

ACTIVITY REPORT 2011

Council Meeting, 30-31 March 2012, CERN (CH)



European Physical Society

more than ideas



Luisa Cifarelli, EPS President

INTRODUCTION FROM THE PRESIDENT

In 2011, Council adopted EPS Strategy Plan 2010+. It is now time to take stock of what we have achieved.

Many actions of the EPS as a 'federation' of European national physical societies have been undertaken, such as the 'Second Asia Europe Physics Summit – ASEPS2' in Poland, the launch in Italy of the International Year of Light initiative which is likely to be soon approved by UNESCO, the start of a dedicated study on 'Physics and the European economy' that will be presented in 2012, *etc.*

The EPS has been active in responding to various EC consultations, for instance the ERA Framework Public Consultation on 'Areas of untapped potential for the development of the European Research Area', or the consultation on the Green Paper: 'Towards a Common Strategic Framework for EU research and innovation funding', or the one on 'Access to and preservation of digital information'.

Contacts with the ERA representatives have also been established, as well as with representatives of the OECD Global Science Forum.

Links with other Societies outside Europe have been strengthened, for instance with the African Physical Society and the Federation of Ibero-American Physical Societies (notably through to the International Year of Light), with the Association of Asia Pacific Physical Societies (who were co-organisers of ASEPS2) and with the

American Physical Society (thanks, in particular, to our joint involvement in 'Physics for Development' actions such as the SESAME grant scheme). Relations with the American Physical Society and the pursuit of common objectives will be further enhanced, as I have recently been elected member-at-large of the APS Forum on International Physics and appointed member of the APS Committee on International Scientific Affairs.

For the EPS activities as a 'learned society', we are of course very proud of e-EPS, our electronic bulletin, started in May 2011, which is now becoming rather popular.

Also a brand new EPS web site has just been released, with new structure, layout, contents, facilities, *etc.* We strongly encourage our members to send us comments and suggestions for future improvement.

The number of EPS Individual Members (and of Associate Members) has been slightly increasing during 2011 and we hope that this trend will continue in 2012. The conferences and prizes of EPS Divisions/Groups have been outstanding, the EPS Historic Site programme has started, and the first EPS Historic Site was created in Warsaw, on the occasion of the Marie Curie celebrations in 2011.

The revival of the EPS in the field of technology has begun. The Technology Group now includes innovation in its remit, and has been renamed the Technology and Innovation Group (TIG). A special TIG

workshop is planned in 2012 as a kick-off meeting.

In 2011 energy has also been central to EPS activities, with the preparation for 2012 of the second European Energy Conference in Maastricht (NL) and with the establishment of the Joint EPS-SIF International School on Energy in Varenna (IT), whose first summer course will also be in 2012.

In addition a conference on 'Physics for Development' at ICTP (Trieste, IT) has been planned as well as a very interesting session of our EPS Forum on Physics and Society, focused on 'Physics and the marketplace'.

Finally the EPS has also undertaken a series of reorganisational steps, in particular concerning its committees (for instance, the Grants Committee). The staff and Secretariat are also regularly monitored, and a young science communicator has been hired. The financial results for the year 2011 are positive and the budgetary extrapolation for 2012 appears to be good.

I would like to express my thanks to all that have worked to implement the EPS Strategy Plan 2010+. Let's go on. ■

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EXECUTIVE COMMITTEE ACTIVITIES

The Executive Committee meets on a regular basis, in order to give timely input on EPS matters. Since the 2011 Council, the committee has met in May 2011 in Sofia, BG, in October prior to the ASEPS meeting in Wroclaw, PL, and in January 2012 in Mulhouse, FR. A core group meeting (vice-President, Treasurer, Secretary, and Secretary General) with President Luisa Cifarelli was held at the beginning of September in order to follow up on on-going activities.

At most Executive Committee meetings, particularly those that are not held at EPS headquarters in Mulhouse, guests are invited. Special care is taken to invite representatives of the local National Physical Society. In 2011, the Executive Committee discussed with representatives from the Bulgarian Physical Society and the Balkan Physical Union, as well as with the Polish Physical Society and Wroclaw University Physics Department. J. Langer (IF Pan, Warsaw, PL & Academia Europaea, London, UK) provided insight to the future EU research strategy and expected developments for Poland. These privileged meetings between the EPS Executive Committee and its Member Societies are important, in order to strengthen links, and gain awareness of particular situations in different European countries. They give the opportunity for both sides to be better informed about on-going actions, and to discuss points where help and/or input is needed.

Among the individuals invited to the Executive Committee meetings were the officers of international relations of APS, DPG and IOP, with whom the Executive Committee discussed

common approaches in different domains (policy statements, prizes, physics for development...).

The Executive Committee members have been very actively involved in providing input (from the point of view of physics) into policy development at the European Commission in areas such as the European Research Area, Horizon 2020 and Gender Equality. All Executive Committee members have contributed to the ongoing Associate Member recruitment campaign. The Executive Committee has actively prepared the renewal of its members for the elections at Council 2012. The implementation of the new distribution scheme with a topical and geographical balance had to be adapted to the existing, renewable members of the Committee.

Executive Committee members are also in charge of specific tasks, which are listed in the following table. Reviews of Action Committees, Divisions and Groups are ongoing; the outline of a new organisational scheme is under discussion. Moreover, each Executive Committee member is the privileged contact point for a set of Member Societies.

Education

Bologna Process Doctoral Study

The EPS Study of the Implementation of the Bologna Process has now been completed. The project brought together 24 EPS Member Societies as partners to investigate the implementation of the Bologna reforms in physics studies in European universities. This was the first

Executive Committee - Distribution of tasks

Executive Committee Member	Activity	Review
Marcis Auzinsh	European Integration	EPN
Caterina Biscari	Member Services, Large Facilities Technology Network	Division and groups activities and services
Luisa Cifarelli <i>President</i>	Alliance for Physics Publishing, General Conference, Energy, Initiative for Science in Europe	
Hendrik Ferdinande	Education activities, European Education Platform, Bologna Process	
Anders Kastberg	Conférence Exceptionnelle	PhysNet
Maciej Kolwas <i>Past President</i>	Young Minds, General Conference ASEPS/Chinese Physical Society, Forum Physics and Society, Initiative for Science in Europe	
Martina Knoop <i>Secretary</i>	Conférence Exceptionnelle	EPS Secretariat Grant's scheme
Colin Latimer <i>Treasurer</i>	Finances	
Ana Proykova	Gender Equality, Student Liaison	
Els de Wolf	European Integration, Education activities	

discipline specific study of this type, and has led to the publication of three reports, based on the research and analysis of input received by the International Centre for Higher Education Research, Kassel (DE). The three reports are available at: www.eps.org/?page=bologna_process

Specification descriptions

The 24 Member Societies that worked together for the Bologna Process Study, under the leadership of H. Ferdinand and with the input from the STEPS consortium have prepared a 'European specification for Physics Bachelor Studies', a 'European specification for Physics Master Studies', and a 'European specification for Physics Doctoral Studies'. Each of these documents is a primary external source for higher education institutions when developing new programs, providing guidance for learning outcomes for these new programs. They are available on the EPS website at:

www.eps.org/?page=studies_reports.

EASPA

The EPS is a founder Member of the 'European Alliance for Subject-Specific and Professional Accreditation and Quality Assurance'. EASPA was created 29 November 2011 and is a pan-European platform for quality assurance in higher education, uniting eight member professional associations in Europe, which act as European field-specific networks.

The common goal of the alliance is to maintain and further develop Europe-wide disciplinary learning outcomes, competence profiles and qualification frameworks; as well as corresponding quality assurance tools; thereby making an important contribution towards the development and implementation of academic and professional mobility within the European Higher Education area.

Communication

e-EPS

In the second quarter of 2011, the EPS launched e-EPS, the electronic newsletter of the EPS. It was created to publish timely information of interest to the members of EPS, and to the physics community. Ten issues of e-EPS have been published since May 2011 with a large success and 35,000 subscribers. EPS Member Societies and Divisions and Groups are encouraged to submit information for publication about their activities, including prize announcements, conferences and developments in their field. It is complementary to EPN, publishing news items that have a relatively short lifetime. The editorial team is: Caterina Biscari, Luisa Cifarelli, Martina Knoop, Maciej Kolwas, David Lee & Ian Randall.

www.epsnews.eu

EPS.ORG

The Executive Committee has followed and provided input into the implementation of the new website. With a cleaner design and easier navigation, eps.org provides up to date information on EPS and its activities. This website is now online, providing new functionalities which the Executive Committee had the pleasure to inaugurate. The shared document space (also used for Council) allows a modern, rapid and secure exchange of documents. Information on Executive Committee activities (members, meetings, executive summaries) are also available on the website.

The completely renovated directory of EPS members is destined to become a lively exchange platform, with the publication of more detailed member profiles, which give the opportunity to detail scientific expertise and competences.

www.eps.org

Visibility

The Executive Committee has actively encouraged the development of EPS communication policy. I. Randall has been hired as the technical editor for e-EPS and is providing valuable communication services. B. Huchet, a master student in Science Communication at the University of Grenoble (FR) is an intern at the EPS Secretariat in Mulhouse. Martina Knoop, the Honorary Secretary of the Executive Committee continues to prepare publishable summaries of the Executive Committee meetings. These summaries are sent to Member Societies, and are available on-line for EPS Members. The visibility of the Society has increased but should be further enhanced, in order for EPS to become a recognized player in policy input.

Policy

EC Consultations

EPS provides input from the physics community to European institutions for the development of science policy in Europe. It consults with its members, and coordinates replies that represent the views of

European physicists. In 2011, the European Commission has actively solicited input from learned societies, including the EPS, for the development of 'Horizon 2020', the research and development funding programme that will start in 2014.

The EPS provided piloted replies to consultations on 'Areas of Untapped Potential for the development of the European Research Area', 'Towards a Common Strategic Framework for EU Research and Innovation Funding', and 'Scientific Information in the digital age'. The complete EPS responses are available at:

www.eps.org/?page=eu_policy



Policy statements

The Executive Committee is reviewing a draft statement regarding assessment of physics research and researchers. Scientific excellence and peer review are considered to be essential elements in any assessment exercise.

The EPS also reacted to the Fukushima earthquake and subsequent tsunami, expressing our sympathy and support (www.epsnews.eu/2011/05/earthquake-japan). The EPS Energy Group prepared a statement.

The Executive Committee is considering a procedure that will allow joint statements by the EPS and the APS. This will provide a global platform for important announcements.

Physics and the EU Economy

The Executive Committee has agreed to undertake a study of Physics and the EU Economy. One of the roles of the EPS is to explain to policy makers that physics makes an important contribution to the economy, and is not limited to university research. Ownership of the definition of what constitutes a physics industry is with the physics learned societies, and not policy makers. Defining the physics industry and demonstrating its importance in the economy is used to argue for continued support to physics research. The study is based on the study conducted by the IoP on 'Physics and the UK Economy' (www.iop.org/publications/iop/2007/page_42716.html) and should be ready in 2012.

15th EPS General Meeting

The 15th EPS General Meeting was held with 27 October 2011 in Wrocław (PL). The President, L. Cifarelli, summarised the development of the EPS over the period 2008-2011. The EPS celebrated its 40th



anniversary in 2008, with a special event in Mulhouse. EPS Divisions and Groups continued to be active, organising premier physics conferences in Europe and awarding many of Europe's most prestigious prizes, including the EPS Europhysics Prize in 2008 to A. Geim and K. Novoselov, 2 years prior to receiving the Nobel Prize. In 2010, the EPS undertook a strategic review, which was adopted by Council in 2011. C. Latimer, EPS Treasurer, reported that the finances of the Society are satisfactory, especially in light of the financial difficulties in Europe. Not only were most activities maintained, many new activities were started, including for example the EPS electronic news bulletin, e-EPS. M. Knoop, EPS Honorary Secretary, reported on the work of the Executive Committee. The Members of the Executive Committee are elected by Council and support the EPS and the President in developing and piloting EPS Activities. Much effort has been devoted to improving communications with Member Societies, and with Divisions and Groups. The Secretariat is evolving, providing support for EPS activities, as well as institutional organisation for the EPS. Staffing over the period 2008-2011 has remained stable. More information on the EPS General Meeting is available at:

www.eps.org/?page=general_meeting

International Relations Asia-Europe Physics Summit

The ASEPS meetings are organised by the EPS and the AAPS to strengthen collaboration in physics research between Europe and Asia.

The 2nd ASEPS meeting in Wrocław together with 15th EPS General Meeting took place 26-29 October 2011 in the dynamic Polish city of Wrocław. The participants included researchers, policy makers and representatives of science funding agencies from Asia, Europe and the USA. The main theme of ASEPS 2 was "Excellence in Physics through Cooperation", to address major topics related to: 'Grand Challenges in Physics', 'Large Research Infrastructures', 'Trends in Physics and Science Policy', and 'Promoting Individual Excellence in Physics'.



The ASEPS working groups looked at: Joint large scale programmes & networks: crisis creates opportunities; Physics at frontier of grand challenges: Energy and sustainable development, alternative energy resources; Education is a must: needs of more and better educated people for science and industry; Mobility of scientists, exchange programmes, obstacles, scholarships versus hiring people; Industry versus Academia: cooperate or die.

The Wrocław Declaration and the recommendations from the working groups are available at:

www.eps.org/?page=eps_projects%20#ASEPS

Physics for Development

The EPS recognises that physics makes significant contributions to cultural, economic and social well-being. The EPS has repeatedly defended this position in its communications with the European Union. Physics can also be a powerful tool for improvement in developing countries outside

Europe. The Executive Committee is currently considering collaboration with other physics societies (notably the IOP and APS) to combine our activities. This was successfully implemented with the SESAME travel grant scheme (www.sesame.org.jo). Links with the International Centre for Theoretical Physics (ICTP) have been strengthened (S. Randjibar Daemi, Deputy Director of ICTP was present at EPS Council 2010). The EPS Physics for Development Group and the Executive Committee are working on a seminar in Brussels on Physics for Development, and with the ICTP for an International Conference on Physics for Development.

EU Projects

The EPS is actively engaged in EU funded projects, in areas of science education and outreach. Through these projects, the EPS promotes physics education at all levels, and highlights the importance of physics in society.

Odysseus

The EPS is a partner in the Odysseus project, Odysseus is a contest for young students. Under the guidance of their teachers, students will prepare projects revolving around one of three major themes in space science: Solar System; Spaceship – global cooperation; and the Co-evolution of life. The contest and the project aim to engage and inspire the European youth in the “New Frontier”, combining creativity, intelligence and innovation. For more information and to participate:

www.eps.org/?page=odysseus

www.odysseus-contest.eu/?page_id=196

PATHWAY

The EPS is a partner in the PATHWAY project, involved in dissemination. This project has just started and will run for 3 years. The co-ordinator is the



Didactics Department at the University of Bayreuth (DE). The project has 25 partners from Europe, Russia and the USA. The PATHWAY project proposes to develop a standard based model enquiry based science teaching. The PATHWAY website is:

www.pathway-project.eu

Outreach

International Year of Light

The International Year of Light is a global initiative, which was started by the EPS Quantum Electronics and Optics Division in 2010. Following the approval of the EPS Council, a resolution was presented to the General Assembly of the International Union of Pure and Applied Physics (IUPAP) in November 2011. Work is on-going to gain support from UNESCO and the UN to have 2015 declared the International Year of Light. A prospectus describing the IYL is available at:

www.eps.org/resource/resmgr/activities/eps_iyol_2.pdf

Passion for Light

The Passion for Light Workshop was co-organised by the EPS and the Società Italiana di Fisica in Varenna (IT) as the kick-off event for the International Year of Light. The keynote speakers included many of the world's leading scientists, and the programme explored many uses of light in frontier research.

The Passion for Light event brought together more than 120 participants and

was part of the ‘Varenna Fisica Festival’ that presented a large variety of scientific events in the region of Lecco-Merate-Varenna, Italy, for a widespread dissemination of scientific culture on physics.

More information is available at:

www.sif.it/SIF/en/portal/activities/passionforlight



Historic Sites

The EPS Historic Sites Award was launched in 2011. It commemorates places in Europe important for the development and the history of physics. The first EPS Historic Site was attributed during Marie Skłodowska Curie Symposium co-organized by EPS in Warsaw (PL) in November 2011 to the Institute of Theoretical Physics of the Warsaw University situated at Hoża 69, a famous centre for research on fluorescence where, in particular, the Jabłoński diagram, a fundamental concept in molecular physics, was invented. This site is of outstanding importance for Polish physics. Generations of Polish physicists were raised there and a number of basic discoveries in various branches of experimental and theoretical physics were achieved there.

Many proposals have been received for the entitlement of other sites in various European countries. These are currently being reviewed and more sites will be attributed in 2012.

www.eps.org/?page=historic_sites

FINANCIAL REPORT 2011

The financial results for the year 2011 were highly satisfactory with an excess of income over expenditure (subject to minor changes after auditing) of 65,467 € compared with the budget of 1,945 €. This was the result of two factors. Income exceeded budget by 32,300 € due mainly to a healthy contribution from conference services, which included the receipt of a late payment from the previous year, and a successful drive to collect member subscriptions. Expenditure was 33,267 € lower than budget mainly due to prudent expenditure on administration and some curtailment of our scientific activities.

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 (Federation, Learned Society and Publishing) in order to facilitate a comparison between federal and learned society activities. The results of this procedure for 2011 indicate that there is a satisfactory correspondence between income and expenditure in these two aspects of our work.

Figure 1: Income and Expenditure 2009-2011 (in €)

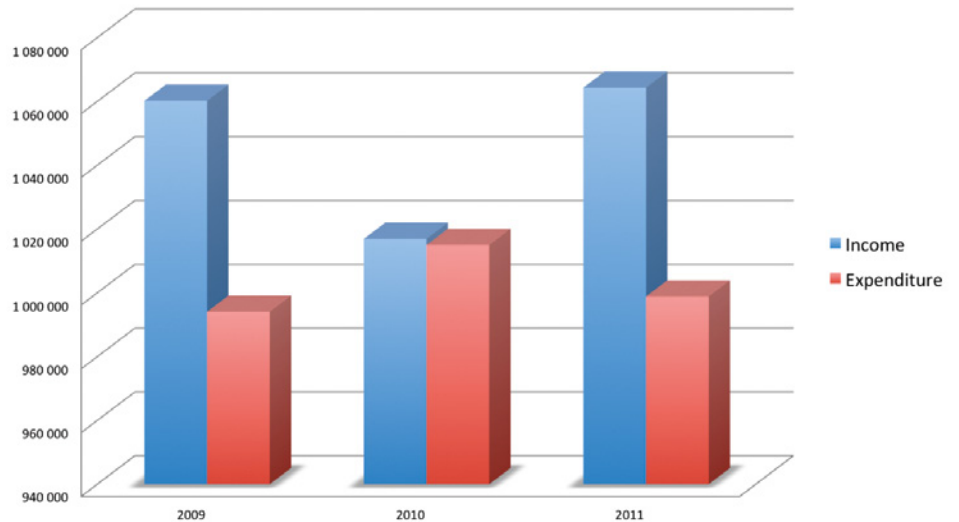


Figure 2: Income 2011 (in €)

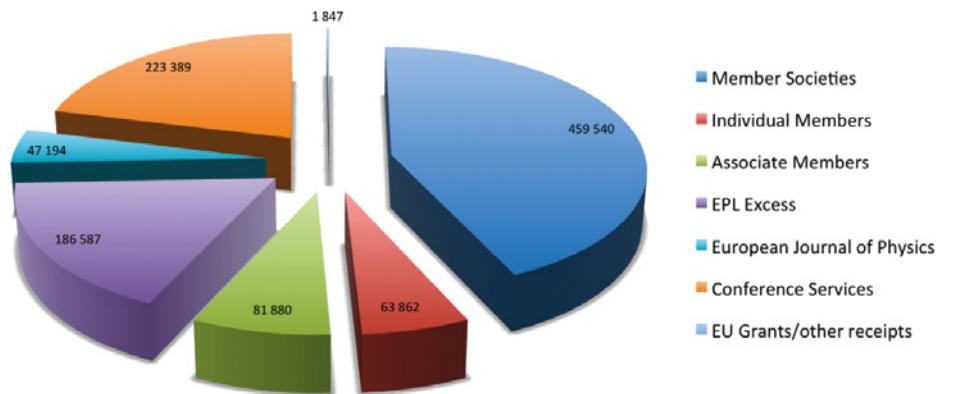
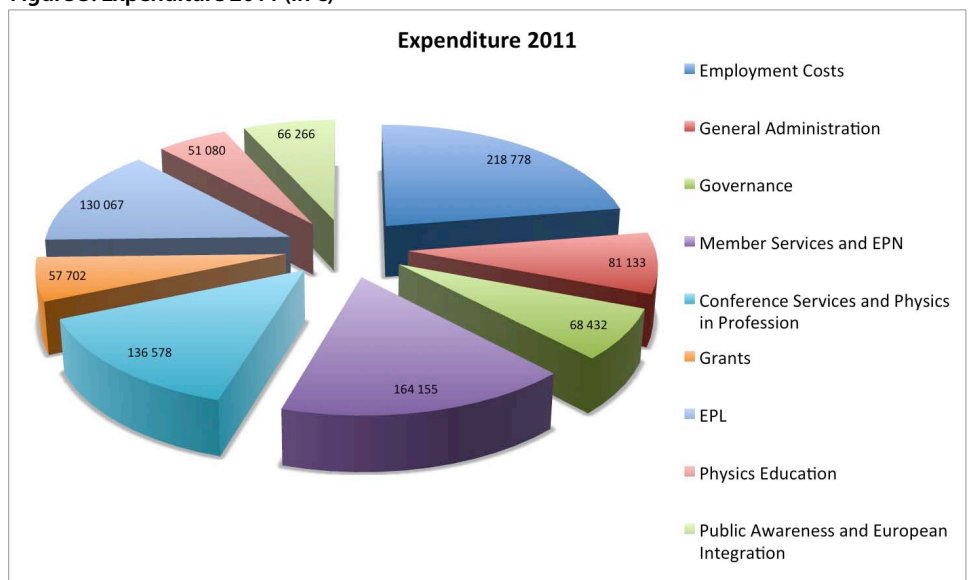


Figure 3: Expenditure 2011 (in €)



SECRETARIAT

The EPS Secretariat is composed of 6.5 persons including the Secretary General. An accountant, an IT manager, an officer for member services, and an administrative secretary provide the necessary logistics for the activities of the President, the members of the Executive Committee, Action Committees, the website, and Divisions and Groups. The half time student trainee in secretarial services has provided cost effective and efficient support. One staff member is graciously provided by Université de Haute Alsace.

In addition, a graphic designer shares his time between EPN, e-EPS and conferences services, a minor fraction of his work load is dedicated to more general EPS activities.

In 2011, the EPS hired a Communication Officer, who is also the technical editor for e-EPS. This has allowed for the development of better communications channels for the EPS and enhanced EPS visibility. The presence of such a staff member is required to support the Executive Committee and the Secretary General on EPS communications, including press releases, statements, *etc.*, in addition to e-EPS and the website

In 2011, EPS Conference Services Department employed 2.5 persons. This very active service organised CLEO/ Europe - EQEC, and Nanometa in 2011. The Conference Service Department has been active in attracting new conferences, which will give a smoother 2-year budget integral of this activity.

EPS headquarters in Mulhouse also houses the EPL editorial office: the staff editor, as well as 2.6 editorial assistants (3 persons). In 2011, they handled a record 2,365 manuscripts (compared with 1,971 in 2010). At the same time, the median time from reception to decision decreased from 82 days in 2010 to 73 days in 2011.

All activities and staff at the secretariat are monitored twice a year by the Executive Committee's Honorary Secretary, Martina Knoop and its Honorary Treasurer, Colin Latimer in cooperation with the Secretary General, David Lee. Through the implementation of staff evaluations, project based tasks and increased dialog, the Secretariat is more dynamic and efficient.



Top: B. Huchet, U. Megnassan, P. Padovani, X. De Araujo, N. Wickey - **Middle:** J. Robert, P. Helfenstein, D. Lee, S. Loskill, I. Randall - **Bottom:** C. Orbann, A. Ouarab, O. Fornari, F. Burr, G. Gunaratnam

EPS COMMITTEES

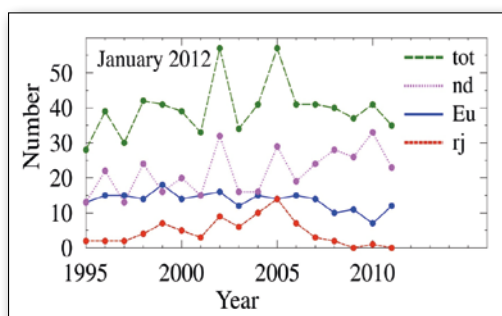
Committees are established by the Executive Committee to implement specific aspects of EPS strategy. Committees are responsible for implementing programmes and projects of the EPS.

Conference Committee Chairman: Olaf Scholten

The Conference Committee is responsible for collecting and disseminating information on EPS Europhysics Conferences (*i.e.* conferences organized by EPS Divisions and Groups), and for evaluating applications to obtain the label of EPS Sponsored Conference. It is also responsible for the distribution of grants for conferences.

Conference Activity 2011: In the figure the number of Europhysics Conferences (Eu, organized by the EPS or one of its Divisions or Groups) and Sponsored Conferences (nd) and schools are given as well as the number of rejected applications (rj) since 1995. The number of Sponsored Conferences is rather stable. The total (tot) number of conferences submitted for EPS endorsement is slowly decreasing in recent years.

Conferences & Schools: Europhysics, Sponsored, or Rejected since 1995, listed



according to the year when the event took place (status as of year-end 2011). After receiving endorsement from the EPS conference organizers may be eligible for receiving grants.

The available granting schemes are:

1. Conferences Grants - the EPS makes grants available to organizers of Europhysics to allow for the participation of young scientists in their meeting.
2. Invited Speaker Grants - the EPS makes grants available to Europhysics conferences for inviting distinguished speakers.
3. EPS Poster Prize - grants are available for an award to a student who has presented the best poster at the conference.
4. IM Travel Grant: Individual Members of the EPS can apply for travel a travel grant of 350 Euro to attend any EPS endorsed conference

As indicated there are more granting schemes open to Europhysics Conferences as compared to other conferences that are endorsed by the EPS. In general, the number of Conference Grants that have been distributed is close to the budgeted amount but requests exceed availability by about 30%. Poster prizes are high in demand and, since the amount per grant is relatively small, these have distributed these more liberally. Several requests for IM Travel Grants were received, only about half of these were within the stipulated criteria for this granting scheme. For more information, please see the section "Grants Committee".

Committee on European Integration Chairman: Jaroslav Nadrchal

The CEI was created in 2008 to advise the Executive Committee on the situation of physics in countries on the periphery of the EU. While the CEI has permanent members, other individuals are regularly contacted in all interested countries for their advice and input.

Activity in 2011:

The CEI sponsored the International Physical Society Exchange Conference (IPSEC) that was organised as part of the Polish Physical Society's General Conference in Lublin (Poland) on 5 September 2011. Representatives of several national physical societies took part in the session. The participants discussed the:

- Methods of evaluation of scientific institutions (overestimating of impact factors, different views of state administration and scientists, links with funding of institutions and projects, *etc.*)
- Enhancing mutual cooperation among National Physical Societies, for example by organising sessions in English within the framework of national meetings. Due to insufficient knowledge of English among a considerable part of Societies members (in particular, physics teachers) it is not possible to have whole meetings in English.
- Best practice in physics education can be enhanced, for example by sharing teaching material and aids on an international basis.

The CEI also supported the 9th European Union Science Olympiad (Competition of high school students in physics, chemistry and biology). It was held in Hradec Králové and Pardubice (Czech Republic) on 10-16 April 2011.

Action plan for 2012

In 2012, the CEI plans to:

1. Update of the report on the situation of physics and physical societies in the countries of Eastern Europe.
2. Prepare a report on the situation in physics and community of physicists in the countries of Africa (together with IGPD).

Forum Physics and Society Chairman: Martial Ducloy

The Forum Physics and Society (FPS) aims at establishing a more active EPS role in the relation of physics to society, taking seriously the challenge of maintaining a strong and critical dialogue between physicists and decision makers from policy and economics. FPS aims at catalyzing the dialogue through workshops and meetings, gathering decision makers and physicists to put the spotlight on topics of interest to both society and to the physics community. The fourth Forum Physics and Society (FPS) assembly took place in El Escorial, Madrid,

Spain 21-23 October 2010, following earlier Forums in Graz, Austria (2006), Zakopane, Poland (2008) and Ratnieki, Latvia (2009). The fifth meeting is scheduled at CERN in March 2012, right before the EPS Council (28-29 March 2012).

The role of FPS should increase inside EPS in the coming years. In many European countries, one may observe a decrease of the interest in scientific culture and scientific issues. This appears in several features like the general public response to science, the interest of young people (pupils and students) into scientific studies, and also a somewhat disappointing evolution of scientific curricula in high schools of several European countries. It is clearly a challenge for learned societies to reverse this general trend. Action is necessary to improve how the general public perceives science, to influence teaching tendencies toward higher scientific content and increase concern for science among the decision makers in policy and economy. FPS has tackled several of these issues in past meetings, like science education (Ratnieki, April 2009) or scientific communication (El Escorial, October 2010). The CERN FPS meeting in 2012 will be focused on exploring the challenges faced by physicists who leave their field of study to pursue alternative careers in the marketplace outside teaching and

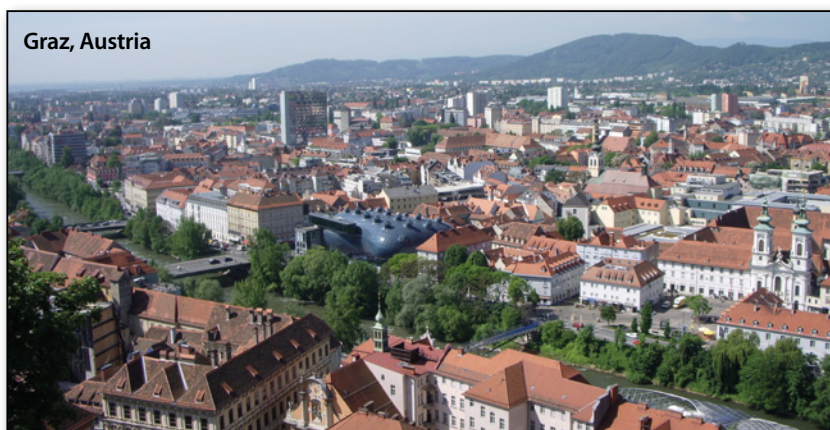
university based research. It will address the overall subject of “Physicists in the marketplace”, dealing with three topics: (i) internal strengths and weaknesses of being a physicist, (ii) the global challenge, and (iii) social scientific responsibility – is physics prepared?

Gender Equality in Physics Chairperson: Ana Proykova

The Gender Equality in Physics Committee was established following the first IUPAP Women in Physics Conference. It informs and advises the Executive Committee on issues relating to women in physics.

The Gender Equality in Physics Committee undertook the following actions in 2011:

1. Individual and group response to Public Consultation on the Future of Gender and Innovation in Europe - a background for the Gender Summit documents <http://gender-summit.eu/index.php>
2. “Women in physics” database is being regularly updated since it was established at the end of 2008. I do believe that the persons included in this database will enhance research and innovation in Europe by addressing gender equality issues.
3. Ana Proykova nominated two women-professors for the ERAB (August 2011).
4. The exchange of information about awards, events, conferences, possible support is ongoing between the EPS and the Gender Equality in Physics Committee. The networking activities are stable. The most recent event was the Gender Summit in 8-9 November, 2011, organized within the framework of the FP7 project genSET.



5. L. Cifarelli and the EPS Secretariat organised a photo exhibit by I. Durante at the Gender Summit “The women who run the biggest machine ever built by man”, which provides profiles and interviews of women scientists working at CERN.

Grants Committee

Chairman: Olaf Scholten

This committee was created in 2007 to make the EPS grants systems more dynamic and better serve their purpose of increasing the visibility of the EPS. To this end the committee critically reviewed the existing granting schemes early in 2011 and a series of new grants has been designed for implementation in 2011. In some cases the new grants resemble the old ones while others are new initiatives. A set of criteria has been defined to judge if a particular grant fulfils its objective. Among the objectives of EPS grants are: bringing publicity to the EPS and promoting the policy goals of the EPS in a cost efficient manner.

The present members of the EPS-Grants committee are: Martina Knoop, Majek Kolwas, David Lee (secretary), Olaf Scholten (chair), Bob Lambourne, and

Colin Latimer. Since the last meeting on January 2011 the committee has not convened and communicated by email. The present granting schemes are listed in the following, shortly stating their aims and performance.

University Student Fellowships:

The aim of this granting scheme is to increase visibility of the EPS among master students by distributing prestigious grants for students to do part of their study in another European country. This support the EPS policy of increasing mutual cooperation between different EU countries. Per year maximally 3 fellowships of 2,000 € each are rewarded to Master students (second cycle, post Bachelor, pre-PhD) towards the expenses of studying in another country for a period of at least 3 months. Over 2011 the three fellowships have been distributed.

Grants for Pre-university

International Physics Competitions:

Grants to organizers of international physics competitions (Olympiads, tournaments and another international contests) promoting physics. Per year not more than 4 grants of 700 € each are available for sponsoring prizes, such as

for the best student and the most inspiring teacher. Over 2011 two grants have been requested and distributed.

Special Regional Projects:

These grants are for sponsoring regional meetings of EPS membership societies involving at least three different countries. An EPS official should be invited to attend the meeting. A total of 3,000 € is available to support 2 or 3 meetings per year. 2 grants were distributed in 2011.

Conferences Grants:

The EPS makes grants available to the organizers of Europhysics conferences to allow for the participation of young scientists in their meeting. Per conference a maximum of 3 grants of 350 € each can be distributed.

IM Travel Grants:

The EPS makes grants available to individual members of the EPS to allow for the participation in a EPS recognized (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. 6 grants were distributed in 2011.

Invited Speaker Grants:

The EPS makes grants, of 500 € each, available to conferences organized by EPS Divisions and Groups (Europhysics conferences and schools) to cover costs of invited speakers. 2 grants were distributed in 2011.

EPS Poster Prize:

Grants, of 250 € each, are available to EPS Europhysics conferences for a poster prize, to make an award to a student who has presented the best poster at the conference. Spending on the granting schemes is strongly reduced over the past year as

Actual spending over 2011

	Spending 2010	Budget 2011	Spending 2011
EPS Student Fellowships	€ 0	€ 6,000	€ 6,000
Pre University IPC	€ 11,330	€ 3,000	€ 350
Special Regional Projects	€ 4,500	€ 3,000	2,700
Conferences Grants	€ 28,671	€ 13,000	€ 12,150
IM Travel Grants	€ 4,000	€ 7,000	€ 2,100
Invited Speaker Grants	€ 2,500	€ 4,000	€ 500
EPS Poster Prize		€ 2,500	€ 3,750
TOTAL	€ 51,001	€ 38,300	€ 27,550

compared to last years, in many cases even below the budgeted amount for 2011. This may be seen as an indication that the possibilities for support from the EPS are not sufficiently known. This could be used by the EPS to launch an effective campaign to advertise itself to the community.

Young Minds

Chairman: Armand Niederberger

In 2010, the EPSYM Action Committee was launched as a platform for proactive young scientists to engage in self-organized activities that strengthen their scientific, outreach and networking capabilities.

Since its start, the EPS Young Minds Project (www.epsyouthminds.org) keeps expanding the reach of the European Physical Society amongst the new generation of physicists.

Two core objectives of the EPS Young Minds Project are to support self-organized student groups, and to create a network of proactive young scientists



within Europe. In the course of 2011, we were further able to establish 10 new sections from all over Europe and the world. Today, 18 sections in Spain, Italy, the United Kingdom, Germany, France, the Ukraine, Russia and the United States of America connect well over 200 young scientists. This constitutes a valuable pool of talent available to EPS member societies and divisions. Also, EPS Young Minds serves as a powerful tool to multiply the impact of activities organized by EPS and its member societies.

Early on in 2011, the first yearly Young Minds Leadership Meeting took place at CERN (Geneva, Switzerland). About 30 representatives from 10 local sections from 6 countries were drawn together and had the possibility of interacting with senior scientists, journal editors and industry leaders. It represented a great opportunity for career building and networking, and also spurred the growth of the EPSYM project.

Apart from the EPSYM leadership meeting in Geneva and the European IONS conference (in Salamanca - SP), the EPS Young Minds Project supported activities in Germany (Erlangen), Italy (Catania, L'Aquila, Messina, Naples, Reggio Calabria, Rome), Russia (Moscow), Spain (Barcelona, Salamanca), UK (Glasgow): open day seminars, experiments for high school students, visits to science sites/labs or industry facilities, outreach, etc.

EPS DIVISIONS AND GROUPS

EPS has 11 Divisions, covering each of the specific fields of physics research. The 7 Groups look at questions of common interest for all physicists such as Physics for Development, Energy, and Technology.

In 2011 the Technology and Innovation Group was launched (as an integration and continuation of the previous Technology Group). It will focus on technology networking among large European facilities, technology transfer and physics-based technology development applied, in particular, to medicine. A special kick-off workshop is foreseen in 2012.

Concerning energy, the Joint EPS-SIF International School on Energy was established in 2011. The primary goal of the School will be to present all physics fields with relevance for the technologies of energy production, conversion, transmission and savings. Their potential will be presented as well as the need for more research and development to achieve their full potential. The School will cover major fields in detailed lectures and will also serve as a forum for discussion. It will bring together scientists working in various energy related areas. The permanent seat of the School will be Villa Monastero, in

Varenna, Como Lake (IT). The frequency will be biannual in order, alternating with the European Energy Conference, jointly organized by the EPS with the ESF and other European learned societies. The first course of the School is scheduled in summer 2012.

EPS Divisions and Groups continue to 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 2011

Conference	Place	Participants	Division
ASEPS 2	Wroclaw, PL	250	EPS
EGAS	Salamanca, ES	300	Atomic, Molecular and Optics Division
CMPS Summer School	Gothenberg, SE	60	Atomic, Molecular and Optics Division
8th Liquid Matter Conference	Vienna, AT	800	Condensed matter Division, Liquids Section
International Conference on Low Temperature Detectors	Heidelberg, DE	300	Condensed Matter Division, Low Temperature Section
Cryo Course	Grenoble, FR	60	Condensed Matter Division, Low Temperature Section
Workshop on Macromolecular Physics	Freiburg, DE	100	Condensed Matter Division, Macromolecular Physics Section
Summer School on Soft Matter Science	Freiburg, DE	100	Condensed Matter Division, Macromolecular Physics Section
Summer School on Magnetisms	Târgovte, RO	60	Condensed Matter Division, Magnetism Section
Spin Physics, Chemistry and Technology	Kazan, RU	500	Condensed Matter Division, Structural and Dynamic Properties of Solids Section
ECOSS 28	Wroclaw, PL	650	Condensed Matter Division, Surfaces Section
High Energy Physics Conference	Grenoble, FR	800	High Energy Physics Division
Nuclear Physics in Astrophysics	Eilat (IS)	140	Nuclear Physics Division
38th Conference on Plasma Physics	Strasbourg, FR	750	Plasma Physics Division
37 Conference on Plasma Physics	Dublin, IE	750	Plasma Physics Division
GIREP-EPS 2011	Jyväskylä, FI	220	Physics Education Division
Biomolecules and Nanostructures	Bedlewo, PL	90	Physics in Life Sciences Division
Nanometa	Seefeld, AT	250	Quantum Electronics and Physics Division
CLEO/Europe – EQEC	Munich, DE	1500	Quantum Electronics and Physics Division
European Solar Physics Meeting	Rhodes, GR	220	Solar Physics Division
International Conference on Statistical Physics	Larnaca, CY	200	Statistical and Non-linear Physics Division
IPAC 2	San Sebastian, SP	1100	Accelerators Group
Wind Symposium	Lillestom, NO	25	Energy Group
ICALEPS	Grenoble, FR	600	Experimental Physics Control Systems
Inauguration of the ECHOPHYSICS Centre	Poellau, AT	150	History of Physics Group
History of Physics Symposium	Lausanne, CH	50	History of Physics Group
Low Cost Physics and appropriate solutions	Yaoundé, Cameroun		Physics for Development Group

PRIZES AWARDED IN 2011

Prize	Laureate	Division
Gero Thomas Medal	Claude Sebenne	EPS
EPS CMD Liquid Matter Prize	David Chandler	Condensed Matter Division, Liquid Matter Sections
EPS High Energy and Particle Physics Prize	Sheldon Lee Glashow John Iliopoulos Luciano Maiani	High Energy and Particle Physics Division
Giuseppe and Vanna Cocconi Prize	Paolo de Bernardis Paul Richards	High Energy and Particle Physics Division
EPS High Energy and Particle Physics Outreach Prize	Christine Kourkoumelis Sofoklis Sotiriou	High Energy and Particle Physics Division
EPS Gribov Medal	Davide Gaiotto	High Energy and Particle Physics Division
EPS High Energy and Particle Physics Young Physicist Prize	Paolo Cremelli Andrea Rizzi	High Energy and Particle Physics Division
IBA Europhysics Prize for Applied Nuclear Science and Nuclear Methods and Research in Medicine	Elisabetta Boaretto	Nuclear Physics Division
Plasma Physics Hannes Alfvén Prize	Patrick Diamond Akira Hasegawa Kunioki Mima	Plasma Physics Division
Plasma Physics Innovation Prize	Alexander Litvak Keishi Sakamoto Manfred K.A. Thumm	Plasma Physics Division
Plasma Physics PhD Awards	Stefan Kneip Julian Schulze Mierk Schwab	Plasma Physics Division
EPS PED Secondary Teaching Award	Becky Parker	Physics Education Division
EPS PED Secondary Poster Prize	Tomas Franc	Physics Education Division
EPS QEOD Prize: Fundamental	Immanuel Bloch	Quantum Electronics and Optics Division
EPS QEOD Prize: Applied	Ursula Keller	Quantum Electronics and Optics Division
Fresnel Prize: Fundamental	Philip Walther	Quantum Electronics and Optics Division
Fresnel Prize: Applied	Christelle Monat	Quantum Electronics and Optics Division
EPS Solar Physics Division Poster Prize	Urs Ganze	Solar Physics Division
Rolf Wideöe Prize	Shin-ichi Kurokawa	Accelerators Group
Gersh Budker Prize	Yasushige Yano	Accelerators Group
Experimental Physics Control Systems Prize	Tomasz Wlostowski	Experimental Physics Control Systems Group

Atomic Molecular and Optical Physics Division



Chairman

- Friedrich Aumayr

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)

Web site

- <http://ampd.epsdivisions.org/>

High Energy And Particle Physics Division



Chairman

- Paris Sphicas

Conference

- HEP General Conference

Prizes

- The High Energy and Particle Physics Prize
- The Young Physicist Prize
- The Gribov Medal
- The Outreach Prize

Web site

- <http://eps-hepp.web.cern.ch/eps-hepp/>

Condensed Matter Division



Chairman

- Eoin P. O'Reilly

Sections

- Liquids, Macromolecular Physics, Magnetism
- 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

Web site

- <http://cmd.epsdivisions.org/>

Nuclear Physics Division



Chairman

- Nikolae Victor Zamfir

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)

Highlights/News

- <http://nuclear.epsdivisions.org/highlights-1/>

Web site

- <http://nuclear.epsdivisions.org/eps-hepp/>

Environmental Physics Division



Chairman

- Herbert Fischer

Prizes

- A draft charter for an EPD award has been established aimed at a prize for young scientists and a medal for lifetime achievement in Environmental Physics. The coming period 2010-2012, sponsors are to be identified.

Plasma Physics Division



Chairman

- Carlos Hidalgo

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

Web site

- <http://plasma.ciemat.es/>

/// Quantum Electronics And Optics Division

- 4 QEOD thesis prizes
- PhD student oral and poster prizes were introduced into the Europhoton conference series

Web site

- <http://qeod.epsdivisions.org>

Physics Education Division**Chairman**

- Robert Lambourne

Conference

- European Physics Education Conference (EPEC)

Prize

- EPS PED Secondary Teaching Award

Web site

- <http://education.epsdivisions.org/>

Solar Physics Division**Chairman**

- Valery Nakariakov

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

Conference

- European Solar Physics Conference

Web site

- <http://soho.estec.esa.nl/SPS/>

Physics In Life Sciences Division**Chairman**

- Marek Cieplak

Conference

- under consideration

Web site

- <http://info.ifpan.edu.pl/DPL/>

Statistical And Nonlinear Physics Division**Chairman**

- Stephan Fauve

Conferences

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

Web site

- <http://statistical.epsdivisions.org/>

Quantum Electronics And Optics Division**Chairman**

- Markus Pollnau

Acting Chair

- John Dudley

-Conferences

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

Prizes

- Quantum Electronics Prize
- Fresnel Prize ///

Notes

Accelerators Group**Chairman**

- Andrzej Wolski

Conference

- International Particle Accelerator Conference

Prizes

- EPS Accelerator Achievement Prize for outstanding work in the accelerator field
- EPS Accelerator Prize for recent significant contributions
- EPS Accelerator 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

Web site

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

Experimental Physics Control Systems Group**Chairman**

- Roland Mueller

Conferences

- International Conference on Accelerator and Large Experimental Physics Control Systems (ICALPECS)
- Current Trends in Data Acquisition and Controls of Accelerator (CTDCA)

Prize: EPCS Prize

Web site: <http://epcs.epsdivisions.org/>

History Of Physics Group**Chairman**

- Peter Maria Schuster

Conference

- International Conference for the History of Science

Web site: <http://history.epsdivisions.org/>

Computational Physics Group**Chairman**

- Peter Howard Borchers

Conferences

- Conference on Computational Physics
- Biennial Grand Seminars in Computational Physics

Prize

- Berni Alder CECAM prize

Web site

- <http://cmd.epsdivisions.org/>

Physics For Development Group**Chairman**

- Francois Piuze

Conference

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

Prize

- Examining proposal to create Instrumentation Award for African Scientists

Web site: <http://igpd.epsdivisions.org/>

Energy Group

This Group was formed in 2010

Chairman

- Friedrich Wagner

Conference

- National Energy Group Seminar
- European Energy Conference

Technology and Innovation Group**Chairman**

- Horst Wenninger

Conference

- under consideration

Web site

- under consideration

JOURNALS

Europhysics News



Editor:
C. Sèbenne

Science Editor:
L.J.F. (Jo) Hermans

Europhysics News is the magazine of the European physics community. It is owned by the European Physical Society and produced in cooperation with EDP Sciences. It is distributed to all our Individual Members and many institutional subscribers. Most European national societies receive EPN for further distribution. The total circulation is currently about 25,000 copies per issue. It is the main communications channel for the EPS, now efficiently coupled to the electronic newsletter of the Society: e-EPS.

Production

The layout of EPN has maintained its general presentation throughout the year, looking principally for ways to become more pleasant to read. The graphic designer, Xavier de Araujo has increased the size and number of illustrations. The size of the “Highlights” section has been limited to a maximum of 12 per issue or 72 per year, which is a maximum of 6 EPN pages per issue. This corresponds to slightly over 20% of the available space for editorial material. So far this has been found satisfactory, but we should notice that the section started with 21 summaries per year in 2006, then increased to 44 the next year and 60 in 2008, to reach 66 in 2009. We

have been glad to see a decrease to 61 in 2010 and 54 in 2011. We hope that the situation will stabilize in the future: about 50 highlights a year would be quite reasonable.

Europhysics News and e-EPS

EPN and the e-EPS Newsletter are complementary. Items from EPN are published in e-EPS, and it has freed EPN from publishing news of temporary interest such as conference announcements, prize calls *etc.* As a consequence, more printing space has become available to make EPN a true magazine. The news section is now devoted to EPS activities, scientific reports on EPS conferences, prize and award laureates of the Society, *etc.*

All EPS Member Societies, Divisions and Groups, and Committees are expected to submit important news items to EPN.

Europhysics News On-line

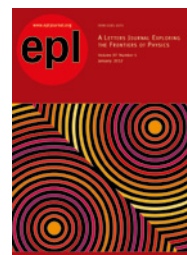
EPN is freely and fully accessible on the web. This makes it available not only to all European physicists, but also to everybody in the world. The statistics of the web visits look very encouraging. The website version is basically the same as the printed issue. However, it adds a new degree of freedom 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. This feature has been used once at present.

Topical coverage

The Editorial Advisory Board has decided to widen the topics treated in the Features as much as possible, recruiting

authors increasingly from the borders of physics and other domains. This will be 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.

EPL



Editor in Chief:
Michael Schreiber

Executive Editor:
Graeme Watt

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 and SIF since 2006. EPL is now published under the scientific policy and control of the EPS by EDP Sciences, IOP Publishing and SIF for a partnership of 17 European physical societies (the EPL Association). EPL is now available in more than 2,000 institutions worldwide and has an Impact Factor of 2.8.

Journal Production

EPL is going through a growth period at present with submissions rising significantly each month over the 2010 value. The total for the year 2011 was 2,328 (1,945 in 2010). The number of articles published has increased over the previous year (882 in 2011; 824 in 2010) but not at the same rate as submissions. The overall acceptance rate is slowly decreasing and is now about 40%.

Publications remain strong in condensed matter, interdisciplinary topics, and in statistical modelling. In addition 26 high-energy physics related articles have been published in 2011 including 2 from the TOTEM collaboration at the LHC. A recent publication downloaded directly from the International Space Station (ISS) on plasmas is attracting significant downloads. These articles are all free Open Access, and given extensive publicity and promotion.

The geographical distribution of submissions (by corresponding author) is Asia: 49%; Europe: 35%; North America: 9%; rest: 7%; while published articles are Europe: 49%; Asia: 31%; North America: 13%; rest: 7%.

The median accept-to-online time during 2011 has reduced to 25 days and is consistent at this level. Exceptional articles can be fast-tracked from acceptance to online publication within 11 days.

Open Access and downloads

The free Open Access policy of EPL for all high-energy physics articles ceased at the end of June 2011 with a total of 137 articles published. This scheme has been replaced by one where the Editor-in-Chief awards OA status to selected articles. The number of articles published by hybrid OA model (author pays for Open Access) has reached 19 since the scheme began in 2007.

The total downloads for the year reached 624,347. The number of downloads per article published has increased from 96 in 2010 to 135 in 2011. This is a significant improvement, possibly an indication of higher quality publications.

The community is becoming more aware that EPL is using software (CrossCheck) tools to investigate manuscripts for plagiarism or infringement.

The Editorial Board of EPL

EPL's Editorial Board comprises the Editor-in-Chief (EiC) and a team of 50 Co-editors. The members of the Board oversee the review process: they select referees and decide on whether a submitted manuscript will be published, is rejected or needs a revision.

All Co-editors of EPL are active physicists of high standing. They are carefully selected by the EiC. The spread of their fields of research closely matches the distribution of submitted manuscripts among the categories of the 'Physics and Astronomy Classification Scheme' (PACS).

Visibility

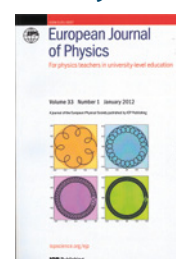
Highlighted (Editor's Choice) summaries still regularly appear in Europhysics News and these are also reprinted at the front of the first issue of each volume of EPL (4 times per year). We are now beginning to ensure that at least one article is also highlighted in each issue of the e-EPS Newsletter.

Compilations were made on 'high-Tc Fe-based superconductors', 'graphene', 'liquid crystals', 'quantum simulators', and 'topological insulators and superconductors'. Compilations highlight articles published in EPL on selected topics. Two booklets highlighting the 'Best of 2010' articles and the 'Most Cited Articles 1986-2011' were distributed.

EPL 25th Anniversary Celebration

EPL celebrated its 25th Anniversary with a Symposium at the Bavarian Academy of Sciences and Humanities in Munich. 250 participants — about a third of them students — gathered on 3 and 4 May 2011 at the Bavarian Academy of Sciences and Humanities in Munich's 'Residenz' palace to attend the EPL25-Symposium 'Frontiers of Physics'. The attendance of the students was sponsored by both the Wilhelm and Else Heraeus Foundation and by EPS member societies that belong to the EPL Association. Leading scientists addressed many of the currently most active fields of physics.

EJP - European Journal of Physics



Editor:

Jan Mostowski

With a world-wide readership and authors from every continent, European Journal of Physics is a truly international journal dedicated to maintaining and improving the standard of taught physics in universities and other higher education institutes. The journal is a joint undertaking of the EPS and the IoP and is published by the Institute of Physics Publishing.

Journal Development

2011 has been another very successful year for the European Journal of Physics. Submissions have increased, while the number of acceptances has decreased slightly, indicating a promising upwards



European Physical Society

6, rue des Frères Lumière · 68200 Mulhouse · France
tel: +33 389 32 94 42 · fax: +33 389 32 94 49
website: www.eps.org
