

C5 Activity Report for the IUPAP C&C Meeting – New Delhi, November 2010
(submitted by Robert Hallock, Chair C-5, August 2010)

OFFICERS 2008-2011:

Chairman: Robert Hallock, USA
Vice-Chairman: Alain Ravex, France
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Alexander, Feher, Slovak Republic
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John Saunders, United Kingdom
Alexander Smirnov, Russia
Nan Lin Wang, China

Associate Members:

Sriram Ramaswamy, India (from C3)
Pawel Hawrylak, Canada (from C8)
Sadamichi Maekawa, Japan (from C9)

MAIN ACHIEVEMENTS

C5 will hold its next formal commission meeting in association with the approved type A conference LT26 (Beijing, August, 2011). It recently sponsored or sanctioned two conferences [Quantum Fluids and Solids, 2010, Grenoble, France (type B); Cyrocrystals and Quantum Crystals, Chernogolovka, Russia (type C)]. Advertisements to solicit proposals to host LT27 (Type A) in 2014 have been placed as has the advertisement to solicit nominations for the C-5 Young Investigator Prize, which will be next awarded in August 2011 at the LT26 meeting (see below for the texts of these solicitations).

COMMISSION MEETINGS

Meeting of C5:

The most recent full commission meeting was held on August 9, 2008, in connection of LT25 in the RAI Congress Center, Amsterdam.

Present: 10 out of 13 members were present

Agenda:

- 1) Review of the minutes of the C5 mid-term Meeting in 2007
- 2) Preliminary report on LT25 by Peter Kes.

- 3) Proposal for organizing LT26 by Li Lu, Chinese Academy of Sciences
- 4) Members of C5 for the 2009-2011 term
- 5) Other C5 matters:
 - IUPAP Young Scientist Prize in Low Temperature Physics
 - C5 WEB-page (<http://www.iupap.org/commissions/c5/website.html>)
 - Report on QFS 2007 in Kazan
 - Report on IUPAP Working Group on Nanoscience
 - London Prize and Simon Prize

In addition there has been periodic e-mail communication among the members when that was necessary (e.g. to approve the wording and the deadlines for the solicitations for the Young Investigator Award and the call for proposals to host LT27).

The next formal meeting will be held at the time of the LT26 meeting in Beijing.

COMMISSION SPONSORED CONFERENCES (2009)

Type B

Quantum fluids and Solids 2009

August 5-11, 2009, Evanston, Illinois, USA, Chairman: William Halperin (co-Chairman Harry Kojima), 260 participants attended. (<http://www.qfs2009.northwestern.edu/>)

Type B

5th International School and Conference on Spintronics and Quantum Information Technology

July 7 – July 11, 2009, Crakow, Poland, Chairman: Tomas Dietl (Co-Chairman Daniel Loss) (<http://info.ifpan.edu.pl/spintech5/>)

COMMISSION SPONSORED CONFERENCES (2010 and beyond)

Type B

Quantum fluids and Solids 2010

August 1 - 6, 2010, Grenoble, France, Chairman: Henri Godfrin (co-Chairman Yuriy Bunkov), 300 participants attended; this was about 15% higher than previous such conferences. A special (and successful) effort was made to enhance the number of women on the committees and invited to deliver talks. A special poster section was devoted to young scientists. Proceedings will be published (with the normal journal review process) in the Journal of Low Temperature Physics. (<http://qfs2010.neel.cnrs.fr/>)

Type C

Cryocrystals and Quantum Crystals 2010

July 26 – 31, 2010, Chernogolovka, Russia, Chairman; A.F. Andreev (co-chairs A. Levchenko and L.P. Mezhov-Deglin). This was a successful conference (with most attendees from Russia and the former Soviet Union). A school of young scientists was held in conjunction with the conference. (<http://issp3.issp.ac.ru/cc2010/>)

Type A (approval previously granted)

26th International Conference on Low Temperature Physics (LT26)

Tentative dates: August 10 – August 17, 2011, Beijing, China, Chairman: Li Lu

Type B (comment)

It is anticipated that for the C&C meeting in November 2010 there will be a request for Type B support for an International Ultra-Low Temperature Conference to be held in South Korea immediately following LT26. This conference takes place every three years, and is truly international. The previous such conference was held in London in 2008. At the date this report was prepared (August 23, 2010), that request from the organizer (E. Kim) had not yet reached the C-5 Commission.

Type A (comment)

27th International Conference on Low Temperature Physics (LT27)

Tentative dates: in August 2014

By natural rotation (among the Americas, Asia and Europe) the LT27 conference will come to the Americas. Informal discussions have been held between the C-5 Chairman and several individuals (in four different countries) who might be interested in organizing LT27. Proposals should reach the C-5 Commission in April 2011.

IUPAP YOUNG SCIENTIST PRIZE IN LOW TEMPERATURE PHYSICS

The first IUPAP Young Scientist Prizes in low temperature physics were given at the LT25 conference in August 2008 (and reported in the 2009 C&C report). The recipients were:

- 1) Dr. Dai Aoki from CEA-Grenoble, France, for his contribution in the discovery of co-existence of superconductivity and ferromagnetism in URhGe.
- 2) Dr. Kostya Novoselov from University of Manchester, UK, for his contribution in the discovery of graphene and for pioneering studies of its extraordinary properties.
- 3) Dr. Viktor Tsepelin, from Lancaster University, UK, for the development of new experimental techniques and key discoveries in the fields of ³He crystals and quantum turbulence.

SOLICITATIONS FOR NOMINATIONS AND PROPOSALS

C-5 has now posted (published in the Journal of Low Temperature Physics) the

Solicitation for the 2011 Young Investigator Award:

CALL FOR NOMINATIONS

IUPAP Young Scientist Prize in Low Temperature Physics 2011

Nominations are being sought for the Young Scientist Prize in Low Temperature Physics, which will be awarded by the International Union of Pure and Applied Physics through the Commission C5 (Low Temperature Physics) in 2011. The prize will be awarded during the 26th International Conference on Low Temperature Physics (LT26) to be held in Beijing, China, August, 2011. The Prize includes a medal, a \$1000 award and an invited presentation to be made at LT26.

The nominee is expected to have made original and outstanding contributions to the field of low temperature physics. If the work was performed in collaboration, the leading personal contribution of the recipient to the achievement must be clearly identifiable. Nominees for the prize should by January 15, 2011 have a maximum of 8 years of research experience (excluding career interruption) following the PhD.

Nominations should include:

- A letter of not more than 1,000 words evaluating the nominee's achievements and identifying the specific work to be recognized.
- Curriculum vitae that identifies all publications.
- A brief biographical sketch not to exceed two pages.
- Suggested text for the award citation.

Self-nominations will not be considered. Nominations should be sent to the chair of IUPAP- C5: preferably by e-mail with attachments (e-mail: hallock@physics.umass.edu); or by regular mail (Prof. R.B. Hallock, Department of Physics, 666 North Pleasant St., University of Massachusetts, Amherst, MA, 01003, USA

Deadline for receipt of nominations is January 15, 2011.

C-5 has also posted the call for proposals to host LT27 in 2014 (published in the Journal of Low Temperature Physics):

CALL FOR PROPOSALS

Proposed Sites to Host LT27 (in 2014)

Proposals are now being sought from those who have an interest to host the 27th International Conference on Low Temperature Physics to be held in 2014. By natural rotation, LT27 is expected to be held in North or South America; LT25 was in Amsterdam, Netherlands, in 2008 and LT26 will be held in Beijing China in 2011.

Proposals need not follow a specific format, but should be detailed enough to allow the members of IUPAP C-5 to be adequately informed. (A) It is expected that proposals will propose an overall organization of the program consistent with tradition. (B) It is also expected that proposals will include: (1) information on the proposed conference site, with meeting space details, and the anticipated date span for the conference, (2) comments on the scientific program, including the

topical areas of the major parallel sessions, (3) the proposed conference chairperson, with details about the various planned committees, (4) comments on the publication plan for the proceedings, (5) an anticipated budget including the registration fee, likely sources of financial support and the possibility for financial aid, (6) comments on local accommodations, proximity to the meeting site and local travel options, (7) tentative plans for excursions, and (8) other information that proposers may wish to supply.

Proposals should be sent to the chair of IUPAP- C5: preferably by e-mail with attachments (e-mail: hallock@physics.umass.edu); or by regular mail (Prof. R.B. Hallock, Department of Physics, 666 North Pleasant St., University of Massachusetts, Amherst, MA, 01003, USA

Deadline for receipt of nominations is April 15, 2011. The C-5 Committee anticipates that the selection will be finalized during its meeting in Beijing at the time of LT26 (early August, 2011) and announced at the end of that meeting.