brussels, Belgium 24 October 2015*
- The Mach laboratory *situated at Ovocny trh 5, Prague, Czech Republic, 18 February 2016*

Already scheduled inaugurations in 2016, in 3 different countries (2 other than the above), are the following:

- The Milan Milankovic Climate Research Centre, *Belgrade, Serbia (already declared on 3 October 2014, inauguration date t.b.d.)*
- The Cabinet of Physics of the University of Coimbra, *Coimbra, Portugal, 11 March 2016*
- The Former Physical Institute of the University of Würzburg, *Würzburg, Germany, 7 June 2016.*

For each inauguration event, a plaque is unveiled in the presence of the local representatives and authorities. The EPS President or his representative (Past President or Member of the EPS Executive Committee or Member of the EPS HS Committee) attends the ceremony. Each ceremony is reported right away in the electronic newsletter e-EPS and on the EPS web site, and an extended article is published afterwards in EPN. So far, this initiative has been a series of success stories: while stamping significant places for the history and the progress of physics, it provides visibility to physics and to the physics community and, at the same time, enhances some spirit of belonging to the EPS. The EPS Historic Sites Committee strongly recommends the continuation of this initiative. ■

▾ The Kamerlingh Onnes building and a part of the canal where in 1807 a gunpowder ship exploded, destroying many houses and making place for the laboratory.

Gerd Leuchs, EPS Honorary Treasurer

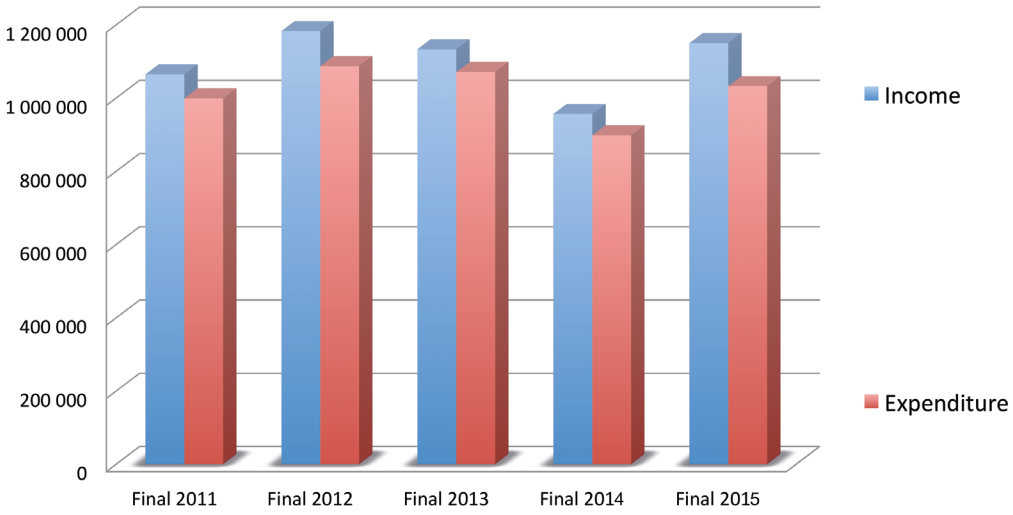
FINANCIAL REPORT 2015

The income for 2015 was Euro 1 149 548, 55% from Members, 23% from publication activities and 22% from conferences and other activities. The expenditure for 2015 was Euro 1 032 244, 35% for administration and governance, and 65% for activities. The outcome for the year was an excess of Euro 117 304.

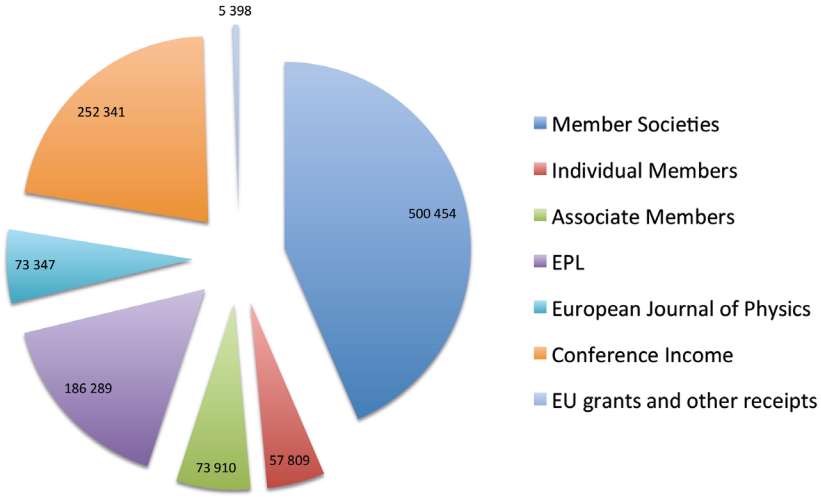
Income was 6.5% more than budgeted. Individual Member income remained stable, while income from Member Societies increased by 5% compared with 2014. Income from conference services was significantly more than budgeted, due to the large increase in the number of participants at the CLEO/Europe – EQEC conference. Administrative expenditure has remained stable, and within budget. The activity expenditure on European representation was 70% less than budgeted, as some of the projects initially foreseen in 2015 were not undertaken. Expenditure for outreach has increased by 50%, due principally to activity related to the International Year of Light.

Substantial work has been done in producing accounts that are more readable and to fulfil the requirement, agreed at the Exceptional Council Meeting in 2010, that EPS income and expenditure should be reported as three business units (labelled as Federation, Learned Society and Publishing) in order to facilitate a comparison between 'federal' and 'learned society' activities.

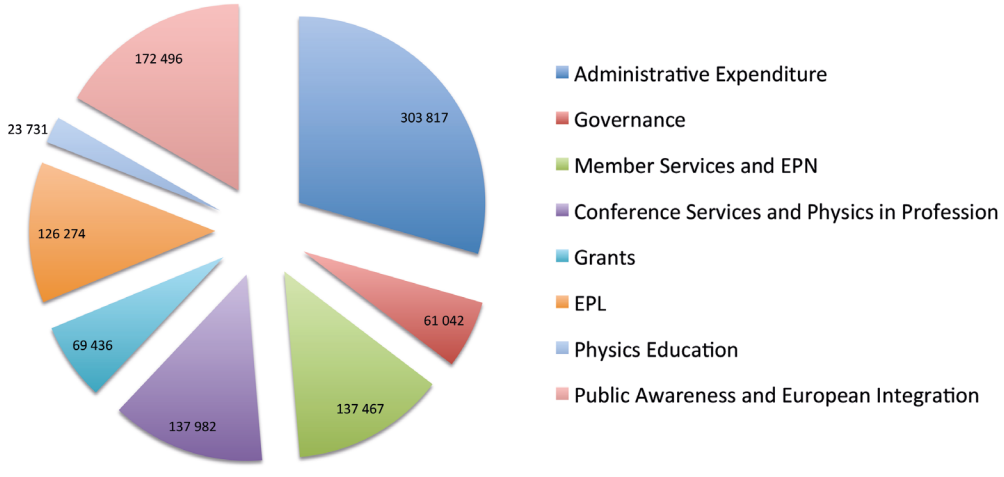
Income and Expenditure 2011 -2015 (in Euro)



Income 2015 (in Euro)



Expenditure 2015 (in Euro)



SECRETARIAT

The Secretariat of the European Physical Society is headquartered on the campus of the Université de Haute Alsace, in Mulhouse, France. Staffing fluctuated throughout the year, linked mainly to conference activity, some natural staff turnover, and increase in activity related to the International Year of Light 2015. At the end of 2015 the EPS employed 11,4 FTE, in 4 main areas: Core Secretariat (5,4); Conference Services (2), International Year of Light (1) and the EPL Editorial Office (3). In addition, the UHA has made a full time secretary available to the EPS.

The Core Secretariat provides administrative services to the EPS, including accounting, graphic design, and information technology. Among the main tasks are the preparation of Europhysics News and e-EPS, website maintenance and design, financial control, invoicing *etc.* The Secretariat also supports Divisions and Groups, and the activities of EPS Committees, and the Executive Committee. European relations, relations with other societies, communications, outreach, policy monitoring and EPS involvement in EU projects are also part of activities of the Core Secretariat.

The Conference Services department provides a full range of services for conferences organised by EPS Divisions and Groups. These include committee management, web site design and maintenance, communication, onsite logistics, online paper submission and maintenance, budgeting, *etc.* The largest conferences organised by the EPS Conference department were the CLEO/Europe-EQEC conference in Munich, (DE), with 1942 participants and the NANOMETA, Seefeld (AT) conference with 217 participants. In addition the EPS Secretariat was involved in the organisation of the Launch Meeting of the International Year of Light, in Paris, France and in the organisation of the 4th Leadership Meeting of the Young Minds in Barcelona, Spain.

EPS headquarters in Mulhouse also houses the EPL editorial office: the staff editor, as well as 2 editorial assistants. In 2015, the EPS Editorial Office handled 1,865 manuscripts. The median submission-to-online time during 2015 remains below 100 days (submit-to-accept ~74 days; accept-to-online ~18 days) consistent with the previous year. ■

▼ **Top:** F. Burr, S. Loskill, D. Lee, G. Gunaratnam - **Middle:** P. Padovani, X. de Araujo, P. Helfenstein, A. Ouarab - **Bottom:** J.G. Rivero González, S. Fila, O. Fornari, K. Desse.

ACTION COMMITTEES REPORTS 2015

CONFERENCE COMMITTEE

Chair: Dominique Vernhet

Conferences, Workshops, and Summer Schools are essential elements in the communication of physics, the career development of physicists, the promotion of physics towards students and young scientists, and for the reputation and credibility of the EPS and physics. The role of the Conference Committee is to advise the EPS Executive Committee on the development of all activities and programmes in the area of such scientific events, and to administer EPS Conference grants. The committee members are Dominique Vernhet (Chair), Colin Latimer (Co-Chair), Gerd Leuchs (EPS Treasurer), Ophelia Fornari (Secretary), Goran Djordjević (Chair CEI), Jo Lister (EOC committee member), Jef Ongena (Chair EPS Energy Group), Marian Reiffers (EPS Executive Committee).

The Conference Committee is responsible for the collecting and disseminating information on both Europhysics Conferences (*i.e.* conferences organised by EPS Divisions and Groups), and for evaluating applications to obtain the label of EPS Sponsored Conference. Conference organisers may also request EPS Conference patronage, which is awarded upon approval of the President and entitles the organisers to use the EPS logo and communications network to disseminate information.

In 2015, the criteria applied for the EPS Sponsored Conferences (/scientific events) have been simplified. The new criteria are available on the EPS website.

Conferences/ scientific events

The Conference Committee received 44 applications of conferences/events for 2015. Among them, 14 Europhysics and 26 EPS Sponsored conferences have been approved.

Conference Grants

The EPS makes grants available to the organisers of Europhysics conferences for the **Young Scientists** in their meeting. Per conference a maximum of 3 grants of 350 € each can be distributed.

Conferences

In 2014 there were 12 Europhysics and 23 EPS Sponsored conferences. The largest conference organised by the EPS Conference department was EUROPHOTON, Lausanne, Switzerland (with participants from over 30 countries). In addition a successful Forum Physics & Society meeting was organised and the 14th European Solar Physics Meeting received substantial organisational support.

Conference Grants: the EPS makes grants available to the organisers of Europhysics conferences to allow the participation of young scientists in their meeting. Per conference a maximum of 3 grants of 350 € each can be distributed. In 2014, grants totalling 7600 euros were distributed

IM Travel Grants: the EPS makes grants available to Individual Members (IMs) of the EPS for the participation in an EPS recognised (Europhysics or Endorsed) meeting. Members may receive a grant of 350 € only once and may request support only in the first 3 years of their membership.

Invited Speaker Grants: the EPS makes grants, of 500 € each, available to conferences organised by EPS Divisions and Groups (Europhysics conferences) to cover costs of invited speakers.

EPS Poster Prize: grants, of 200 € each, are available to EPS Europhysics or Sponsored conferences for a poster prize, to make an award to a student who has presented the best poster at the conference.

▸ **Further information on EPS conferences and grants, including application procedures, is available on the EPS website: www.eps.org/?page=events.**

HISTORIC SITES COMMITTEE

Chair: Luisa Cifarelli

See highlights, above

DISTINCTIONS AND AWARDS COMMITTEE

Chair: Martial Ducloy

This recently created committee is supposed to examine in the coming year EPS awards and distinctions, including Honorary Members and Fellows. It should advise the Executive Committee on awards by EPS Divisions and Groups, as well as on proposals for new awards, and check the conditions of prize awarding (ethical rules, *etc.*).

This committee has clearly to find its position inside the EPS structure. There are about 30 prizes awarded by Divisions and Groups, and one should add the various prizes (>~5) given by the Executive Committee and EPS president. Indeed 18 and 22 prizes have been awarded in 2013 and 2014 respectively. All these awards are normally examined by the Executive Committee. The D&A Committee is still examining when it should become involved as this is not well defined. The chair of the D&A Committee was involved in only one endorsement procedure in 2015 (the IBA prize awarded by the Nuclear Physics Division,). Another D&A activity has been to check the conditions of creation of a new EPS award "the EPS Achievement Award".

In summary, the Executive Committee should make explicit the working conditions as well as the structure of the D&A Committee, in order to make it effective. Also some general thoughts should be done about the inflationary number of EPS awards.

EQUAL OPPORTUNITIES COMMITTEE

Chair: Lucia di Ciaccio

In 2015, the Equal Opportunity Committee of the EPS was engaged in several actions aiming to accomplish the Committee mandate of promoting a balanced representation of women in physics.

As in previous years, the EOC organised the attribution of the Emmy Noether Distinction for Women in Physics. The purpose of the Distinction is to enhance the recognition of noteworthy women physicists proposing them as role models for the young generations of physicists.

Two calls for nominations were issued: the first in Spring and the second in Autumn. An *'ad hoc'* Selection Committee appointed by the chair of the EPS Equal Opportunities Committee reviewed the eligible nominations and made proposals to the Executive Committee for endorsement. The 2015 laureates were:

Anna Fontcuberta i Morral, from the Institut des Matériaux of the École Polytechnique Fédérale de Lausanne, Switzerland, for her pioneer work on high quality III-V nanowires grown in a self-catalytic method by Molecular Beam Epitaxy allowing to produce novel nano-heterostructures in particular for photovoltaic and quantum optoelectronic applications.

Sibylle Günter, from the Max-Planck Institute for Plasma Physics, Garching, Germany for her leading role in the study of the effects of microscopic physics on the large-scale behaviour and stability of hot magnetised plasmas in fusion devices.

In 2015 the EOC launched a new project named "Visibility for Young" with the help of the Young Minds Action Committee. The project consists in preparing and publishing in e-EPS short portraits of young women researchers in physics in the very early stage of their career in academia or in industry. The idea is that a young female candidate physicist (student, post-doc or young researcher) may identify herself with a person only few years older and find positive answers to the concerns that she might have regarding the choice of pursuing a career in physics. Two portraits were published: the first in August and the second in November and were very well received.

The EOC was also solicited to propose a name for a new EPS Prize serving the purpose of recognising strong engagement in activities dealing with outreach and public understanding of physics. The Committee has examined the scientific and personal career of many women physicists with outstanding scientific merits and strong relations with Europe and proposed a name for endorsement to the Executive Committee.

For the year 2016 additional actions are under consideration. One consists in encouraging the participation, as member of the Committee, of young male physicists. The Committee aims also to promote a closer collaboration with MS and D/G.

COMMITTEE ON EUROPEAN INTEGRATION

Chair: G. Djordjevic

Members

In 2015, the composition of the CEI was: Goran Djordjević, Serbia (chair), Ana Proykova, Bulgaria, Radu Constantinescu, Romania, Maciej Kolwas, Poland, Guido Martinelli, Italy, Dénes Lajos Nagy, Hungary, Sofoklis Sotiriou, Greece.

Background

In accordance with the accepted strategy, the EPS-CEI activity was oriented to promote Physics and the scientific cooperation across South-Central-Eastern Europe. The focus was put on five important actions:

- **Action 1:** Project "Towards the integration of the physics community in CEI countries into the ERA"
- **Action 2:** Integrating Access to Research Infrastructures in Europe.
- **Action 3:** Training – EPS School Program - Schools for Physics students.
- **Action 4:** Education and teachers training.
- **Action 5:** Strengthening the regional cooperation among EPS member societies and physics` promotion.

The budget for the EPS-CEI was Euro 10,000. The Committee chose to work in synergy with other organisations and structures that supplied supplementary resources. In the field of Theoretical and Mathematical Physics, the activities were significantly integrated in the SEENET-MTP Network program (**www.seenet-mtp.info**). Here are some specific activities of EPS-CEI which took place in 2015.

Action 1: Activities in 2015

The main activity of the Committee in 2015 was the continuation of the Project "Towards the integration of the physics community in CEI countries into the ERA".

Background of the Project: A Consortium, consisting of EPS, ICTP (International Centre for Theoretical Physics, UNESCO Venice Office and SEENET-MTP, supported by Central European Initiative Trieste implemented the Project. The main goal was to bring together scientists from the Balkans and Central Europe, their partners all over Europe, EU officials and science policy experts, and to establish a strategic partnership between them. Consideration of concrete and forthcoming calls for joint projects in physics and science education has been a natural continuation of these activities. Three workshops were held during 2014. Three projects have been submitted:

1. Joint PhD Program CERN-SEENET in High Energy Theoretical Physics Total budget for 2015 – 50.000 CHF. Accepted. Implemented. **http://phd.seenet-mtp.info**
2. **PHYSICS+: Alternative Paths for Physics Students;** Erasmus+ / Knowledge alliance KA2
3. Particle Physics: Theory and Phenomenology. MARIE SKŁODOWSKA-CURIE ACTIONS/Innovative Training Networks (ITN)

Action 2: The INARIE workshop

(Integrating Access to Pan-European Research Infrastructures in Central and Eastern Europe) 30.11 – 2.12.2015, Debrecen, Hungary.

The workshop concluded a series of previous EPS-CEI workshops in Bucharest, Sofia and Trieste. INARIE took place in the premises of Atomki in Debrecen. It was attended by 84 participants, 34 of which came from 25 institutions from 17 countries outside Hungary. The workshop was opened on behalf of EPS-CEI by R. Constantinescu (Craiova-Uni). A number of key holders in the field of Research Infrastructures in Europe, as J. Womersley, M. Venkatesh, F. Linde, C. Rizzuto, and many others, contributed to the high level of the meeting, making it one of the main

events in the CEI program in 2015. The main document of the workshop is the Debrecen Declaration, supporting the access to pan-European research infrastructures by scientists of small and medium-size countries (**www.epsnews.eu/2016/01/declaration-at-the-inarie-workshop**). The Declaration was signed by L. Lovász, President, Hungarian Academy of Sciences, C. Rossel, EPS President and J. Womersley, ESFRI Chair.

Action 3:
In the direction of *Student Training - EPS School Program - Schools for Physics students*, the Committee cooperated with SEENET-MTP in implementing the PhD Training Program organised in cooperation with CERN. Two Schools, in Belgrade and Bucharest, were held. **http://phd.seenet-mtp.info/**

Action 4: In the frame of Physics education and teachers training activities
The Committee was involved in the organisation of:
The 3rd International Symposium «Position of Physics in Secondary Schools in Balkan Region», Aleksinac, Serbia, February 20-22, 2015. The symposium brought together over 120 participants from 10 countries. It has the potential to be one of the central events in the region within framework "teachers for teachers". The EPS-CEI mission and activities were presented by the Committee chair and the preparation for the "Balkan-Physics-Marathon program" was initiated.

The seminar for teachers in partnership with ESEA and Galileo Teachers Training Program was held in Craiova, Romania, in December 2015. This program will be continued in 2016.

Action 5:
For strengthening the regional cooperation among EPS member societies, the Committee tried to involve as many national societies as possible in its activities. The results can be characterised as follow:

- **Officially represented and fully included:** Union of Physicists in Bulgaria, Hellenic Physical Society, Eötvös Loránd Physical Society Hungary, Polish Physical Society, Romanian Physical Society, Serbian Physical Society.
- **Active participation of individual members:** Albanian Physical Society, Belarusian Physical Society, Croatian Physical Society, Society of Physicists of Macedonia, Moldovan Physical Society, Turkish Physical Society, Ukrainian Physical Society.
- **Contact has been established:** Society of Mathematicians, Physicists and Astronomers of Slovenia, Slovak Physical Society. Contacts with two societies in Bosnia and Herzegovina have been also established. The president of one of these two societies took part in one of the Committee meetings.
- **No feedback:** Armenian and Georgian Physical Societies and Physical Society of Montenegro.

As an activity of the Committee in 2015, we can report the *Informal meeting of Physical Societies - IPSEC X, 7 September 2015, Kielce, Poland*. It is a traditional meeting held under the auspices of the EPS and the CEI. This year 15 representatives from 9 physical societies participated and the role of national and international scientific societies in the modern world was discussed. For *promotion of physics in the region(s)*, a working meeting of the Committee devoted to the preparation of the joint projects was held in Mulhouse, France (July 2015) with participation of E. Kypriotis, A. Proykova, R. Constantinescu, G. Djordjević, M. Kolwas and D. Lee.

A series of events promoting Science, Education and Culture in the context of the IYL 2015, "Lights of the World" Bucharest, 30th October - 1st November 2015, Palace of the Parliament and **marking the 70th anniversary of UNESCO were organised with the participation of more than 100 attendees.**

Some updating of the EPS-CEI web page was done and preparation of its new form has been finished. The EPS-CEI web page will appear in the new form in March 2016.

Action Plan and Budget for 2016:
The Committee will continue to work on further implementation of the above mentioned projects. A meeting of the EPS leaders, Committee members and invited guests is planned. In the frame of Physics education and Teacher's training program, with a strong support of ESEA and in cooperation with UNESCO, a *Balkan-Physics-Marathon program* is planned. A team of about 40 very good teachers mainly from Albania, Bulgaria, Greece, Serbia and Romania will spend 10 days together travelling 1500 km through 3 countries, visiting scientific and educational centers, historical sites and natural landmarks. The program will be concluded with a 5-day Summer Institute in the Marathon.

Depending on the budget, which is proposed to be at the same level as in 2015 – 10.000 EUR, the Committee will be open to support other activities throughout the year. The Committee term will be finished in June 2016, and, with some changes, it can continue on course taken during the last 3 years.

FORUM PHYSICS AND SOCIETY

Chair: Averill Macdonald

Main Achievements of 2015
The composition of the FPS has been renewed (see table below). Out going members join an ad hoc advisory group for future FPS activities.

Made preliminary plans for VII Forum 2016

Plans for 2016
Run VII Forum for Autumn 2016;
Develop better use of website

Plans for VII Forum – London October 2016:
The VII Forum will focus on an important problem, *e.g.* the lack of girls studying physics beyond age 18 and the lack of women working, particularly at the higher levels, in physics related careers, or the need to train sufficient number of scientists in the ERA, …
Dates: Wednesday 26th - Friday 28th October
Location: Institute of Physics, 80 Portland Place, London.

PRELIMINARY PROGRAMME:
Wednesday 26th October
18.00 Welcome reception at The Science Museum, South Kensington, London.
Thursday 27th October
AM: introductions from EPS member institutes of the magnitude of the issue of gender balance in Physics in their countries
PM: expert speakers introducing successful projects currently in place in different countries *e.g.*
Institute of Physics UK 'Gender Initiative'
Women in Science and Engineering Campaign 'People Like Me'
Kings College London 'Aspires' and 'Opening Doors'

N.B. suggestions are welcome from the EPS Council for speakers to describe successful projects across Europe. Please send to **a.m.macdonald@reading.ac.uk**.
Friday 28th
AM: further examples of successful projects
PM: group discussions of recommendations to the EPS

NAME	COUNTRY
Averil Macdonald	UK
Mirjana Bozic	Serbia
Sonja Drexler	Austria
Lydia Sanmarti	Italy
Ian Bearden	Denmark
Hendrick Frederick	Belgium
Xavier Alvarez	Spain
Antigone Marino	Italy
Katarina Vukovic	Serbia
Katarina Vukovic	The Netherlands

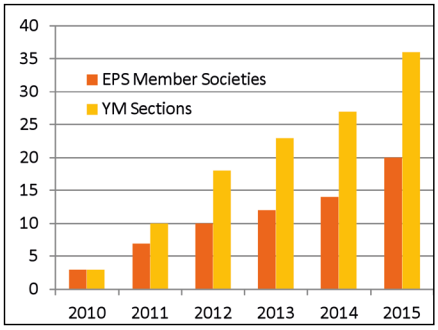
YOUNG MINDS ACTION COMMITTEE

Chair: Antigone Marino

The first aim of the YM project is to encourage and support professional skills of the next generation of physicists in Europe. The first tool that we identified in 2010, the year of launch of the project, was the creation of local student groups, called Sections.

YM Sections, once they joined the project, direct their efforts a) to organise seminars, workshops and schools, b) to carry out educational activities for schools and in general outreach activities, c) to join and enrich the scientific community through the implementation of national and international networks, collaborations between them, with the local communities and with other societies.

In 2015 the YM continued to grow. Currently, the project includes 400 young scientists from over 35 Sections in 20 countries: Spain, Italy, Russia, Germany, United Kingdom, Ukraine, France, Switzerland, Turkey, Austria, Belgium Hungary, Czech Republic, Denmark, Latvia, Lithuania, The Netherlands, Poland, Portugal, and Morocco.



The YM project supports their activities with small grants. The main criteria for evaluating their grant applications are professional relevance, cultural outcome, visibility and impact for the EPS, and impact per Euro. Professional relevance means the activity potential to bring new skills to the Section members to improve their own professional development. Cultural outcome is ensured requiring all activities to either have a direct connection to scientific research, dissemination of science, or building a professional network. Visibility and impact for the EPS is required to achieve another goal of the project, which is to make the EPS and the National Physical Societies better known among young people, who often do not know the benefits that these Societies reserve them. Finally, impact per Euro is our catchphrase to emphasise the fact that we expect our members to work hard to maximize the effect of the money they spend, an issue that a young scientist will always have to face in the world of scientific research. In the next paragraphs the key challenges the project had to face in 2015 are described.

YM Granted Activities

For 2015 the main goal was to involve more and more EPS Member Societies. YM is now running in 20 countries, with the help of its related national societies. Among them, new ones with respect to 2014 are Portugal, Denmark, The Netherlands, Czech Republic, Austria, Belgium and Morocco. The last one clearly expresses the interest of the project for Mediterranean countries.

For each year January 15th and July 15th, are set as deadlines for the grants request submission. During 2015, the project funded 64 activities, submitted from 23 Sections: 68% outreach activities, 21% professional development ones, and 11% networking activities.

What worries the Committee is the number of rejected requests, which have grown from 10% in 2014 to 20% in 2015. This is due to an increase in the number of YM Sections, while the project budget is fixed to 20k€.

A list of the granted activities and their outcomes are reported on the YM website: **www.epsyoungminds.org/sections/**

International Year of Light (IYL2015)

2015 will be remembered from the scientific community as the International Year of Light. Young Minds had the opportunity to run special grants. Between the 44 outreach activities, 20 were specially dedicated to light and light based technologies.

YM Action Committee

The YM Action Committee is composed of senior scientists, young scientists, and people from the EPS staff, for a total of 10 members.

The senior members are Christophe Rossel, EPS President, and Zsolt Fülöp, member of the Executive Committee. The EPS staff members ensure the best connection between the project and the EPS: the Secretary General, David Lee; and the Conference Assistant, Ophélia Fornari. The young scientists are Antigone Marino (Italy) and Ulrike Ritzmann (Germany), Enrique

Sanchez (Spain), Eva Salvador Balaguer (Spain), and Bence Godó (Hungary), and added two new members joined the group: Roberta Caruso (Italy) and Jonas Berzinš (Lithuania). The action committee met twice in 2015. On May 29th in Barcelona (Spain) during the 4th YM Meeting at ICFO, and on November 28th in Konstanz (Germany).

4th YM Leadership Meeting

On 29-30 May 2015, representatives of the EPS Young Minds sections were invited to present and discuss their activities at the 4th Young Minds Leadership Meeting, held at the Institute of Photonic Sciences (ICFO) in Barcelona, Spain.

As in previous editions, the meeting started with a general overview of the EPS YM project, its growing success and expansion over the past 5 years. All the Sections had the opportunity to present their activities. Once again outreach remains the pillar of the YM activities, followed by events for professional development (schools, seminars, *etc.*) and networking events.

Physics League, the YM Section of the University of Valladolid in Spain, won the 2015 Best YM Activity Award with an amazing outreach show on Physics and Superpowers. This year the prize was sponsored for the first time by the frontier letters journal EPL.

ICFO was one of the best places for the YM Leadership Meeting 2015, during the International Year of Light. Moreover, the Institute offered an enviable palette of invited speakers that the young scientists had the opportunity to listen to and meet. Romain Quidant, leader of the Plasmon Nano-Optics Group, was invited to talk on "Nano-Optics: When light gets us into the nanoworld". Niek van Hulst, leader of the Molecular nanophotonics group, gave an overview on the research at ICFO which has more than 20 research groups, making the Institute one of the leading research centres in optics in the world. Finally Lydia Sanmarti-Vila, leader of the Knowledge & Technology Transfer Department, introduced ICFO's outreach projects aimed to bring photonics closer to the society.

The EPS activities were presented in two interesting talks. Christophe Rossel, president of the EPS, gave a plenary lecture providing his personal view of the relations between Physics and Society. David Lee, the EPS Secretary General, gave a talk about "The European Physics Community", highlighting the importance of the YM project for the society itself, and the increasing need of interaction with European initiatives involved in policies for research.

Looking to the future, YM explored the possibility of activities aimed at developing countries. Lorenzo Giorgi, Executive Director of Liter of Light Italy, and Barbara Capone, C.E.O. and project leader of Sunshine 4 Palestine, introduced the YM members to the world of physics for development, showing how physicists can work to help needy communities.

YM and EPS

In 2015 YM was invited to give a talk at the Bad Honnef EPS Council meeting. It was a good opportunity to present the first 5 years project results, and be in contact with all the EPS groups, divisions and committees.

YM is trying to be, year after year, more integrated in the EPS structure. In the past years our collaboration with the Historic Sites Committee and the Forum for Physics and Society one were settled up. This year new collaborations were established by the YM AC be better integrated with other EPS bodies:

For the International Year of Light, the Quantum Electronics and Optics Division (QEOD) and the Young Minds Action Committee offered a limited number of travel grants for PhD Students who wished to attend CLEO®/Europe-EQEC 2015. During the award ceremony in Munich, YM had the opportunity to award 10 students.

YM organised a special session at the European Nuclear Physics Conference (EUNPC), which took place from August 31st to September 3rd in Groningen (NL). In this session invited speakers gave overview talks to train young scientists for their professional knowledge as well as in promoting science.

YM has been co-working with the EPS Equal Opportunities Committee (EOC) for the publication in e-EPS of short portraits of young women researchers in physics. YM believes that young scientists can and have to make a contribution to a social actions like gender equality.

YM and Collaborations

All the collaborations set in these years are going on, in particular the one with the COST Target Network TN1301, *Next Generation of Young Scientist: Towards a Contemporary Spirit of R&I (Sci-GENERATION)*. Sci-GENERATION is a new COST initiative that aims at elaborating contemporary scientific thought and thereby disseminating a new Spirit of Research and Innovation in Europe. These goals will be developed through the creation of a bottom-up and pan-European platform for young outstanding researchers in order to share and transmit their visions on emergent research paths and research policy as well as their respective experience and ideas. ■

Notes

JOURNALS REPORTS 2015

EUROPHYSICS (EPN)

Editor:
V.R. Velasco

Science Editor:
L. J. F. Hermans

EPN has kept its general presentation over the year, except that the last two issues were combined into EPN 46/5&6, following the decision by the Executive Committee. The composition of the production team has remained unchanged.

The size of the "Highlights" section corresponds to slightly over 20% of the available space for editorial material. Now, the maximum number of "Highlights" per issue is 14. Their total number in 2013 was 66, although in issues 44/5 and 44/6 there were 14 and 13 "Highlights", respectively. Their total number in 2014 was 63 with 14 "Highlights" in issues 45/2 and 45/3. Their total number in 2015 was 57, with 13 "Highlights" in issues 46/2 and 46/4.

The News section is devoted to EPS statements and activities, scientific reports on EPS conferences, prize and award laureates of the Society, *etc.* This information is to be supplied by all bodies of the EPS, *i.e.*, the Executive Committee, Action Committees, Divisions, Sections and Groups. **it is the duty of these bodies to keep all EPS members informed of their activities, and Europhysics news is made to carry the information.** In particular, EPS prizes should be reported in EPN, in order to ensure the legacy and value of the prize through a printed announcement, distributed in over 25,000 copies throughout Europe.

Almost all the EPS Historic Sites inaugurated in 2015 have been covered in EPN.

This year, after an interlude, EPN published a book review. Unfortunately we have not found reviewers for other requests of different publishers. It would be good to receive information of the Divisions and Groups about possible candidates willing to review.

The biggest novelty in 2015 was EPN 46/5&6, the special issue devoted to the IYL2015. All features were devoted to subjects related to different aspects of light. Prof. Luc Bergé, Chair of the Quantum Electronics and Optics Division of the EPS, was the Guest Editor. We thank him for his excellent choice of authors and subjects and the smooth and timely handling of the process.

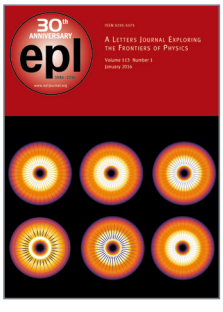
At the same time that EPN is printed, it is made accessible on the web freely and fully. This makes it available not only to all European physicists, but to everybody in the world. The statistics of the web visits look very encouraging. The web version is basically the same as the printed issue. However, it adds a new degree of freedom by giving space, when needed, to complementary documents such as videos or scientific developments related to a subject that is presented in the printed issue. So far this has only scarcely been used. Another bonus is the flip book pdf version with an html version indexed by Google. This user-friendly flip book is available for all issues (see:**www.zyyne.com/widgetdoc;13732**).

The EPN Editorial Advisory Board (EAB) had to bid farewell to Małgorzata Nowina-Konopka (PL) and Mirjana Božić (HR) who reached the end of their term. Antigone Marino (Napoli, IT) joins the EAB as of January 2016. The EAB continues to widen the scope of Feature topics as much as possible, recruiting authors increasingly from the borders of physics and other domains. This is progressively achieved by adjusting the composition of the board, upon member replacements, giving priority to *topical* rather than *geographical* distribution. We feel that EPN must primarily be instructive and pleasant to read, rather than reporting from the cutting edge of physics research. In this spirit it was decided, as of 2014, to open a new 'Crossing Borders' column as an outreach into the public domain.

The editorial team of EPN, however small, hopes to continue to make an increasingly interesting journal, but needs the help and support of the Council in two ways:

- First, the Council can make suggestions for editorial policy and improvements.
- Second, each Council member can help by providing short information of lasting interest (preferably with pictures) at the wider European scope.

EPL



Editor in Chief:
Giorgio Benedek

Executive Editor:
Graeme Watt

Staff Editor :
Frédéric Burr

EPL publishes original, high-quality Letters in all areas of physics, ranging from condensed matter topics and interdisciplinary research to astrophysics, geophysics, plasma and fusion sciences, including those with application potential. The Journal was founded in 1986 by the European Physical Society (EPS), the Société Française de Physique (SFP) and its subsidiary EDP Sciences, the Società Italiana di Fisica (SIF) and the Institute of Physics (IOP). The new journal incorporated Lettere al Nuovo Cimento and Journal de Physique Lettres and was published by EPS, EDP Sciences, IOP Publishing and SIF for a partnership of 17 European physical societies (the EPL Association). EPL is now available in more than 2000 institutions world-wide and has an Impact Factor of 2,095.

Report of the EPL Editor-in-Chief

The data reported below in the Executive Editor's Report, while indicating a journal in a substantially good health as concerns the very high scientific quality of papers published, with an increasing number of down-loads worldwide, nevertheless show that the projections outlined in the EPL Strategy to 2015 (2015 impact factor (IF) > 3, acceptance rate reduced to 33% with submissions raised to 3,000) have not been met. A contributing factor is the decline in the number of submissions from China, due in part to the adoption in China of new evaluation criteria based on bibliometrics. EPL is now assigned to the third rank with an IF < 2.5. Some specific action is needed, as indicated below. It should be noted however that the new acceptance criteria and visibility actions, adopted at the end of 2014, and the restructuring of the Editorial Board with the nomination of 9 Deputy Editors, implemented during 2015, will hopefully start affecting the number of submissions and the acceptance rate during 2016. The first IF eventually affected by the new editorial policy is that of 2016, disclosed in 2017.

A quantitative analysis of EPL status confirms the conclusion that its unsatisfactory IF and other aspects like the abnormal number of 0-citation papers, many of which produced by very good authors, contribute to a visibility problem. The quality of papers is generally very high, as expected form the outstanding level of its Editorial Board (the average Hirsch index of its more than sixty Co-Editors is 36); the excellent advertising and the short publication times, due to the work of its Executive, Staff and Production editors are other features of EPL, which should merit a much higher IF. Thus the year 2015 has been devoted to the implementation of the actions decided at the EPLA BoD (Board of Directors) meeting held in November 2014 in Hamburg.

Means to increase visibility – In addition to the well-established Compilations, Highlights and EPL Awards, a new type of invited letters, Perspectives (belonging to the Premium collection in addition to Editor's Choice (EC) and Open Access (OA) papers), has been introduced from the end of 2014. As anticipated in an Editorial (EPL 107 (2014) 40000), two series of invited Perspectives (PS) were introduced, one devoted to the International Year of Light 2015 and one to all the other areas of physics covered by EPL

An encouraging result is that Perspectives systematically cover about one half of the top 10 most cited EPL letters, often in the first positions. Although the Perspectives with more than 1500 down-loadings are also collecting citations (the cites/Perspective in 2015 are about twice as those for the ordinary 2015 letters), it is too early to say whether invited Perspectives will be effective in improving the IF.

The Citation Alert (CA) service, initially considered of great help to increase EPL visibility, has been offered so far only to Perspective authors, due to the additional workload implied. Verifying the effective impact of the CA service in terms of additional citations is not an easy matter, so that the extension of the CA service to all EPL papers or at least to all Premium papers has not been considered at least for the near future.

The Premium series, including EC, OA and PS (from the end of 2014) letters, proved to have alone an IF about 76% times larger than EPL overall IF in 2013, so that it was planned to report a Visibility Index (VI) in EPL webpage aside the ordinary IF. However, as documented in the EE Report, the 2014 VI is only 32% larger than the IF, and a similar figure is projected for 2015. The percentage of Premium papers in 2012+2013 and 2013+2014 is about twice that for 2011+2012.

A new editorial decision tree & acceptance policy - As already reported to the Bad Honnef 2015 EPS Council more stringent acceptance criteria have been adopted and communicated by the EPLA BoD Chairman and the EPL EiC to the CEs (Co-Editors). It is too early, however, to evaluate their effects. Some hint may be found in the number of cites/paper in 2015 for papers published in 2015 as compared to the same ratio in 2014: according to ISI-WoS the ratio 0.434 for 2014 is raised to 0.504 for 2015, but not yet as 0.596 of 2013 and 0.656 of 2012. However the ratio for only the PSs is 1.091.

Restructuring the Editorial Board – There have been significant changes adopted in 2015. Nine Deputy Editors, covering the main areas of physics, have been selected among the previous Co-Editors and Advisory Editors. They are gradually replacing the Advisory Editors (no longer nominated). The Board of Deputy Editors (DEB) should assist the EiC in deciding the scientific aspects of EPL editorial policy and in more specific decisions like the choice of new Co-Editors, appeals, *etc.* The first DEB meeting, where also, and only, the new CEs elected in 2015 have been invited, took place in Mulhouse last November.

Another important change is the increase in the number of CEs to more than 60 for a better coverage of topical and geographical areas and for reducing the workload of each CE. In order to reduce the costs of the Editorial Board (EB), plenary EB meetings will in general only take place every third year, in the occasion of the EiC renewal, and will be replaced by Topical EB meetings for the CEs in the various areas of physics, which may be held annually during corresponding topical conferences. The DEB meetings, always including the new CEs, will instead take place every year.

30 Years of EPL - The 30th birthday of EPL (née Europhysics Letters) will be celebrated in Groningen within the EPS-CMD Conference. EPL is co-sponsoring the EPS-CMD Prize which will be delivered with a special ceremony at the EPS-CMD Conference. In that special occasion the plenary EPL EB meeting will be organised.

The EiC acknowledges the very valuable assistance of the Executive Editor Graeme Watt, of the Staff Editor Frédéric Burr and colleagues at the Editorial Office in Mulhouse, as well as all persons involved in EPL management and production at SIF in Bologna, IoPP in Bristol, and EDP Sciences in Paris.

Report of the EPL Executive Editor

Journal Production

The total number of submissions for 2015 was 1,865 (down from 2,103 for 2014; and lower for the 2nd year in a row). Possible causes for this reduction in submissions is under investigation. The total number of articles published in 2015 was 798 (similar to 788 in 2014), significantly down from 868 in 2013 indicating a further tightening of the acceptance rate to ~40%. Reducing

the acceptance rate to attain 33% is a goal but this also depends on an increase in the submissions.

Published articles are dominated by China (182) although this has decreased from 193 in 2014. Then follow France (78), Germany (69), USA (58; down 11 from previous year), Italy (49; up 23 from previous year), UK (44), India (41), Brazil (34) and Russia (30). Most countries, except China and the USA, have a similar value to the previous year. Italy has doubled their published articles!

The strongest categories are 'mathematical methods' & 'statistical & nonlinear physics' with over 110 published articles. Condensed matter electronic structure topics in 'bulk materials', 'transport' and 'surfaces, interfaces, thin films & low-D structures' have over 90 articles in total. These topics form the key strengths of EPL material followed by 'magnetism & ferroelectrics' and 'quantum mechanics' articles each with more than 50 published articles. Applied and interdisciplinary articles have 40 publications.

As a hybrid open access journal (APC of €1,400 at present) EPL is one of the most affordable available although a large take-up has not been evident. Only 10 published in 2015 (12 articles in 2014).

The median submission-to-online time during 2015 remains below 100 days (submit-to-accept ~74 days; accept-to-online ~18 days) consistent with the previous year. Effort will be made during 2016 to bring this down further. Fast-tracking of exceptional articles is still available.

The print run continues to be reduced at intervals depending on subscription demand. The total number of copies of each print issue at the beginning of 2016 is now down to 205. From the start of 2015 double-sized issues (12 printed issues each containing 2 online issues) are beginning to result in a cost saving by only having 12 print runs, instead of 24 previously.

Transfers between EPL and several EDPS and IOPP journals resulted in 40 articles (50 in 2014) rejected from EPL with recommendation to submit to a different journal. 23 of these were subsequently published, compared with 26 in 2014.

At the end of 2015 there were over 3,200 institutions subscribing to EPL.

Marketing & Promotion

Selected Editor's Choice summaries, regularly appear in issues of Europhysics News, are printed as a preface to the first issue of each volume of EPL, and also feature in each alternate e-EPS Newsletter issue. Booklets containing "Highlights of 2014" were distributed at over 200 events throughout the year, containing abstracts from many of the Editor's Choice articles as well as open access, most cited, most downloaded, and other notable articles. Full text is available for download free online throughout the year. The Highlights of 2015 is available for circulation to events in 2016. In addition, the IOPP cross-journal booklets focussed on key topics, such as 'Graphene', 'Semiconductors', 'Quantum Information' link to relevant EPL articles.

The total downloads for 2015 almost reached 570,000 (rising each year; up from 542,000 in 2014). The number of different articles downloaded from the 2015 published articles was 790 with a median downloads per article of 146 (rising from the 120s in previous years). The Editor's Choice articles, of which 65 were published in 2015, averaged almost 400 downloads per article, indicative of the higher quality of these articles selected by Co-Editors. As there is no longer a free-to-read period for any articles the download tables are dominated by the Editor's Choice and Open Access articles that lie outside the pay-wall.

Downloads were dominated by 31% to Asia; 21% to Western Europe and to North America (probably led by the Perspectives). It is encouraging to see North American institutes, led by Yale and MIT, on top of the table with 17% of the downloads. Thus EPL may well be read in these establishments but, so far, no evidence of increased submission activity. China lies next with 15%. The number of downloads to unregistered addresses (non-institutes, mobile laptops, home networks, *etc.*) remains around 13%.

New online compilations are added as older ones are updated. Significant additions during 2015 include – Chaos & chaotic systems; Neutrinos; Phonons; and Thin films, surfaces & interfaces.

Quarterly newsletters are emailed to thousands of recipients targeted for their interest in the content. These mailshots highlight specific published articles, sponsored award winners, short biographies of a few Co-Editors, forthcoming events where EPL may be present, and links to recent compilation topics. Marketing campaigns use a variety of social media resources to promote the journal.

EUROPEAN JOURNAL OF PHYSICS (EJP)

Editor
Michael Vollmer

Associate publisher
IOP Publishing
Iain Trotter

Executive summary

IOP Publishing is very pleased to report to the Council another very successful year in 2015 for the European Journal of Physics (EJP), with the launch of Review articles, the introduction of a strong proactive commissioning programme and new innovations in marketing. We can report significant increases in both accepted articles and article downloads. The sustained focus on strategic development of the journal, as part of a wider education portfolio, will continue to intensify in 2016 with the allocation of further dedicated resources.

Editorial activity

The new appointments to the journal in 2014 have been consolidated with the recruitment to the editorial board of Professor Yurij Holovatch, National Acad. Sci. of Ukraine. As expected, these valuable appointments have had a very positive impact on growing our quality peer reviewed content through their additional supervision and commissioning.

'Physics Education Research' was formally included in the journal's scope this year, and

	Submissions (by received year)						Acceptances (by final decision year)					
Article Type	2010	2011	2012	2013	2014	2015	2010	2011	2012	2013	2014	2015
Papers	638	665	731	712	738	662	144	140	164	146	143	196
Letters	48	31	32	42	34	41	9	6	5	6	4	13
Review						15						2
Featured / Symposia	5	2	2	13	9	12	3	3	3	13	4	3
Other	16	25	22	11	12	14	10	17	17	7	5	9
Total	**707**	**723**	**787**	**778**	**793**	**744**	**166**	**166**	**189**	**172**	**156**	**223**

will be one of the newly introduced subject sections from 2016. This change in scope has been quickly adopted by the journal audience and promises to be an important part of our offering. We have also successfully launched undergraduate-level review articles, with a strong pipeline of commissioned content being added throughout 2015. The first review was published in the November issue and several further articles are currently under review for publication in early 2016. In addition, we have introduced the *Focus on* model – which replace 'Special Issues'. Focus on articles are published when ready in regular issues of the journal, throughout an extended submission window (up to 12 months), and collected together online. This avoids any delay to publication for authors submitting early. 'Focus on Advanced Optics', launched in June 2015, will be followed by two more early in 2016.

Submissions and acceptances for 2015 show the strong performance of the journal – the significant increase (43%) in acceptances reflects our focus on commissioning high quality content, as well as our commitment to thorough and fair peer-review of submitted articles.

Download figures show a similarly significant increase **(22%)** from 2014, and reflect the combined effect of press-releasing articles along with a consistent and innovative strategy across marketing and social media. Not included is the article "The fluid dynamics of the chocolate fountain", published in Issue 1 2016 (November 2015), which was picked up by many major news outlets and has been downloaded over 8000 times to date.

2015 Highlights collection

The Highlights collection is a selection of the most downloaded and most cited papers, which represent some of the most popular, useful and innovative work published in EJP during 2015. All of the articles in the collection are free to read online until 31 December 2016 to help encourage usage of this quality content, with the aim that this will then encourage researchers to cite the articles in their own research.

The Highlights can be found online at **http://iopscience.iop.org/0143-0807/page/Highlights%20of%202015**, and will be promoted throughout 2016 using e-mail marketing and social media.

Launch of the new "Education" hub from IOP Publishing

The new Education hub from IOP Publishing was successfully launched in May 2015. It aims to showcase in one location the excellent education related content being published across *EJP* and *Physics Education*. The web page can be found online at iopscience.org/education, where users will find new content added each month and the option to subscribe to a free monthly newsletter.

The European Journal of Physics IYL 2015 special collection

To celebrate the International Year of Light (IYL) a bespoke printed piece was created specifically for the Education and Training in Optics and Photonics (ETOP) conference in June 2015, demonstrating just some of the high-quality articles published in this

Article Title	Article ID	Volume	Issue	Online Publication Date	Full-Text
The Leidenfrost Maze	0143-0807/36/3/035004	36	3	26/02/2015	5,069
The concept of information in physics: an interdisciplinary topical lecture	0143-0807/36/1/015010	36	1	19/11/2014	2,780
An investigation into the impact of question structure on the performance of first year physics undergraduate students at the University of Cambridge	0143-0807/36/4/045014	36	4	22/05/2015	2,167
Does using active learning in thermodynamics lectures improve students conceptual understanding and learning experiences?	0143-0807/36/1/015020	36	1	18/12/2014	2,077
Ready to learn physics: a team-based learning model for first year university	0143-0807/36/5/055052	36	5	13/08/2015	1,895
How online learning modules can improve the representational fluency and conceptual understanding of university physics students	0143-0807/36/4/045019	36	4	10/06/2015	1,516
The kinematic advantage of electric cars	0143-0807/36/6/065037	36	6	06/10/2015	1,432
Asymptotic approach to the Schrödinger equation in the presence of a screened Coulomb potential and a uniform field	0143-0807/36/4/045005	36	4	30/04/2015	1,249
Laser experimental system as teaching aid for demonstrating basic phenomena of laser feedback	0143-0807/36/2/025006	36	2	04/01/2015	1,158
An introduction to polymer nanocomposites	0143-0807/36/6/063001	36	6	14/10/2015	1,125

area in EJP. An online version can be found at **http://iopscience.iop.org/0143-0807/page/European%20Journal%20of%20Physics%20IYL%202015%20special%20collection**

In conclusion

In 2016, the European Journal of Physics is now better placed than ever before to build on the success of previous years. With a clear, coherent development strategy, the addition of extra dedicated team resources and a strong and committed editorial board, we will be able to deliver sustained journal growth through obtaining quality, target ed content from authors who are acknowledged experts in their field.

E-EPS

Editor: A. Bracco

Technical Editor : G. Gunaratnam

e-EPS is the newsletter of the European Physical Society. The editorial team is: Angela Bracco, Luisa Cifarelli, John Dudley, Gina Gunaratnam, LJF Hermans, Maciej Kolwas, David Lee, Jorge Rivero González, Christophe P. Rossel and Victor R. Velasco

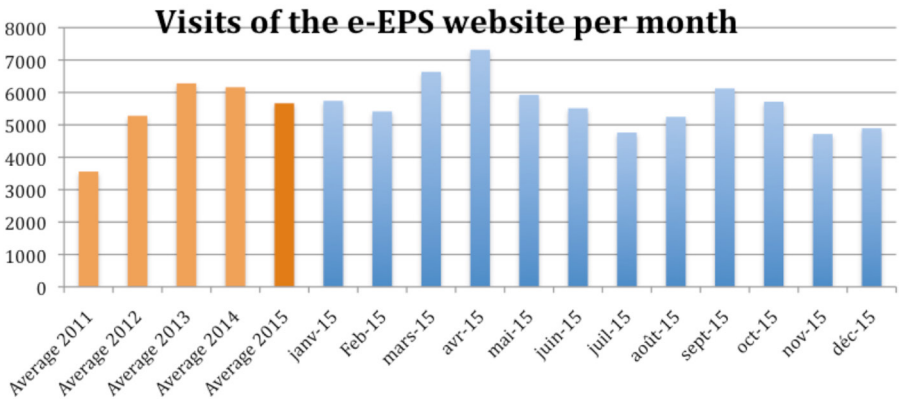
The first issue of e-EPS was published in May 2011. There has been continued growth in the number of articles published, while the visits to the website and the number of subscribers remain substantially stable.

Key numbers of the newsletter for 2015

Number of visits on the website: **68 009** (-8% of 2014)
Number of subscribers in December 2015: **33 501** (-0,68% of 2014)
Number of articles published: **216** (+3%)
Number of comments: **7** (-92%)

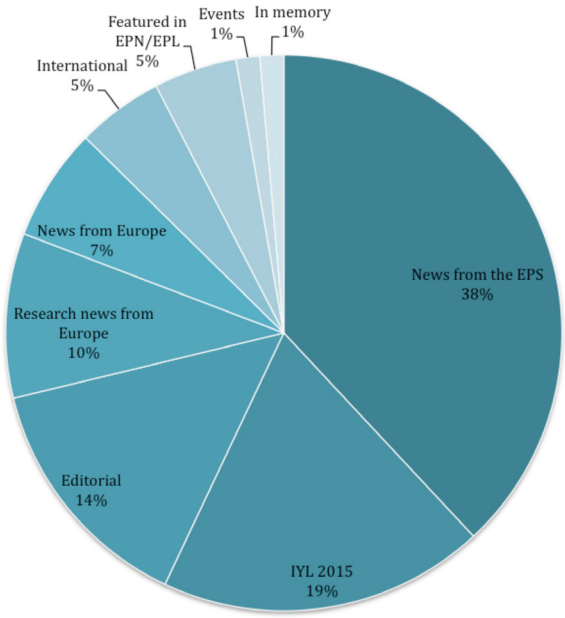
Stats of the 2015 issue

Month	Visits of the e-EPS website per month
Average 2011	3559
Average 2012	5278
Average 2013	6281
Average 2014	6161
Average 2015	5667
Jan-15	5741
Feb-15	5414
March-15	6636
April-15	7316
May-15	5928
June-15	5513
July-15	4762
Aug-15	5246
Sept-15	6125
Oct-15	5715
Nov-15	4718
Dec-15	4895



Most read articles in 2015 (>600 visits)

Article	Visits
The first ever photograph of light as both a particle and wave (EPFL Press Release)	1589
Two Prestigious Prizes in Quantum Electronics and Optics announced	1250
Editorial – Is there a by-product of fundamental physics?	1054
A portrait of a young physicist : Barbara Marchetti	969
The 2015 EPS HEPP prizes are announced	968
Spring 2015 EPS Emmy Noether Distinction for Anna Fontcuberta i Morral	899
Young Researcher Prizes in Quantum Electronics and Optics	852
EPS Emmy Noether Distinction Autumn 2014 for Women in Physics	797
Editorial – Insignificant details, pleasure and discovery	786
Editorial – Women in physics: challenging the established stereotypes?	784
Ancient books destroyed by the eruption of Mount Vesuvius 'read' for the very first time	731
Editorial – Pugwash : Physicists, nuclear weapons and scientists' responsibility	682
The Spring 2015 Emmy Noether distinction presented to Anna Fontcuberta i Morral	639
Editorial – Light is Here!	636
Physicists peer into hydrogen atom using quantum microscope	625
Portraits of young physicists: Fatema Tanjia, a pursued dream	623



Category	Visits	%
News from the EPS	17294	38,06
IYL 2015	8620	18,97
Editorial	6452	14,2
Research news from Europe	4354	9,58
News from Europe	2990	6,58
International	2286	5,03
Featured in EPN/EPL	2197	4,83
Events	625	1,38
In memory	625	1,38

News from the EPS	Visits	%
Awards	8058	46,59%
Other	3138	18,15%
EPS Historic site	2139	12,37%
Policy	1769	10,23%
Women in physics	1592	9,21%
Young Minds	643	3,72%

▲ Distribution of visits per category of articles in the most viewed articles (> 100 visits)

◂ Details of visits per article

Notes

EPS DIVISIONS AND GROUPS

EPS has 11 Divisions, covering each of the specific fields of physics research. The 6 Groups look at questions of common interest for all physicists such as Physics for Development, and Technology. EPS Divisions and Groups organise many of Europe's leading physics conferences, allowing members of the European and global physics community to share their research and exchange with their colleagues. They also award many prestigious prizes and are involved in policy debates and physics outreach.

CONFERENCES ORGANISED IN 2015

CONFERENCE	PLACE	PARTICIPANTS	DIVISION/GROUP
XXIX ICPEAC	Toledo, Spain	660	Atomic, Molecular and Optical Physics
47th EGAS 2015	Riga, Latvia	180	Atomic, Molecular and Optical Physics
GIREP-EPEC 2015	Wrocław, Poland	157	Physics Education
ECOSS-31	Barcelona, Spain	374	Condensed Matter
EPS High Energy Physics Conference	Vienna, Austria	789	High Energy and Particle Physics
3rd European Nuclear Physics Conference	Groningen, Netherlands	210	Nuclear Physics
7th Nuclear Physics in Astrophysics	York, United Kingdom	120	Nuclear Physics
42nd EPS Conference on Plasma Physics	Belem, Portugal	647	Plasma Physics
1st Conference on Plasma Diagnostics	Frascati, Italy	180	Plasma Physics
CLEO/Europe-EQEC	Munich, Germany	1942	Quantum Electronics and Optics
NANOMETA	Seefeld, Austria	258	Quantum Electronics and Optics
IPAC'15	Richmond, USA	1200	Accelerator Group
EEC	Karlsruhe, Germany	600	Energy Group
ICALEPCS	Melbourne, Australia	360	Experimental physics Control Systems
SIC Symposium	Turin, Italy	122	History Group

PRIZES AWARDED IN 2015

LAUREATE	PRIZE	DIVISION
Irena Dvořáková	EPS-PED Secondary Teaching Award	Physics Education
James D. Bjorken	EPS-HEP Prize	High Energy and Particle Physics
Guido Altarelli, Yuri L. Dokshitzer, Lev Lipatov, and Giorgio Parisi	EPS-HEP Prize	High Energy and Particle Physics
Francis Halzen	Giuseppe and Vanna Cocconi Prize	High Energy and Particle Physics
Pedro G. Vieira	Gribov Medal	High Energy and Particle Physics
Jan Fiete Groisse-Oetringhaus	Young Experimental Physicist Prize	High Energy and Particle Physics
Giovanni Petrucciani	Young Experimental Physicist Prize	High Energy and Particle Physics
Kate Shaw	EPS HEP Outreach Prize	High Energy and Particle Physics
Mehran Salehpour	IBA Prize	Nuclear Physics
José Manuel Alarcón	PhD Prize	Nuclear Physics
Liam Gaffney	PhD Prize	Nuclear Physics
Christopher Walz	PhD Prize	Nuclear Physics
Nathaniel Fisch	EPS Hannes Alfvén Prize	Plasma Physics
Bruno Albertazzi, ,	EPS PhD Prize	Plasma Physics
Joaquim Loizu	EPS PhD Prize	Plasma Physics
Michael Tack	EPS PhD Prize	Plasma Physics
M. Bailly-Grandvaux	EPS IUPAP Student Poster Prize	Plasma Physics
N. Bakharev	EPS IUPAP Student Poster Prize	Plasma Physics
S. Esponisa	EPS IUPAP Student Poster Prize	Plasma Physics
L. Horvath	EPS IUPAP Student Poster Prize	Plasma Physics
Miles Padgett	EPS-QEOD Prize for research into the Science of Light	Quantum Electronics and Optics
John Pendry, Fundamental Aspects	EPS-QEOD Prize	Quantum Electronics and Optics
Bahram Javidi, Applied Aspects	EPS-QEOD Prize	Quantum Electronics and Optics
Tim Taminiau, Fundamental Aspects	Fresnel Prize	Quantum Electronics and Optics
Daniele Brida, Applied Aspects	Fresnel Prize	Quantum Electronics and Optics
T. Langen, S. Raza, T. Herr, P. Shadbolt	EPS-QEOD Thesis Prizes	Quantum Electronics and Optics
Prachi Chitnis	EPS-EPCS	Experimental Physics Control Systems
Anna Fontcuberta i Morral	Emmy Noether Distinction, Spring	Equal Opportunities Committee
Sibylle Günter	Emmy Noether Distinction, Autumn	Equal Opportunities Committee
Gerardo Delgado Barrio	Gero Thomas Medal	European Physical Society
Nazzareno Mandolesi, Jean-Loup Puget, Jan Tauber	EPS Edison Volta Prize	European Physical Society

EPS DIVISIONS

Atomic Molecular and Optical Physics Division

Chair
- Dominique Vernhet

Sections
- Electronic and Atomic Collisions
- Chemical and Molecular Physics
- European Group on Atomic Systems

Conferences
- European Conference Atomic and Molecular Physics (ECAMP)
- European Group on Atomic Systems Conference (EGAS)

Website
- www.eps.org/group/AMOPD

High Energy And Particle Physics Division

Chair
- Yves Sirois

Conference
- HEP General Conference

Prizes
- High Energy and Particle Physics Prize
- Young experimental Physicist Prize
- Gribov Medal
- Outreach Prize
- Giuseppe and Vanna Cocconi Prize

Website
- http://eps-hepp.web.cern.ch/eps-hepp/

Condensed Matter Division

Chair
- Kees van de Beek

Sections
- Liquids, Macromolecular Physics, Magnetism, Structural and Dynamical Properties of Solids
- Semiconductors and Insulators, Surfaces and Interfaces

Conferences
- CMD General Conference
- Liquid Matter Conference
- EDM Macromolecular Physics
- Joint European Magnetism Symposium
- ECOSS

Prize
- EPS CMD Europhysics Prize

Website
- www.eps.org/group/CMD

Nuclear Physics Division

Chair
- Faiçal Azaiez

Conferences
- EPS Nuclear Physics Division Conference
- Nuclear Physics in Astrophysics

Prizes
- Lise Meitner Prize (Nuclear Science)
- IBA Europhysics Prize (Applied Nuclear Science and Nuclear Methods in Medicine)
- PhD Prize in Nuclear Physics

Highlights/News
- http://nuclear.epsdivisions.org/highlights-1/

Website
- http://www.eps.org/group/NPD

Environmental Physics Division

Chair
- Herbert Fischer

Conferences
- Under consideration

- **Website**
  http://www.eps.org/members/group.aspx?id=85192

Plasma Physics Division

Chair
- Sylvie Jacquemot

Sections
- Beam Plasma and Inertial Fusion Section
- Dusty and Low Temperature

Conference
- EPS Plasma Physics Division Conference ///

/// Plasma Physics Division (following p.16)

Prizes
- EPS-PPD Hannes Alfvén Prize
- EPS-PPD PhD Research Award
- EPS-PPD Innovation Prize

Website
- http://plasma.ciemat.es/eps/

Physics Education Division

Chair
- David Sands

Conference
- European Physics Education Conference (EPEC)

Prize
- EPS PED Secondary Teaching Award

Website
- www.eps.org/group/PED

Physics In Life Sciences Division

Chair
- Felix Ritort

Conference
- under consideration

Website
- www.eps.org/group/DPL

Quantum Electronics And Optics Division

Chair
- Luc Bergé

Conferences
- EPS-QEOD Europhoton meetings
- CLEO/Europe – EQEC
- Nanometa

Prizes
- Quantum Electronics Prize
- Fresnel Prize
- 4 QEOD thesis prizes
- Research in Laser Science and Applications Prizes ///

/// Quantum Electronics And Optics Division

- Research into the Science of Light Prizes

Website
- http://qeod.epsdivisions.org/

Solar Physics Division

Chair
- Manolis Georgoulis

The JSPD is a joint Division with the European Astronomical Society (EAS) and the European Physical Society (EPS)

Conference
- European Solar Physics Conference

Website
- www.eps.org/group/ESPD

Statistical And Nonlinear Physics Division

Chair
- Christian Beck

Conferences
- Applications of Physics in Financial Analysis
- International Conference on Statistical Physics

Website
- www.eps.org/group/SNPD

Notes

EPS GROUPS

Accelerators Group

Chair
- Gianluigi Arduini

Conference
- International Particle Accelerator Conference

Prizes
- EPS Accelerator Rolf Wildeøe Prize for outstanding work in the accelerator field
- EPS Accelerator Gersh Budker Prize for recent significant contributions
- EPS Accelerator Frank Sacherer Prize for an individual early career researcher for recent significant contributions
- EPS Accelerator Prize for PhD or equivalent for the quality of their work
- EPS Accelerator Prize for student poster

Website
- http://epac.web.cern.ch/EPAC/EPS-AG/Welcome.html

Computational Physics Group

Chair
- Alex Hansen

Conferences
- Conference on Computational Physics
- Biennial Granad Seminars in Computational Physics

Prize
- Berni Alder CECAM prize
- 2014 Young Scientist Prize

Website
- http://phycomp.technion.ac.il/~EPS-CPG/

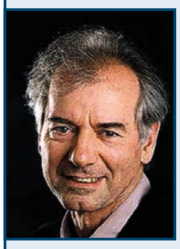
Energy Group

Chair
- Jozef Ongenar

Conference
- National Energy Group Seminar
- European Energy Conference

Website
- www.eps.org/group/EG

History Of Physics Group



Chairman
- Peter Maria Schuster

Conference
- International Conference for the History of Science

Website
- Under construction

Physics For Development Group

Chairman
- Ernst van Groningen

Conference
- Examining proposal to create a European Conference on Science and Development

Prize
- Examining proposal to create Instrumentation Award for African Scientists

Website
- www.physdev.org

Technology and Innovation Group

Chairman
- Markus Nordberg

Conference
- Technology and Innovation Workshop

Website
- Under construction

Notes

Notes

Notes

European Physical Society

6, rue des Frères Lumière • 68200 Mulhouse • France
tel: +33 389 32 94 40 • fax: +33 389 32 94 49
website: www.eps.org