

Minutes of the C&CC Meeting

Day 1 - 26th April 2015

Lundquist Lecture Hall, Adriatico Guest House

09:00 – 18:00

In Attendance:

1	Bruce McKellar	President	15	Michael Thewalt	Chair -C8
2	Kennedy Reed	President - Designate	16	Xiaofeng Jin	Chair - C9
3	Cecilia Jarlskog	Past President	17	Heidi Schellman	Secretary - C11
4	Rudzani Nemutudi	Assoc. Secretary General	18	Alinka Lépine-Szily	Chair - C12 and Vice President
5	Kok Khoo Phua	Secretary General	19	Sandro Scandolo	Chair - C13
6	Monica Pepe-Altarelli	Vice-President at Large	20	Hideo Nitta	Chair - C14
7	Vitaly Kveder	Vice-President at Large	21	Toshiyuki Azuma	Chair - C15 and Vice President
8	Alex Hansen	Vice-President at Large	22	Minh Quang Tran	Vice-Chair - C16
9	Wenlong Zhan	Vice-President at Large	23	Deborah Kane	Chair - C17
10	Vanderlei Salvador Bagnato	Chair - C2	24	Manfred Salmhofer	Chair - C18
11	Itamar Procaccia	Chair - C3	25	Grazina Tautvaišienė	Chair - C19 and Vice President
12	Karl-Heinz Kampert	Chair -C4	26	HaiQing Lin	Chair - C20
13	John Saunders	Chair - C5 and Vice President	27	Yasuhiko Arakawa	President - AC1
14	Aihua Xie	Chair - C6	28	Beverly Berger	Secretary - AC2
			29	Marion Burgess	President - AC3
			30	Fridtjof Nusslin	Past President - AC4
			31	Kwek Leong Chuan	Observer
			32	Sun Han	IUPAP Secretariat
			33	Maitri Bobba	IUPAP Secretariat

Invited Guest Speakers:

1	Dieter Richter	Convenor of Advisory Working Group on soft matter (Unable to attend)
2	Fernando Quevedo	Director, ICTP
3	Joe Niemela	Secretariat, IYOL

Absent with Apologies:

1	Raynien Kwo	Chair – C10 and Vice President
2	Francis Allotey	Vice-President at Large
3	Lin-Ni Hau	Chair – C16
4	Juan Fuster	Chair – C11

All commission chairs/representatives were seated by sequence for ease of reference

Welcome by Fernando Quevedo, the Director of the ICTP

Prof Quevedo welcomed all to the ICTP campus and described the organisation structure and workings of ICTP. He described the 60th year celebration (2014) and the extensive international collaborations that ICTP fosters and develops.

Welcome by President IUPAP

Bruce McKellar thanked Fernando for hosting the C&CC meeting at ICTP. He then introduced himself and welcomed all to the C&CC Meeting.

Introduction of members

Each participant introduced themselves.

Introduction to IUPAP

Bruce McKellar gave a brief introduction on the purpose and the structure of IUPAP

Resolutions from General Assembly

The 28th GA Resolutions were discussed. In particular:

Resolution 6: IUPAP Associated Organisations | establish a committee to work on this.

- C&CC suggested that a committee consisting of K K Phua (Convenor), Sandro Scandolo and Deb Kane be established to report to October "meeting" on how:
 - to revise the statutes
 - to include IUPAP Associated Organisations,
 - what we want from Associated Organisations
 - what can they expect from us,
 - possible organisations to approach

Resolution 9: IUPAP Prize for Outstanding Contributions to the Improvement of Physics Research and/or Education in one or more Developing Countries

- It was recommended to Council that the revised proposal be accepted after changing the term 'Prize' to 'Medal' It was noted that since the Executive Council has the authority from the GA to act on this proposal the medal will be able to be presented at GA 2017.
- It was recommended that the monetary award be Eur 3000
- The standard IUPAP working definition of 'developing' is to apply in this case
- It was decided that the person needs to be employed in a developing country

Resolution 13: Advisory Working Group on Accelerator Science

C&CC considered the report by Roy Rubinstein, and proposed the creation of a Working Group on Accelerator Science, as recommended in that report. It was also proposed that the chairs of ECFA, ACFA, ICFA and American Physical Society Division of Physics of Beams, should nominate people for the working group to produce a draft charge and to recommend initial membership of the new IUPAP Working Group on Accelerator Science.

- The Council is requested to ask the Chairs of C10, C11, C12, C16, AC4, WG9 and WG7 to propose two people who could serve on the interim working group. Council will make the final decision on membership, after careful consideration of the nominees and those proposed by Roy Rubinstein.
- The Council may select fewer people than those proposed, and stressed that the working group should be conscious of the needs of accelerator physicists in drawing up the mandate of the working group

Resolution 8: Advisory Working Group on Soft Matter

The convenor of the Advisory Working Group on Soft Matter, Professor Dieter Richter, was unable to attend.

- The process of forming the interim working group is to continue. Chairs of relevant Commissions (C3, C6, C8, C10, C20 & AC4) were asked to propose members for the advisory working group. IUPAC should be asked to propose a member, given the importance of soft matter in Chemistry.

Report on the Singapore Office

K K Phua briefed all on the relocation of the IUPAP Administrative office from IOP London to Singapore.

- As of 1st January 2015 the IUPAP Admin office has moved to Singapore
- It is currently housed at the Institute of Advanced Studies at the Nanyang Technological University, Singapore
- It has been incorporated as a private non-profit company – International Union of Pure & Applied Physics Singapore Pte Ltd
- The transfer of the IUPAP website from London to Singapore has also been activated but it will take some time due to teething issues

Minutes of previous C&CC meeting

The previous C&CC meeting minutes were reviewed without any comments.

The role and operation of Commissions

The roles and operations of commissions were introduced by two former Commission Chairs, Kennedy Reed and Alex Hansen.

Some issues raised were:

- It is IUPAC policy that visas should be granted to participants in IUPAC supported conferences. It is the responsibility of participants to apply in time for assistance to be given if necessary.
- The necessity of having confidential information areas on the webpage for Commissions was pointed out.
- The previous chair of a Commission is to be an observer on the commission for one year after the completion of their term to facilitate their mentoring of the new Chair.
- The process for nomination and award for the Young Scientist Prize was reviewed

Commission matters

- C2, C4, C5, C6, C8, C10, C11, C12, C14, C15, C17 & C19 submitted written reports, which were taken as read and questions were asked of the Commissions. The reports are attached as Appendix 1.
- There are vacancies in C11, C16 and C20.
 - C20 proposed to fill their vacancy with Marc Etienne Brachet of France, who was the unsuccessful candidate in the ballot for membership of C20 at the 28th General Assembly.
 - It was recommend that council approve Marc Etienne Brachet's appointment as a member of C20
 - The process adopted for the C11 and C16 vacancies was discussed. It was recommended to Council that, when a vacancy in a Commission occurs, the relevant IUPAC member is to be asked to nominate a replacement to the Commission, who will recommend a new member to Council. The Commission may also consider other nominees who were not appointed to the Commission by the General Assembly.
- Associate members proposed by the commissions:

- C4 recommended:
 - Steve Barwick, USA - Neutrino Astronomy
 - Ilya Usoskin, Finland - Heliospheric Physics
 - Albert de Roeck, Belgium - Particle physics
 - Laura Baudis, Switzerland - Dark Matter searches

It was noted that existing Associate members of Commissions in general have appointments from 2012 to 2015. This means that they will remain as Associate members until the end of 2015 unless replacements are appointed earlier.

It was recommended that Council approve the above C4 nominations

Conferences Proposed for Endorsement

- AC3 for endorsement of
 1. ICA 2016, the 22nd International Congress on Acoustics to be held in Buenos Aires – Argentina beginning 5 Sept 2016,
 2. ICA 2019, the 23rd International Congress on Acoustics to be held in Germany starting on 8 Sept 2019.

It was recommended that Council endorse CA-2016 and ICA-2019.

- It was recommended that Executive Council delegates to the Associate Secretary General the authority to endorse conferences within the IUPAP series, advise the Council pertaining to endorsement of the conferences, and that he will write to the organisers advising them of the outcome, and provide them with the relevant forms as well as the IUPAP logo to be displayed on their website, within one week after approval. During this period members of Council may call for a ballot. If a ballot is called for, the letter will not be sent to the conference organisers until the result is known. The ballot will be held without delay
- Proposals for endorsement of Conferences which are not in an IUPAP Series will continue to be raised to the Council with a recommendation from the Associate Secretary General. It was noted that the Council consultation is to occur without unnecessary delay
- The council noted the proliferation of fake conferences, many of which have the same or similar titles as regular physics conferences, Chairs are encouraged to apply for early endorsement of suitable conferences.

Procedures for Sponsorship of Conferences

Rudzani Nemitudi introduced the procedures for sponsorship of conferences. He also outlined the various categories of conferences and how they are decided for support. He emphasised that the commission chairs should encourage conference organisers to file the report for the conference after the event to facilitate future endorsements and sponsorships.

Minutes of the C&CC Meeting

Day 2 — 27th April 2015

Lundquist Lecture Hall, Adriatico Guest House

09:00 – 16:00

Financial Matters

- The report on the financial position of IUPAP for the period 2012–2014 (Appendix 2) – was received and noted. The organisation is now in a more reasonable financial position in comparison to the previous years. There is approximately 1 million Euros in reserve funds.
- The 2015 Budget (Appendix 3) was reviewed and recommended for approval by the council. Indicative budgets for 2016 & 2017 were also received. The indicative budget shows a very small cumulative surplus. Unless the economic situation improves and the number of members paying dues is increased, careful control of spending will be necessary to avoid a deficit for the triennium.
- The 2016 budget will be reviewed and approved by email in October.
- Members with dues in arrears: A number of members are having difficulty in paying their dues because of a condition of austerity in their country. In some cases partial payment may be possible. In other cases where a member has been paying the introductory 50% dues but getting one share, it may be possible for them to continue to pay at the discounted rate, but not at the full rate;
 - Council delegated to C1: Commission on Policy and Finance the authority to adjust dues so as to allow the member involved to remain in IUPAP, and in turn give IUPAP some income from the member.

IUPAP internet

- The transition of the webpage from London to Singapore has been smooth with a few technical issues.
- It is now being moved slowly for hosting at the NTU server with strict firewalls. There have been some spam problems in the London office that were quickly dealt with. The web page for the new server will provide better monitoring and autonomy.
- Because of some requests by commissions for historic information, work on creating a virtual library resource is currently being explored.
- Other suggestions by the members of C&CC were:
 - Creating an account with 'Academic Jobs online' to facilitate the process of commissions deciding on their Young Scientist Prizes.
 - Using an analytics program to track the number of views to particular pages and events on the IUPAP webpage
 - Revamp the design of the webpage to be able to view the respective tabs at the top
 - Easier access to information and more structured outlay of the same on the page – removing repetitive information and consolidating under specific titles

Newsletter

The newsletter was distributed at the meeting. It was agreed that there would be 3 issues of the newsletter per year. Feedback on the process and information to be included was:

- Young scientist prize winners are to be featured.
- Commissions are to be rostered to provide input to the newsletters over this three year period
- Encourage all conference organisers to add the newsletter link on their conference webpage
- Hard-copy versions to be mailed to 60 member liaisons, 250 commission members and 500 worldwide physics societies. A total of 1000 copies were printed
- The online version will be updated and sent out to all

Commission contributions towards the IUPAP Mission

The IUPAP Mission, as stated in our statute I, is to assist in the worldwide development of physics, to foster international cooperation in physics, and to help in the application of physics toward solving problems of concern to humanity. It is carried out by sponsoring international meetings; fostering communications and publications; encouraging research and education; fostering the free circulation of scientists; promoting international agreements on symbols, units and nomenclature; and cooperating with other organisations on disciplinary and interdisciplinary problems.

Commissions Contributions should include:

- Submission of reports: Commission Chairs to have responsibility for pushing conference organisers to complete reports. Conference organisers are to be told at the time of receiving conference support that they are to report data on participation of women, young scientists and international scientists; so that they can ensure that their registration procedure collects the required information.
- The office is to automate or otherwise assist with the extraction of data on participation of women for the gender champion

Affiliated Commissions

Affiliated commissions 1, 2 & 3 submitted their reports which were briefed to the council.

- It was suggested that IUPAP design a generic poster similar to ICA (AC3) encompassing the general structure, working and mission of IUPAP.

Afternote: The poster was designed and sent to AC4 to be displayed at their next conference

Working Groups

Working Groups will submit their 2015 reports to the next C&CC meeting to be held in October, to be reviewed and discussed.

The 2014 reports were duly reviewed and issues on gender champion and women in physics were discussed under 'any other business'.

ICSU Matters

- Barbara Erasmus, the Treasurer of ICSU, who is a leading physicist working in the field of relativistic heavy ion interactions, and who was previously a member of C12, has agreed to be our Inter-union representative for ICSU. It was recommended that Council appoint her to that position for 2015-2017.
- ICSU Grants for 2016 applications are expected to be called in May, with a closing date of 1 December. It is expected that the rules will be changed to require greater emphasis on collaboration, perhaps partnership, with other ICSU members and the ICSU Regional Offices.
 - C13 and C20 have indicated an interest in making an application.
 - Implications of successful grant application, and procedures to develop applications were discussed and it was recommended that Council determine future procedure when the guidelines are available

Inter-union Representatives

The list of Inter-union Representatives was noted. It was requested that Commission and working group chairs provide feedback to the Council by the October meeting on the following questions regarding Inter-union representatives relevant to them:

- Is it appropriate that we continue to have this Inter-union representative?
- Is it appropriate that the present representative continue to act, or should a replacement be made?

- If the position continues how will they ensure that the IU representative reports to the 29th General Assembly?
 - It was noted that C4 may wish to make appointments before October, and it was agreed that Council could consider and determine requests for appointment as they are made.

Bids to host GA 2017

Members were invited to submit expressions of interest in hosting the 2017 General Assembly. - In response, a proposal has been received from the Chinese Physical Society, Beijing inviting us to have our 2017 General Assembly in Beijing.

- It was agreed to issue a reminder to Liaisons, copied to members of C&CC, extending the deadline to **1 July 2015** following which discussions with those interested in hosting the 2017 General Assembly.
- Discussions will be held with those interested in hosting the 2017 General Assembly, and will be reported to the October meeting.

Other business

- Position of Deputy Secretary General
 - It was recommended that Council create the position of Deputy Secretary General for the period 2015-2017, and to invite Leong Chuan Kwek to fill it, on condition that this position would not involve extra costs to IUPAP.

- Gender Champion
 - It was recommended that Council appoint Alinka Lepine-Szily as the Gender Champion for IUPAP Commissions

- History of IUPAP

IUPAP was created in 1922, so it will soon be 100 years old. It is appropriate to celebrate this centenary in some way. As Kennedy Reed is the only member of Council who will still be a member in 2022, council requested him to advise on how to commemorate this important occasion, giving a preliminary report to the October meeting.

- Kennedy to approach the Japan liaison or Hideo Nitta to get the history of IUPAP as the first Asian country to join IUPAP was Japan
- Retrace information from previous Presidents and members for accurate information

Review of meeting, and future procedures

It was recommended that the next meetings of the Council and Commission Chairs and of the Executive Council be in October and that they be conducted electronically. These meetings will make decisions on

- a) Associate members of Commissions
- b) Supported Conferences 2016
- c) Endorsement of 2016 budget
- d) Inter-union representatives
- e) Location of C&CC 2016

It was suggested that Vilnius, Lithuania or Valencia, Spain could host the next C&CC meeting. Prof Grazina Tautvaisiene and Juan Fuster would investigate and provide a proposal to the October meeting.

- f) Location of 2017 GA
- g) IUPAP Centenary
- h) Other matters

The International Year of Light

Since 2015 is the International Year of Light - Joe Niemela, of the IYOL Secretariat was invited to give a short introduction into the various events held in conjunction with the Year of Light.

- More information can be found at www.light2015.org
- It was noted that activities were planned for all ages

Closing

The meeting thanked Fernando Quevedo, the Director of the Abdus Salam International Centre for Theoretical Physics, Trieste for generously hosting out meeting, and Sandro Scadolo for his assistance with the Organisation.

The meeting thanked Maitri Bobba and Sun Han for their efficient organisation of the meeting, and their efficient work in the IUPAP Office.

C2 - SYMBOLS, UNITS, NOMENCLATURE, ATOMIC MASSES AND FUNDAMENTAL CONSTANTS

Summary of planned Commission activity for 2015

Proposal for members short meetings : Limited resources makes difficult to hold a regular annual meeting for this Commission. Therefore, the proposal is to use regular meeting taking place within the Atomic, Molecular and Optics Community , often with the presence of many of the members of C2, to hold small meeting to debate relevant topics for the C2 commission. Members will send to the chair of the commission their planned participation in meetings in order to be organized a schedule of partial meetings.

Planning for a diffusion activity: The importance of units, fundamental constants and symbols is well recognized in all levels of education. Pre-university students and undergraduates have little information about the wonderful science behind fundamental constants, symbols and units. We shall start to put together a booklet and a movie to be available internet with the title " The Science behind fundamental constants and the unit system" .The text and movie shall have contribution to all members and will be presented in three different languages.

Discussions of new meeting: The importance strength the connection of Atomic physics with Astrophysics demands a special attention. Besides the regular meetings already existing, discussions on the new experiments to measure Gravitational constant G using atomic interferometer and characteristics of light scattering in the interstellar medium should take place during the year.

Regular and ongoing Activities: Discussions about support for meetings, Awards, and activities presently ongoing in the commission shall have continuity during 2015.

C2 *Proposal of a possible IUPAP Workshop*

Vanderlei S. Bagnato

From Cold Atoms to Astrophysics (and back)

Quantum mechanics, atomic physics and astrophysics have a long common history. The observation of discrete absorption lines of atomic vapors has been crucial for the development of the Bohr model with fundamental contributions to the development of the quantum mechanics. When the astrophysical community went beyond the mere detection of light intensities and used spectral information of detected light, a new window opened to the understanding of the constitution, formation and evolution of stars, planets and other astrophysical objects. Even quantum optics has entered the field of astrophysics, with the intensity correlation experiments on performed by Hanbury-Brown and Twiss in the 50s, even though optical interferometry, as pioneered by A. Labeyrie and now implemented on the VLTI, has been taken over to increase the angular resolution of astrophysical objects. The idea to have a workshop that can cover the following topics:

- i) Interference corrections
- ii) Levy flights
- iii) Polarimetry
- iv) Random lasing
- v) Optical Forces

Beyond the scattering properties of light in astrophysics, the mechanical feedback of light onto the atomic motion needs to be considered. In astrophysics, it has been known for a long time that equilibrium properties of self-gravitating systems are rather special: negative specific heat, canonical (fixed temperature) and microcanonical (fixed energy) ensembles are not equivalent. These anomalous features of long range interacting systems have been fully appreciated by other physicists' communities only later. When long range forces are considered, local properties of the particles in the cloud depend on all particles and thus on the total size of the system. Understanding the self-organizing behavior or the thermodynamics and out-of-equilibrium dynamics of long-range interacting systems is still a challenging objective. This is for instance the situation of gravity in 3 dimensions and leads to the so-called Jeans instability, responsible for the formation of large scale structures such as galaxies. In recent years it has been shown that statistical physics of long-range interacting systems generally exhibit a whole set of new qualitative properties and behaviors: temperature jumps, long-time relaxation (quasi-stationary states), violations of ergodicity, etc. These long range interactions are also well known in plasma physics, where the Vlasov equations and derivations of this are used to study collective dynamical effects. One can therefore use one components plasmas or trapped ions to study such collective effects with long range interactions.

Possible Experts (outside the cold atom community)

- (i) Intensity corrélation : D. Dravins
- (ii) polarimetry of light scattered by hot atomic vapours : J. Stenflo
- (iii) random lasers : H. Cao, D. Stone
- (iv) Scattering : Robin Kaiser

Commission C4 – Astroparticle Physics

Report on the period Oct-2104 - April 2015

1. Membership

Newly Elected Members:

<i>Name</i>	<i>Country</i>	<i>Research field</i>	<i>remark</i>
Karl-Heinz Kampert	Germany	HE-CRs, EAS	Chair 2008,11,14
Sunil K. Gupta	India	HE-CRS, EAS, gamma-astr	Vice-chair, 2011, 2014
Adri Burger	South Africa	CR transport & modul., heliospheric phys.	Secretary 2011,2014
Jörg Hörandel	Netherlands	direct and HE CRs, EAS, gamma-astr.	2011,2014
Masaki Mori	Japan	Gamma-astr.	2011,2014
Michal Ostrowski	Poland	CR-Theory, gamma-astr.	2011,2014
Eun-Suk Seo	USA	Heliospheric Physics, direct CRs	2011,2014
Pierre Binetruy	France	Cosmology, gravitation, dark energy	2014
Pasquale Blasi	Italy	CR-Theory	2014
Zhen Cao	China	Gamma-Astronomy, CRs	2014
Joakim Edsjö	Sweden	indirect searches for dark matter	2014
Michael Kachelriess	Norway	CR-Theory	2014
Ryan Nichol	UK	UHE neutrinos	2014
Mikhail Panasyuk	Russia	CRs, EAS	2014

By email exchange and during its first teleconferences held on Febr. 9, and 19., and March 26, 2015, the newly formed commission discussed candidates for inter-union and associate membership. The commission has prepared a list of associated candidates and Inter-Union cross reps to be approved by the Council.

2. C4 Name Change:

The international scientific community largely welcomed the recent C4 name change from “Cosmic Rays” to “Astroparticle Physics”. C4 will continue doing its best to get the entire scientific community behind this change. Moreover, it will continue integrating new scientific communities under the umbrella of C4, such as direct and indirect dark matter searches.

3. ApPIC & C4:

C4 and the newly formed WG10: Astroparticle Physics International Committee (ApPIC), chaired by Michel Spiro (CNRS) tightened their links with the C4-chair being appointed ex-officio member of ApPIC. The current membership can be found at:

<http://iupap.org/working-groups/wg10-astroparticle-physics-international-committee-appic/>

4. New IUPAP / C4 Webpages:

The improved system and almost instant response time by the new IUPAP administration helped to clean-up and improve the C4 pages.

5. Upcoming Meetings supported by IUPAP in 2015:

A-type conference:

34th International Cosmic Ray Conference (“The Astroparticle Conference”),
30 July–6 August 2015, The Hague, The Netherlands,

(Chair of organising committee: Ad van den Berg, University of Groningen)

<http://icrc2015.nl>

B-type conference:

TAUP 2015: XIV International Conference on Topics in Astroparticle and Underground Physics, 7–11 September 2015, Torino, Italy

(Chair: Nicolao Fornengo, University and INFN Torino, Italy)

<http://taup2015.to.infn.it>

6. IUPAP Awards 2015

The IUPAP award ceremony will take place in the opening session of the ICRC 2015 in The Hague. The winners of the IUPAP Young Scientists Awards 2015 are:

Prof. Dr. Julia Tjus (Bochum University, Germany) for her outstanding work connecting phenomenology and experiment in neutrino astronomy.

Dr. Claudio Kopper (Madison, USA) for his outstanding contribution to the analysis of the IceCube data, leading to the first-ever observation of high-energy cosmic neutrinos.

C4 also serves to select the winners of the O’Ceallaigh and Bhabha Medals. The 2015 winners are:

Prof. Jun Nishimura (Institute of Space and Astronautical Science, Japan)

O’Ceallaigh Medal

Prof. Tom K. Gaisser (Bartol Research Lab, USA)

Bhabha Medal.

Karl-Heinz Kampert

Chair, IUPAP C4 – Astroparticle Physics

April 15, 2015

C5 Activity Report for the IUPAP Council and Commission Chairs Meeting April 2015

(submitted by J. Saunders, Chair C5)

Officers/Members 2014-2017

Chair	John Saunders	UK
Vice-Chair	Srinivasan Ramakrishnan	India
Secretary	William Halperin	USA
Members:	Viktoria Bekeris	Argentina
	John Beamish	Canada
	Hong Ding	China
	Pertti Hakonen	Finland
	Jean-Pascal Brison	France
	Christian Pfleiderer	Germany
	Naoto Nagaosa	Japan
	Hans Hilgenkamp	Netherlands
	Maxim Kagan	Russian Federation
	Peter Skyba	Slovakia
	Juhn-Jong Lin	Taiwan
Associate Members (2013-2015):	Jacek Kossut	Poland
	YoshiChica Otani	Japan

Main Achievements

Brief Review of Activity in 2014

See activity report for the IUPAP General Assembly, November 2014 for further detail.

Two sponsored conferences took place:

Type A: 27th International Conference on Low Temperature Physics (LT27), Aug 6-13, 2014 Buenos Aires, Argentina.

Type B: International Conference on Ultralow Temperature Physics (ULT2014), Aug 14-19, San Carlos de Bariloche, Argentina.

LT27 was the first of this series held in the Southern Hemisphere and the first in South America. Both the Conference Chair and Co-Chair were women.

Three IUPAP Young Scientist Prizes were presented, with associated invited talks. The Prizes were awarded to Cory R Dean, Leonardo DiCarlo and Mathieu Le Tacon.

The London and Simon prizes, the two major international prizes in Low Temperature Physics were presented, with associated invited talks, at the opening ceremony. The London Prize, sponsored by C5, was awarded to Michel Devoret, John Martinis and Robert J Schoelkopf. The Simon Prize was awarded to Peter Wölfle.

Commission C5 met at LT27 in August 2014. Subsequent business has been conducted by e-mail. C5 has received the report on ULT 2014 (posted on IUPAP site), and a full report (draft) from the LT27 organisers.

The proceedings of LT27 were published online in December 2014 (Journal of Physics Conference Series, Volume 568). As well as an Editorial Foreword, the report on LT27 prepared by C5 (included in the November 2014 activity report) is also published there.

Sponsored Conferences (2015)

Type B

International Symposium on Quantum Fluids and Solids 2015 (QFS2015)

Aug 10-15, 2015, Niagara Falls, USA

About 200 participants

Chair: F Gasparini, Co-Chair: E. Krotscheck.

Sponsored Conferences Proposed in 2016

Type B

International Symposium on Quantum Fluids and Solids 2016 (QFS2016)

Aug 11-15, 2016, Prague

About 250 participants

Chair: L Skrbek

IUPAP sponsorship has been requested (submission date 23 March 2015). This request has received unanimous approval from C5.

Planned Sponsored Conferences (2017)

Type A

28th International Conference on Low Temperature Physics (LT28). Selected by C5. Request for support anticipated.

Aug 9-16, 2017, Gothenburg, Sweden

About 1,200 participants

Chair: P. Delsing, Co-Chairs: M. Fogelström, J Bylander, F Lombardi.

Type B

International Conference on Ultralow Temperature Physics (ULT2017). Approved by C5. Request for support anticipated.

August 2017, Heidelberg, Germany

About 200-250 participants.

Chair: C. Enss.

Projected Activities for 2015 – IUPAP Commission on Semiconductors (C8)

1. Test new conference endorsement procedure using the 33rd International Conference on the Physics of Semiconductors (ICPS) (Beijing, 2016.7.31 - 2016.8.5) as a test case – done.
2. Prepare for a meeting of C8 at the 21st International Conference on Electronic Properties of Two-Dimensional Systems/17th International Conference on Modulated Semiconductor Structures (EP2DS/MSS), July 26-31, 2015, Sendai, Japan, our odd-year IUPAP-supported type A conference.
3. C8 meeting Tuesday July 28 at the EP2DS/MSS conference, Sendai, Japan.
 - introduction of new members and brief review of the roles of IUPAP and the commission
 - update on the preparations for ICPS 2016 in Beijing
 - update on the preparations for ICPS 2018 (tentatively scheduled for Montpellier, France)
 - informal discussions with possible bidders for ICPS 2020
 - review of EP2DS/MSS 2015
 - discussion on new Associate members from C5 and C17
 - discussion regarding the next round of C8 Young Scientist Prizes, to be awarded at ICPS 2016
 - discussion on how to improve the visibility of C8 and IUAP in the physics community
 - higher visibility for the Young Scientist prizes
 - possible proactive involvement with conferences that seek support sporadically, use of the new endorsement mechanism
4. Poll members not in attendance, communicate new Assoc. Members to IUPAP

C8 Membership 2014-2015

Chair	Michael Thewalt	Canada	thewalt@sfu.ca
Vice-Chair	Belita Koiller	Brazil	bkoiller@gmail.com
Secretary	Rolf Haug	Germany	haug@nano.uni-hannover.de
Member	Qi-Kun Xue	China	qkxue@mail.tsinghua.edu.cn
Member	Pascale Senellart	France	pascale.senellart@lpn.cnrs.fr
Member	Young Dong Kim	Korea	ydkim@khu.ac.kr
Member	Amalia Patanè	United Kingdom	amalia.patane@nottingham.ac.uk
Member	Yasuhiko Arakawa	Japan	arakawa@iis.u-tokyo.ac.jp
Member	Robert Suris	Russian Federation	suris@theory.ioffe.rssi.ru
Member	Per Olof Holtz	Sweden	poh@ifm.liu.se
Member	Anna Cavallini	Italy	Anna.Cavallini@bo.infn.it
Member	Jacek Kossut	Poland	kossut@ifpan.edu.pl
Member	Uli Zülicke	New Zealand	uli.zuelicke@vuw.ac.nz
Member	Alan MacDonald	United States	macd@physics.utexas.edu
Assoc. Mem.	Jason Petta	C17 United States	petta@princeton.edu
Assoc. Mem.	Jukka Pekola	C5 Finland	pekola@boojum.hut.fi
Observer	Robin Nicholas	United Kingdom	r.nicholas1@physics.ox.ac.uk

Commission C6 – Biological Physics

C6 Report to the IUPAP Executive Council and Commission Chair Meeting

April 2015

Aihua Xie, IUPAP C6 Commission Chair

1. Membership

C6 membership (2014-2017)

Name	Country	Roles	Terms
Aihua Xie	USA	Chair	(2014) (2011)
Helmut Grubmuller	Germany	Vice Chair	(2014) (2011)(2008)
Rita Maria Cunha de Almeida	Brazil	Secretary	(2014) (2011)
Melanie Campbell	Canada	Member	(2014)
Imre Derenyi	Hungary	Member	(2014) (2011)
Ramin Golestanian	UK	Member	(2014) (2011)
Ming Li	China	Member	(2014)
Silvia Morante	Italy	Member	(2014) (2011)
Madan Rao	India	Member	(2014)
Paolo de los Rios	Switzerland	Member	(2014) (2011)
Galina Riznichenko	Russia	Member	(2014) (2011)
Masaki Sasai	Japan	Member	(2014)
Bryan Trevor Sewell	South Africa	Member	(2014)
Francoise Brochard Wyart	France	Member	(2014)
Fridtjof Nusslin	Germany	Associate Member AC4 Medical Physics	2013-2015

2. Brief Review of C6 Activities in 2014

See the C6 activity report for the IUPAP General Assembly (November 2014) for the details.

- The 8th IUPAP International Conference on Biological Physics (ICBP2014) was held in Beijing June 18-22, 2014. The conference was attended by more than 500 participants from 26 countries.
- Three IUPAP Young Scientist Prizes were presented at the ICBP2014. The prizes were awarded to Yi Cao (China), Marina Kuimova (UK) and Tuomas Knowles (UK).
- A joint symposium between C6 and AC4 was organized and held on June 20 at ICBP2014 on “The Physics of Cancer”.
- Selected the proposed organizer of the 9th IUPAP International Conference on Biological Physics (ICBP2017): Rita Maria Cunha de Almeida of Brazil.

- The C6 Commission meeting was held on June 21, 2014 during the ICBP2014 conference in Beijing.

3. Sponsored Conferences

Planned IUPAP C6 conference

Type B

The 9th IUPAP International Conference on Biological Physics (ICBP2017) was selected by C6 to be held in Brazil in 2017. Request for IUPAP support is anticipated.

Principal organizer: Rita Maria Cunha de Almeida

4. Planned C6 Activities in 2015

- To discuss initiation of C6 Annual Newsletters to communicate with and to reach the large international community of biological physics
- To discuss initiation of regular C6 workshops (Type D) to be held in developing countries
- To get started with organizing the 9th IUPAP International Conference on Biological Physics (Brazil, 2017).

Projected Activities for 2015 – IUPAP Commission on Semiconductors (C8)

1. Test new conference endorsement procedure using the 33rd International Conference on the Physics of Semiconductors (ICPS) (Beijing, 2016.7.31 - 2016.8.5) as a test case – done.
2. Prepare for a meeting of C8 at the 21st International Conference on Electronic Properties of Two-Dimensional Systems/17th International Conference on Modulated Semiconductor Structures (EP2DS/MSS), July 26-31, 2015, Sendai, Japan, our odd-year IUPAP-supported type A conference.
3. C8 meeting Tuesday July 28 at the EP2DS/MSS conference, Sendai, Japan.
 - introduction of new members and brief review of the roles of IUPAP and the commission
 - update on the preparations for ICPS 2016 in Beijing
 - update on the preparations for ICPS 2018 (tentatively scheduled for Montpellier, France)
 - informal discussions with possible bidders for ICPS 2020
 - review of EP2DS/MSS 2015
 - discussion on new Associate members from C5 and C17
 - discussion regarding the next round of C8 Young Scientist Prizes, to be awarded at ICPS 2016
 - discussion on how to improve the visibility of C8 and IUAP in the physics community
 - higher visibility for the Young Scientist prizes
 - possible proactive involvement with conferences that seek support sporadically, use of the new endorsement mechanism
4. Poll members not in attendance, communicate new Assoc. Members to IUPAP

C8 Membership 2014-2015

Chair	Michael Thewalt	Canada	thewalt@sfu.ca
Vice-Chair	Belita Koiller	Brazil	bkoiller@gmail.com
Secretary	Rolf Haug	Germany	haug@nano.uni-hannover.de
Member	Qi-Kun Xue	China	qkxue@mail.tsinghua.edu.cn
Member	Pascale Senellart	France	pascale.senellart@lpn.cnrs.fr
Member	Young Dong Kim	Korea	ydkim@khu.ac.kr
Member	Amalia Patanè	United Kingdom	amalia.patane@nottingham.ac.uk
Member	Yasuhiko Arakawa	Japan	arakawa@iis.u-tokyo.ac.jp
Member	Robert Suris	Russian Federation	suris@theory.ioffe.rssi.ru
Member	Per Olof Holtz	Sweden	poh@ifm.liu.se
Member	Anna Cavallini	Italy	Anna.Cavallini@bo.infn.it
Member	Jacek Kossut	Poland	kossut@ifpan.edu.pl
Member	Uli Zülicke	New Zealand	uli.zuelicke@vuw.ac.nz
Member	Alan MacDonald	United States	macd@physics.utexas.edu
Assoc. Mem.	Jason Petta	C17 United States	petta@princeton.edu
Assoc. Mem.	Jukka Pekola	C5 Finland	pekola@boojum.hut.fi
Observer	Robin Nicholas	United Kingdom	r.nicholas1@physics.ox.ac.uk

The C10 : Structure and Dynamics of Condensed Matter Activity Report (1/1/2015 - 4/25/2015)

1. The C 10 YSP 2015 award ceremony was held in APS March meeting, San Antonio, USA, March 3, 2015. The prize winner is Prof. Keji Lai, Assistant Professor of Department of Physics, University of Texas-Austin with citation: “for his outstanding contribution in nanoscale impedance imaging of strongly correlated and low-dimensional quantum materials”. He has delivered an award lecture entitled “Nanoscale Impedance Imaging of Novel Quantum Materials” during APS march meeting on 3/5.
2. We have just announced publically in the IUPAP web site on the C 10 2016 YSP to start the nomination process from 5/1 till 7/15/2015.
3. Given the very diversity of the fields in C 10, the commission members have rarely been able to meet face to face in the past. The conference of “Materials and Mechanism of Superconductivity” is a C 10 sponsored conference, and the 11th conference will be held in Geneva, 8/23-28 this year. The C 10 members such as Laura Green (Vice chair) and Marisa Medarde from Switzerland have suggested to take this opportunity to have most of our C 10 members to meet and discuss C 10 agenda during this M²S conference.
4. One of discussion focus for our commission meeting in M²S is to consider on how to incorporate the Materials Genome Initiative (MGI) in US, as well as the “ Materials’ Revolution--Computational Design and Discovery of Novel Materials” (MARVEL) in SWISS into C 10.

C 10 Members for the years of 2015 -2017

Officers

Chair: J. Raynien Kwo (2014) (2011) (2008)

Department of Physics, National Tsing Hua University, Hsinchu, Taiwan

Vice-Chair: Laura Greene (2014) (2011)

Department of Physics, University of Illinois, Urbana-Champaign, Urbana, Illinois, USA

Secretary: Hartmut S. Leipner (2014) (2011)

Interdisziplinäres Zentrum für Material-Wissenschaften der Universitaet Halle-Wittenberg, Halle, Germany

Members

Maria Luisa Medarde Barragan (2014)

Laboratory for Developments and Methods, Paul Scherrer Institut, Switzerland

Jonas Fransson (2014) (2011)

Department of Physics and Astronomy, Uppsala University, Uppsala, Sweden

Vladimir Kulakovskii (2014)

Solid State Physics Institute, RAS, Central'naya, Chernogolovka, Moscow Region, Russian Federation

Najeh Thabet Mliki (2014) (2011)

Department of Physics, Faculty of Science of Tunis, University of Tunis El Manar, Tunis Tunisia

Kell Mortensen (2014)

Niels Bohr Institute, University of Copenhagen, Universitetsparken, Copenhagen, Denmark

Youichi Murakami (2014)

Institute of Materials Structure Science, High Energy Accelerator Research, Tsukuba, Japan

TaeWon Noh (2014)

Center for Correlated Electron Systems, Seoul National University, Seoul Republic of Korea

Rob Robinson (2014) (2011)

Australian Nuclear Science & Technology Organisation, New South Wales, Australia

Dominik Schaniel (2014)

Laboratory for Crystallography, Magnetic Resonance, and Modelling, Vandoeuvre-l, France

Matt Tucker (2014)

ISIS facility & Diamond light source Ltd, Harwell, Oxford, UK

Mu Wang (2014) (2011)

National Lab of Solid State Microstructure, School of Physics, Nanjing University, Nanjing, China

C11 Report to IUPAP Commission Chairs and Executive Committee

April 2015

Juan Fuster, Chair C11 Commission

C11 Officers:

Chair: Juan Fuster (2014) (2011), Spain

Vice-Chair: Heidi Schellman (2014)(2011), USA

Secretary: Soo-Bong Kim (2014)(2011), Korea

C11 Members:

Martin Schnabl (2014) Czech Republic

Zhizhong Xing (2014) China

Amol Dighe I(2014) ndia

Dezső Horváth (2014) Hungary

Mark Lancaster (2011) United Kingdom

Mihoko Nojiri (2014) Japan

Vladimir Kekelidze (2011) Russian Federation

Raymond Volkas (2014) Australia

Sergio Novaes (2011) Brazil

Per Olof Hulth (2014) Sweden

Florenca Canelli (2014) Switzerland

C11 Associate Members:

Johannes Knapp (C4)

Jean-Michel Poutissou (C12)

Thanu Padmanabhan (C19)

Note: We regret to inform that Professor Per Olof Hulth passed away on March 2015

Activities:

The 37th International Conference on High Energy Physics (ICHEP 2014) (<http://www.ichep2014.es>) was hosted by IFIC in Valencia, Spain July 2-9. For its 37th edition, ICHEP went for the first time to Spain. ICHEP 2014 attracted a total of 967 scientists from 53 countries, with the largest delegation of 193 participants coming from Spain. The women participation was 198. The scientific programme in Valencia consisted of parallel and plenary sessions. In the 15 parallel sessions, 538 experimental and theoretical communications were presented, covering most of the areas in the field. A summary of the results discussed in these sessions was then given in 55 talks in the 42 plenary sessions that took place in the second half of the conference. The scientific programme was completed with the display of more than 200 posters that summarized the work of young researchers. The presence of young scientists was large. The 60th CERN anniversary and Industrial session complemented the programme. A large number of outreach activities was organized during and before the conference with 18 topical seminar and outreach talks. The exposition "Accelerating Science" from CERN

was brought to Valencia and got more than 244.000 visitors at the Arts and Science Museum of Valencia. A total of 52 grants were awarded to young scientists to cover their attendance to the meeting.

The third Technology and Instrumentation conference (TIPP 2014) (<http://www.tipp2014.nl/index.html>) was held in June in Amsterdam. A total of 448 people attended of whom 77 were women, 53 were from the US, 79 from the Netherlands. The scientific programme in Amsterdam consisted of parallel and plenary sessions. There were a total of 229 parallel talks in 5 parallel tracks, 19 plenary talks and 170 posters. It was notice that a significant amount of posters didn't show up (59) due to the fact only oral presentations could be covered from their home Institutes. Better format and more weight to poster presentations should be considered for future conferences. An industry session took place. Several outreach activities and a public lecture completed the dissemination programme. Prizes for best oral and posters were awarded.

Neutrino 2014 (<http://neutrino2014.bu.edu/>) was held in Boston in early June. 549 attended of whom 85 were women. 287 of the participants were from outside the US. Of particular note this year was a presentation by IceCube on the first detection of high-energy astrophysical neutrinos, a long sought goal of neutrino telescopes. The RENO experiment announced the first observation of an unanticipated component in the reactor neutrino flux.

The annual meeting of the IUPAP C11 Commission was held on July 5, 2011 at the Conference Center during the ICHEP conference. At this meeting, the commission reviewed recently sponsored conferences, discussed the upcoming conferences seeking sponsorship, reviewed progress on upcoming conferences and selected the location of future conferences. The list of selected upcoming sponsored IUPAP conferences is:

- 2015, International Symposium on Lepton Photon Interactions at High Energies (LP2015) in Ljubjana (Slovenia), August 17-22, 2015;
- 2016, The 38th International Conference on High Energy Physics (ICHEP 2016) in Chicago (USA), August 3-9 2016;
- 2017, International Symposium on Lepton Photon Interactions at High Energies (LP2015) in Guangzhou (China);
- 2017, TIPP 2017 at IHEP Beijing (China);
- 2018, The 38th International Conference on High Energy Physics (ICHEP 2018) in Seoul (Korea).

The C11 Chair Hiroaki Aihara and Vice-Chair Francois Le Diberder finished their term. A unanimous and warm recognition of their service was expressed by the committee. Juan Fuster was nominated as Chair, Heidi Schellman as Vice-Chair and Soo-Bong Kim as Secretary.

The 2014 IUPAP C11 Young Scientist Prizes were awarded at the ICHEP 2014 conference in Valencia to:

- Claude Duhr, IPPP Durham. For his outstanding contributions to elementary particle theory, in particular, to formal developments in quantum field theory and their applications to precision calculations in collider phenomenology.
- Kersten Tackmann, DESY. For her outstanding contributions to experimental high energy physics, in particular, to the discovery of the Higgs Boson via its gamma gamma decay mode with the ATLAS experiment.

The 2016 IUPAP C11 Young Scientist Prizes will be awarded at the ICHEP conference in Chicago. The biennial C11 prizes honor achievement by two young scientists in the fields of experimental and theoretical particle physics. The deadline for nominations for the 2016 prizes will be January 15, 2016.

IUPAP C11 also sponsored the 5th International Particle Accelerator Conference (IPAC) June 15-20 in Dresden, Germany (<http://www.ipac14.org/>) The annual IPAC conference covers accelerator physics and technologies.

Associates:

New associate members from other IUPAP Commissions need to be nominated from the C4, C12 and C19 Commissions. In addition to these traditional members in the C11 Commission other associate members from the ICFA group and the new Accelerator Science group (if finally created) will also be nominated.

New Accelerator Science Group at IUPAP

Over the past year there has been discussion on a proposed IUPAP Commission or Working Group on accelerator science. Juan Fuster was asked by Roy Rubinstein (secretary of ICFA, the International Committee for Future Accelerators) to express the C11 opinion on this topic. Juan Fuster joined the ICFA meeting in Newport News, VA, USA in February 2015 and the C11 members later held a phone meeting to discuss the issue. The C11 commission members expressed a positive view the creation of a new IUPAP Working Group in Accelerator Science.

Complementarity with the existing ICFA Working Group is needed to avoid duplication. The C11 commission foresees the new Group as a bottom-up approach to be managed by the accelerator scientist community whereas ICFA is a more top-down body mainly concerned with the coordination by laboratories of large future experimental facilities. ICFA is mainly focused on the future of Particle Physics whereas the new Group should cover much broader domains of the accelerator science. Such a new group should have strong links to ICFA and C11.

C12 Report to the IUPAP Council and Commission Chairs Meeting April 2015

C12: Commission on Nuclear Physics (Alinka Lépine-Szily)

1. The latest annual meeting of C12 was held on July 12, 2014 at Hotel Johanneshof, Egelsbach, Germany c/o GSI with 12 out of the 14 commission members present. This meeting followed the annual meeting of the IUPAP Working Group 9 on International Cooperation in Nuclear Physics which was held at GSI, Darmstadt, Germany, on July 11. The members of WG.9 were welcomed to attend the meeting of C12 as observers and vice versa.

The major items on the agenda were

- the selection of the IUPAP conference support
- the recommendation and the selection of the executive member and new members for the next C12.

Those discussions and decisions were held in camera in the Executive session.

Election of new Officers and Members of C12

Hide Sakai explained the different aspects of the officer and member election:

- sub-field,
- geographical region,
- relevant experience,
- gender, etc.

After a careful discussion, taking into account the various factors and the nominations from the national IUPAP committees, the Commission agreed on a list of candidates to be presented to the Nomination Sub-Committee.

Conference recommendations

There were one pre-approval request for the Type-A and seven requests

The committee heard presentations by the organizers of the conferences to be held in 2015:

- Few Body problems in Physics FB21 (Daniel Phillips)
- Electromagnetic Isotope Separators and Related Topics EMIS-2015 (Helmut Weick)
- Symmetries in Subatomic Physics SSP-2015 (Willem van Oers)
- Nucleus-Nucleus Collisions NN2015 (Claudio Spitaleri)
- Latin American Symposium on Nuclear Physics and Applications XI LASNPA (A. Lépine-Szily)
- Origin of Matter and Evolution of Galaxies OMEG2015 (Weiping Liu)
- Electromagnetic Interactions with Nucleons and Nuclei EINN (C. Alexandrou) via "Skype"

After careful deliberation by the C12 members, the following recommendations for IUPAP sponsorship were suggested :

- Category A support pre-approval requested
International Conference on Nuclear Physics (INPC 2016), Adelaide, Australia, September 2016.
- Category B support:
NN2015, LASNPA2015, EMIS2015, FB21 in that ranking order
- Category C support:
OMEG2015, SSP2015 and EINN2015.

2. Our annual meeting in 2015 will be held on June 5, 2015 in Washington DC. The main subjects of our meeting will be the following:

- a) Recommendation for conference support

The conferences that should ask support are the following

- International Nuclear Physics Conference INPC 2016 (Anthony Thomas)
- International Spin Physics Symposium SPIN2016 (Mathias G. Perdekamp)
- Nuclei in Cosmos NIC2016 (Tohru Motobayashi)
- International Conference on Meson-Nucleon Physics and the Structure of the Nucleon MENU2016

- b) IUPAP Young Scientist Prize Selection process

Three awards will be given at the INPC2016 conference to the winners of the selection performed by the C12 members. The divulgation of the award by different media and the selection process will be discussed at our meeting in June.

- c) Associate members to other commissions

The C12 has associate members at the following commissions:

- C11 (Particle Physics)
- C19 (Astrophysics)
- C13 (Physics for development)
- APPIC working group

New associate members will be elected to these commissions

Alinka Lépine-Szilý
IUPAP-Nuclear Physics Commission C12- Chair

International Commission on Physics Education (C14) Activities in 2015

1. Conference

International Conference on Physics Education (ICPE 2015), Beijing, China, August 10-14, 2015.

This conference will be supported by IUPAP and C14. The conference will focus on “Engaging Students in Physics – Research and Practice”. Web site: <http://www.iupap-icpe2015.org/>

2. PHYSWARE

PHYSWARE 2015 was held on January 25 to 30 at the ICTP Trieste. PHYSWARE is a collaborative workshop to promote physics teaching and learning in the developing world. PHYSWARE 2015 was generously sponsored by ICTP and co-sponsored by IUPAP and EPS.

3. Annual ICPE face-to-face meeting

We plan to hold our annual commission meeting on August 14, 2015, i.e. immediately after the end of the ICPE 2015 conference in Beijing. The items to be discussed will be:

1) Future conferences

World Conference on Physics Education (WCPE) 2016, July 11-16, São Paulo, Brazil.

ICPE 2017 and beyond.

2) ICPE Newsletter

3) ICPE Medal

The problem: we have only one blank ICPE Medal left.

4) Young Scientist Award

5) New associate members of ICPE

6) New projects for 2015-2017



Commission C15: Atomic, Molecular and Optical Physics

Report (October 2014 – April 2015) to the IUPAP Council & Commission Chairs meeting
ICTP, 25-26 April 2015

Submitted by Toshiyuki Azuma (Chair)

C15 officer:

Chair:

T. Azuma
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Vice Chair:

Roberto Rivarola
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Secretary:

Dominique Vernhet,
Institut des NanoSciences de Paris, Université Pierre et Marie Curie – Paris 6
B84, 4 place Jussieu, 75252 Paris cedex 05, France
Email: dominique.vernhet@insp.jussieu.fr

C15 Activity:

Since the last C6CC meeting at Singapore, we started the activities with the new officers listed above and renewed 11 members. The major activities in 2015 are categorized into the following three items.

1. IUPAP C15 Young Scientist Prize

The commission C15 runs this IUPAP Young Scientist Prize in Atomic, Molecular, and Optical (AMO) Physics. Selection procedure of the 2015 winner has started by the call for nomination at 13th January 2015, and we had 25 nominations. Ranking of nominations for the Young Scientist Prize in AMO Physics was again highly competitive and taken very seriously by members of the Commission. Now the selection procedure is at the final stage. The prize will be awarded annually alternating between the two major “flagship” conferences of the AMO Physics field regularly supported by IUPAP, ICPEAC (the International Conference on Photonic, Electronic, and Atomic Collisions) or ICAP (the International Conference on Atomic Physics). This year, the winner will be invited to talk at 29th ICPEAC 2015 (22-28 July 2015 in Toledo, Spain).

2. Conference Support

The following conferences will be supported by IUPAP in 2015.

The 29th International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC 2015)

http:// www.icpeac2015.com

Location: Toledo, Spain

Date: 22 - 28 July 2015

Chair: Roberto Rivarola (IFIR, Argentina)

Conference Type: A

The 22nd International Conference on Laser Spectroscopy (ICOLS 2015)

Location: Sentosa Island in Singapore

Date: 28 June – 3 July 2015

Chair: Kai Dieckmann (National University of Singapore, Singapore)

3. C15 Commission Meeting

The commission meeting is now scheduled during the coming ICPEAC2015.

IUPAP C17: Commission on Laser Physics and Photonics

Report to IUPAP Council and Commission Chairs Meeting, Trieste, 25-26 April 2015

1. IUPAP C17 Young Scientist Prize

The IUPAP Commission on Laser Physics and Photonics runs its Young Scientist Prizes every two years, awarding two prizes in each round. These two prizes recognize the very highest level of achievements in fundamental and applied research. The 2015 prizes attracted 12 nominations, 9 male, 3 female. Geographical spread included Australia(3), Austria(1), Belgium(1), Canada(1), Germany(1), New Zealand(1), Spain(2), United Kingdom(1), USA(1).

The 2015 IUPAP Young Scientist Prize in Laser Physics and Photonics (Applied Aspects) will be awarded to Dr Mark Thompson, Centre for Quantum Photonics, University of Bristol, United Kingdom. Dr Mark Thompson is awarded the prize “for his contributions to the new and emerging field of quantum photonics, and particularly for his pioneering work in integrated quantum photonic circuits.”

The 2015 IUPAP Young Scientist Prize in Laser Physics and Photonics (Fundamental Aspects) will be awarded to Dr Robert Fickler, Institute for Quantum Optics and Quantum Information, University of Vienna, Austria. Robert Fickler is awarded “for his groundbreaking contributions to the entanglement of complex structures of photons, which have opened up new avenues for quantum communication”.

The award ceremony will be hosted at CLEO/Europe – EQEC 2015 21-25 June 2015 in Munich. <http://www.cleoeurope.org/> and the award winners will be publicised more broadly thereafter.

Next call for the IUPAP C17 Young Scientist Prizes will be launched towards the end of 2016 for 2017. A longer term schedule of the major international conferences at which the prizes will be awarded, which also fulfill IUPAP requirements, is to be put in place before the call for nominations in 2016.

2. International Year of Light (and Light Based Technologies) 2015

The International Year is being celebrated extensively around the globe. The official website lists activities and documents the year: <http://www.light2015.org/Home.html>

91 National Nodes which are organising local campaigns, activities and events are also listed <http://www.light2015.org/Home/About/Country.html>

One of the very first events was inclusion of IYL related projections in the Sydney Harbour Bridge Pylon Displays on New Year’s Eve. <http://light2015.org.au/year-of-lights-starts-at-sydney-nye-fireworks/> The Sydney Harbour Bridge Icon turned on at midnight, a LED based display, featured a light bulb – in keeping with the theme of Sydney NYE2014 (Inspire Sydney) and IYL.

The official launch for IYL was held at the UNESCO Headquarters in Paris 19-20 January 2015. <http://www.light2015.org/Home/About/Resources/Videos.html> Prof Cristina Masoller attended as a representative of C17. Previous Chair, Prof Alan Shore (2008-2011) also attended as representative for Wales. Reports of the launch are reproduced in Appendix B. A copy of the program for the launch can be provided to anyone who would like it.

3. Laser Physicist/Research Leader Joins the Greek Government

Well known research leader in the European laser physics and photonics community, Professor Costas Fotakis, previously a Director of the Institute of Electronic Structure and Laser (IESL) at the Foundation for Research and Technology – Hellas (FORTH) in Crete, Greece and then elected as President of FORTH in 2011 started a new phase of his career as the Deputy Minister for Research and Innovation in the new Greek Government, January 2015. <http://greece.greekreporter.com/2015/02/01/who-is-who-in-the-new-greek-government/> Should we think of creating a directory of “Physics Angels” – those who have a physics background and/or strong interest in physics who have become influencers and who can be neutral supporters of physics? A strong, collective, disinterested voice from such a grouping could help to raise awareness of the contribution of physics to society.



Costas Fotakis is the new Deputy Minister for Research and Innovation in Greece.

4. Associate Members of C17

At the IUPAP Executive Council and Commission Chairs meeting of October 2012 C17 proposed the European Physical Society (EPS) as an associated member of the commission. This was approved. Two representatives from the EPS were named as Associate members to formalize liaison:

Prof John Dudley, President of the EPS, former chair of the QEOD/EPS
David Lee, Secretary General, EPS

Currently, there is a request to confirm Associate members of the Commission on the IUPAP website. It is proposed the term of these two Associate members be extended through 2015.

5. Ongoing Work of the Commission in 2015

Undertake a review of C17 conference support and ensure that networking occurs via which appropriate conferences are forthcoming in applications for support.

Discuss priorities for Associate members – Commission related research, education and outreach activities to be included in the discussion

Support the international Year of Light strongly. Plan for longer term beneficial legacies of the year.

Appendix A. Commission Membership 2014-2017

Officers:

Chair, Prof. Deborah Kane (2011) (2014)

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Secretary, Prof. Gong Qihuang (2011) (2014)

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Past Chair, Prof. Victor Zadkov (2011)(2008)

Vice-Dean, Faculty of Physics

Vice-Director, International Laser Center

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Prof. Tamás Kiss (2011) (2014)

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International Year of Light Illuminates Paris



United Nations
Educational, Scientific and
Cultural Organization



International
Year of Light
2015

The opening ceremony for the International Year of Light was held in Paris on 19-20 January.

by Benjamin J. Eggleton

The opening ceremony for the International Year of Light and Light-based Technologies was a two-day celebration of the wonderful and diverse ways in which human society is uplifted by our interaction with light. The ceremony was most aptly held at the UNESCO headquarters in Paris, a city known for centuries as The City of Light.

UNESCO itself was founded in the aftermath of World War Two as an organisation designed to build lasting world peace by encouraging all of humankind to regard themselves not as individual competing nations, but rather as one people working in solidarity towards a common future where democracy, development and human dignity are available to all. UNESCO strives to achieve this goal by promoting education as a human right, fostering intercultural understanding, pursuing scientific cooperation and protecting freedom of expression.

Over the two days participants were led through this journey by a range of people who have made understanding



The IYL light show on UNESCO in Paris.

light the focus of their life's work. In line with UNESCO's goals, the organisers put together an event that celebrated the scientific, economic and social impacts of how light is used, offering a fascinating overview of the way a seemingly small innovation in one area can have profound impact in the lives of many.

Presentations ranged from Nobel Prize winners explaining how our understanding of light informs our understanding of the

foundations of the cosmos, to grassroots workers showing how bringing eyeglasses to isolated African villages or light into the homes of the poorest slum dwellers can fundamentally change human lives for the better. It was a rare and wonderful opportunity for all of us to lift our focus from the specifics of our own work and see the way that science interconnects with human societies around the globe.

This diversity in the presentations gave rise to stimulating conversations of the intersection of physics, technology, development and society. Highlights included presentations from leading scientists such as Steve Chu (1997 Nobel Prize winner and former US Secretary of Energy), William Phillips (1997 Nobel Prize winner), Serge Haroche (2012 Nobel Prize Winner), Gerard Mourou, Zhores Alferov (2000 Nobel Prize Winner), Alain Aspect, Brian Wilson and Sune Svanberg (Former chair of the Nobel Committee for Physics). We also heard fascinating presentations that dealt with "light for humanity and culture", including captivating talks on light solutions for many problems in developing countries. The International Year of Light asks us to expand our intellectual horizons when we consider the impact of our work, and



At UNESCO headquarters in Paris in the main auditorium just before the formal proceedings begin.

the opening ceremony helped us to start doing so.

CUDOS, a gold sponsor of IYL, will be organising a year-long series of events and will be focusing on developing its International Outreach resources, teaching photonics science to school students.

Benjamin Eggleton, ARC Laureate Fellow, is Director of CUDOS, ARC Centre of Excellence and is with the Institute of Photonics and Optical Science (IPOS) and the School of Physics, University of Sydney.



Professor Andrew White from the University of Queensland and Professor Benjamin Eggleton from the University of Sydney at the UNESCO headquarters in Paris.



Professor John Dudley the Chair of the IYL steering committee and current President of the European Physical Society speaking at the opening ceremony. Image credit: © UNESCO/Nora Houguenade.



Dr William Phillips presenting his keynote talk on cold atoms with striking demonstrations that engaged the audience (Nobel Prize winner in Physics). Image credit: SPIE.

SPIE News

by Amy Nelson

Solutions Enabled by Light Inspire at International Year of Light Celebration

Credit for all images: SPIE, the international society for optics and photonics.

United Nations' International Year of Light was launched by high-profile, diverse speakers, with technologies both simple and futuristic being reported at the UNESCO-hosted event

Paris, the City of Light, was home to opening ceremonies launching the United-Nations-declared International Year of Light and Light-based Technologies (IYL 2015) in January. High-level speakers took the stage at UNESCO headquarters to celebrate the many uses and roles of light in our lives.

IYL 2015 was adopted by the United Nations to raise awareness of how optical technologies promote sustainable development and provide solutions to worldwide challenges in energy, education, agriculture, communications and health. With UNESCO as lead agency, IYL 2015 programs promote improved public and political understanding of the central role of light in the modern world while also celebrating noteworthy anniversaries in 2015 - from the first studies of optics 1,000 years ago to discoveries in optical communications that power the Internet today.

Light is solar power installations and LEDs bringing light to remote communities; it is what enables instantaneous

communication across the globe and into space via phones and computers; it is a source of artistic inspiration for visual artists and musicians, and plays a role in most of the world's theologies.

The launch was one of the first IYL 2015 events. SPIE, the international society for optics and photonics, is a Founding Partner of IYL 2015.

More than a thousand participants went to Paris for the two-day event, with speakers including international diplomats and decision-makers, Nobel laureates, CEOs, and science and industry leaders from across the globe.

Keynote lectures, symposia, and round-table discussions covered areas of basic science, innovative lighting solutions for society, light pollution, emerging trends in photonics, the Einstein Centenary, the role of light-based technologies in addressing global challenges, light in art and culture, the history of science, and science policy.

Nobel Laureate Ahmed Zewail called for dialogue, not conflict, and vision and leadership to address the world's needs. Fellow Nobelist Steven Chu stressed the promise of solar power, and said there is "less than a 1-in-27-million chance that Earth's record hot streak is natural." Later, U.S. National Science Foundation director France Córdova stressed the importance of basic research in the discovery of new applications for light. Ziad Aldrees, Saudi Arabia's Ambassador and Permanent Delegate to UNESCO, harkened back to the scientific contributions of Ibn al-Haytham, whose seminal Book of Optics was written around 1015, and others working in the "Golden Age" of Muslim civilization.

Hearing from a wide variety of speakers



Flavia Schlegel, Assistant Director-General for Natural Sciences, UNESCO at the opening ceremony.

provided a really broad perspective on how light impacts our society, said Anne-Sophie Poulin-Girard, a Université Laval student who was among the participants.

John Dudley of Université de Franche-Comté, president of the European Physical Society and chair of the IYL global steering committee, pointed out the importance of the IYL 2015 observance to the optics and photonics community as a means to communicate the importance of the technologies in everyone's lives. "We only get one chance," he said "It is nice to celebrate but we need to get to work as well."

The program featured several cultural and musical interludes, and the outside of the UNESCO building was lit by Finnish light artist Kari Kola with a display entitled "Light is Here" reflecting the powerful elements of the Northern lights.

Optical technologies for simple lighting, inexpensive eyeglasses, and solar power were among the many and varied applications of light celebrated during the second day of ceremonies. In a well-received and inspiring session on Light Solutions, three presenters described highly successful programs that are making huge improvements in quality of life in several areas of the world. Ilac Diaz told how 'A Liter of Light' is using very low technology - a plastic bottle filled with water and chlorine - to create a 55-watt solar bulb powerful enough to light up a home while being environmentally friendly, inexpensive, and easy to make. Martin



UNESCO building interior.



"Light is Here" - a light artwork gracing the UNESCO building at the ceremony.

Aufmuth described how 'One Dollar Glasses' is changing lives by providing locally manufactured glasses at low cost to some of the approximately 150 million people worldwide who need prescription eyeglasses but cannot afford them - and who may be unable to work to earn money without them. The program also teaches people in the community how to make the glasses, further opening the path out of the cycle of poverty. Linda Wamune explained the 'Sunny Money' program, which provides solar-powered lights and chargers in African communities to enable more hours in the day for activities such as studying. Wamune said that the program is successful in part because the lights are sold rather than given away. People in Africa can afford such small technology devices, she said, and they place more

value on what has been purchased, as the perception is that items that are given away are of lesser quality.

Nobel Laureate William Phillips started the day with a dynamic, crowd-pleasing demonstration using liquid nitrogen. Fellow Nobelists Serge Haroche and Zhores Alferov gave thought-provoking and visionary talks - Haroche on how light reveals the quantum nature of physical reality, and Alferov on how heterostructures enable the creation of new structures with unique and superior electrical, optical, and mechanical properties.

Future of Light panellist Sune Svanberg (Lund University) made the audience laugh with a slide explaining the few "simple" steps to winning a Nobel prize. He joined fellow panellists Alain Aspect (UNESCO Niels Bohr Medal Laureate),

SPIE Fellow Bernard Kress (Google [X]), and 2014 SPIE Britton Chance Biomedical Optics Award winner Brian Wilson (Ontario Cancer Institute) in describing future applications of light in healthcare, computing and wearable technologies, and research.

A roundtable discussion on science policy moderated by Jose Mariano Gago, Portugal's former Minister of Science, Technology and Innovation, emphasized science as a tool for development. Gago encouraged nations to cooperate and improve the dialogue about science policy at an international level. Science, he said, "can be a source of peace or a source of conflict, a source of war or a source of development. It must rely on knowledge and trust."

Panellist Naledi Pandor, South African Minister of Science and Technology, pointed out a disconnect between Africa and the rest of the world, saying that the continent is often excluded from initiatives that are nominally "global." The continent needs to raise its profile with well-crafted science policy, building human capital in a wide range of disciplines, and making sure researchers have academic freedom and the infrastructure to work, she said.

"Every closing is an opening," observed Maciej Nalecz, UNESCO Director of the Division of Science Policy and Capacity-Building - the closing of IYL 2015 ceremonies are just the beginning of a year full of activities.

Read more: spie.org/x105834.xml

IUPAP C19 Astrophysics Activity report 2014.11 – 2015.04

Our work was started in the following directions:

1) C19 Webpage updating

First most urgent updates have been done and a team of five volunteering commission members (Petr Hadrava, Michel Rieutord, Grazina Tautvaisiene, and Pietro Ubertini lead by C19 Secretary Patrick Woudt) was consolidated for implementation of further improvements.

2) IUPAP Young Scientist Medals in the field of Astrophysics

A call for nominations for the IUPAP Young Scientist Medals in the field of Astrophysics of 2014 and 2015 was announced in February of 2015. A committee of ten members was appointed which will review the applications and select winners.

The IUPAP Young Scientist Medal in the field of Astrophysics of 2014 and 2015 will be awarded during the 28th Texas Symposium on Relativistic Astrophysics on December 13–18, 2015 in Geneva, Switzerland.

3) Face-to-face-meeting organization

The C19 face-to-face meeting is planned in the period of August 3-14, 2015 in Honolulu, USA during the General Assembly of the International Astronomical Union. Seven C19 members plan to meet.

4) Nomination of Associate members

The final list of the associated C19 members will be presented in autumn. Presently we have one candidate in our list (Kei-ichi Maeda, Waseda University, Japan).

5) IUPAP support of international conferences

For the IUPAP support traditionally was selected the 28th Texas Symposium on Relativistic Astrophysics to be held in Geneva on 13–18 December, 2015:

<https://indico.cern.ch/event/336103/>

6) Participation at organizing committees of international conferences supported by IUPAP

Three members of C19 work at the Scientific Organising Committee of the 28th Texas Symposium on Relativistic Astrophysics (Grazina Tautvaisiene, Shuang-Nan Zhang, and assoc. member Virginia Trimble).

7) International Year of Light

So far members act individually in their native countries. There are no common actions elaborated yet. The work is in progress.

Grazina Tautvaisiene
C19 Chair

APPENDIX 2 FINANCIAL POSITION

IUPAP Financial Position 2012 -2014

	Budget			Actual			Estimate
	2012	2013	2014	2012	2013	2014 to 28/02/2015	2014
INCOME							
Dues	407,000	419,000	431,570	411,272	456,310	437,269	440,000
Bank Interest	1,000	1,000	500	2,949			
Other				600			
TOTAL INCOME	408,000	420,000	432,070	414,822	456,310	437,269	440,000
EXPENDITURE							
Conferences	148,000	104,500	104,500	145,417	114,500	114,000	114,500
Conference/travel grants	42,000	45,000	35,000	38,314	45,000	35,000	45,000
ICTP publications for developing countries	3,000	3,000		0	0	0	
ICPE News letter	3,000	3,000	3,000	0	0	0	
Commissions	30,000	23,000	23,000	7,712	30,109	3,103	23,000
C&CC meetings	70,000	35,000	45,000	166,664	30,450	29,931	45,000
Young scientist prizes	12,000	6,000	12,000	13,606	14,951	14,000	14,000
Working Groups	35,000	37,500	37,500	2,585	20,268	15,722	20,000
Developing Countries Workshop	21,000	21,000	21,000	21,000	21,000	12,000	21,000
New Programmes		7,000	7,000	3,709	3,763	3,763	3,763
Women in Physics conference			15,000		0	15,000	15,000
General Report/Newsletters	5,000	2,000	2,000	1,000	0		
ICSU	19,400	19,400	19,400	19,400	19,982	20,581	20,581
ICST	1,000	1,000	1,000	800	800	0	
Secretariat	50,000	52,800	57,600	54,286	46,838	50,400	60,000
President	5,000	5,000	5,000	267	5,708	762	5,000
GA			45,000		0	21,616	50,000
Banking and accounting	11,000	11,000	11,000	8,545	1,729	3,096	6,000
Liability Insurance	2,000	2,000	2,000		0	0	
Contingency	7,000	7,000	7,000		20	8,826	7,000
ICSU GA			4,500		0	853	4,500
Nomination Subcommittee			2,500		0	1,874	2,500
Other expenses					0		
TOTAL EXPENDITURE	464,400	385,200	460,000	483,305	355,118	350,526	456,844
SURPLUS	-56,400	34,800	-27,930	-68,483	101,192	86,743	-16,844
CUMULATIVE SURPLUS	0	34,800	6,870	0	101,192	187,935	84,348

Comments on the statement of financial position of IUPAP

- 1 The Executive Council meeting of 2011 determined a budget for 2012-2014 which would have a deficit. The General Assembly of 2011 made decisions which reduced the income and increased the expenditure, increasing the budgeted deficit.
- 2 The Executive Council in October 2012 reacted to this likely large deficit for the triennium by reducing expenditure, principally for Conferences and for the Commissions. The Council also agreed that, if necessary, the deficit for 2012 would be covered by a transfer from the reserves, hence the 0 cumulative surplus shown in the 2012 budget. These provisions restored the operating budget to a small surplus at the end of 2014.
- 3 The administration vigorously encouraged members to pay their dues, and this has led to an income in excess of that budgeted. The budgeted income allowed for a larger level of non-payment than actually occurred
- 4 The increased income in 2012 and 2013 and less than budgeted expenditure in 2013, and present estimates of 2014 expenditure lead us to expect a significant surplus at the end of 2014. When returned to the reserve account, this will more than compensate for the sum transferred from the reserve to cover the 2012 deficit. The net return to the reserve fund is expected to be about 110000 EUR.
- 5 On C&CC and GA in 2014 our expenditure was much less than budgeted for, thanks to the very generous support of our hosts, the Institute for Advanced Studies of the Nanyang Technological University
- 6 The reserve fund at 1 January 2012 was 812284 EUR, and at 1 January 2015(allowing for debtors and creditors 2015) it was 1,007,499.99. This now represents more than twice expected annual income
- 7 One can argue about a sensible level for the reserve fund. I regard 1.5 times the annual income as a minimum, and would prefer the reserve to be at 2 times the annual income. In a survey of various similar organisations I have found that they regard 1.5 to 5 times the annual income as a minimum for their reserve funds. The reserve for 1/1/15 is 2.3 times the 2014 annual income
- 8 I wish to thank the Executive Council for taking action to reduce the expenditure, the Administration for taking action to increase the fraction of dues received, and the Institute for Advanced Studies of the Nanyang Technological University . Together these actions have brought us to the close of the 2014 financial year in a sound financial position.
- 9 Small variations may occur as income is received and payments made which relate to the 2014 financial year

Bruce McKellar 26 March 2015

APPENDIX 3 2015-2017 BUDGET

IUPAP 2015-2017 BUDget

	2014 Budget	2014 Actual 28/2/15	2015 Budget approved 2014	2015 Budget Revised	2016 Budget	2017 Budget
INCOME						
Dues	431570	437,269	444517	450387	463899	477816
Bank Interest	500					
Other						
TOTAL INCOME	432070	437,269	444517	450387	463899	477816
EXPENDITURE						
Conferences	104500	114,000	140000	140000	140000	140000
Conference/travel grants	35000	35,000	45000	45000	45000	45000
ICPE News letter	3000	0	3000	3000	3000	3000
Commissions	23000	3,103	30000	30000	30000	30000
C&CC meetings	45000	29,931	35000	35000	35000	35000
Young scientist prizes	12000	14,000	12000	22000	22000	22000
Working Groups	37500	15,722	35000	35000	35000	35000
Developing Countries Workshop	21000	12,000	21000	21000	21000	21000
New Programmes	7000	3,763	7000	7500	7500	7500
Women in Physics conference	15000	15,000				15000
General Report/Newsletters	2000		5000	5000	5000	5000
ICSU	19400	20,581	20600	20600	21218	21855
ICST		0				
Secretariat	1000		1000	1000	1000	1000
President	57600	50,400	48000	50000	45000	40000
GA	5000	762	5000	5000	5000	5000
Banking and accounting	45000	21,616				60000
Liability Insurance	11000	3,096	11000	11000	11000	11000
Contingency	2000	0	2000	2000	2000	2000
ICSU GA	7000	8,826	7000	7000	7000	7000
Nomination Subcommittee	4500	853				6000
Other expenses	2500	1,874				2500
TOTAL EXPENDITURE	460000	350,526	427600	440100	435718	514855
SURPLUS	-27930	86,743	16917	10287	28181	-37039
CUMULATIVE SURPLUS	#REF!	86,743	16917	10287	38468	1429

b

Notes on the budget

1 The total amount of 2015 dues billed is 526746, but because of the effects of the
global financial crisis we do not expect to receive this amount. The sum now
budgeted is based on recent payment history

2 For this triennium we are using an inflation rate of 3% for the fees.

3 This inflation rate allows us to enhance conference+ conference travel grants, but
not to the 2012 level, and to restore the expenditure on commissions.

4 We budget annually over the triennium, and can move expenditure items between
years in the triennium, but not outside this budget cycle.

5 Commissions receive 4090 EUR total over the 3 years

6 Working groups get 2500 EUR each, except for WG5, Women in Physics, which
gets 17500 EUR

7 The cumulative surplus is moved to reserves after the 3 year period and restarts in
2015, and will be moved to reserves after 2017

8 The Secretariat fees are 2015: Singapore 45000, London 5000; 2016: Singapore
40000, London 5000; 2017 Singapore 40000

9 The 7500 for new programs is to cover the Advisory Working Groups on soft
matter, on accelerator physics, and the new working group on measurement of G;
2500 EUR each.

10 5000 EUR pa has been allowed for Newsletters and reports, because we need to
enhance our communications

11 Note that the 2017 budget shows a very small cumulative surplus.
Unless the economic situation improves and payment of dues is
increased, careful control of spending will be necessary to avoid a deficit
for the triennium

12 Council should approve the revised 2015 budget, and regard the
following years as indicative. Each year's budget is to be approved at
the Council meeting in the previous year. We will review the 2016
budget by email in October.