

Report to the IUPAP Council and Commission Chairs; 2011

The 32nd **International Cosmic Ray Conference (ICRC 2011)**, <http://icrc2011.ihep.ac.cn>, co-sponsored by the IUPAP, Chinese Academy of Sciences, National Natural Science Foundation of China, China Center of Advanced Science and Technology and the Institute of High Energy Physics in Beijing, was held at Beijing, China, during August 11-18, 2011. Among the 690 participants were 121 women physicists and astrophysicists and a total of 1038 contributory papers were presented in four parallel and poster sessions. The scientific program included several review talks on subjects of great topical interest like the results from the LHC at CERN, cosmic ray acceleration using observations on high energy gamma rays and neutrinos, cosmic rays from the Sun and their propagation in the Heliosphere, astro-particle physics at the highest energies and the search for dark matter. Seven rapporteur papers covered the highlights of papers presented at the conference covering all the major areas of present day cosmic ray research. Eighteen highlight talks described some of the large experimental projects in various stages of development and operation and their physics results. The popular **Victor Hess Memorial lecture**, a regular feature at the ICRC's, was delivered by the well-known Chinese cosmic ray physicist, Prof. Youheng Tan, in Chinese for a large audience composed mainly of young Chinese students. The proceedings of the ICRC 2011 will be available online at <http://icrc2011.ihep.ac.cn/> soon. In view of very limited demand for the printed version of the proceedings due to the very high cost of producing a small number of copies, the Commission agreed with the proposal from the organizers not to produce the printed version of the proceedings.

The **2011 O'Ceallaigh medal** was presented to **Alan Watson (UK)** during the inaugural session of the ICRC 2011 followed by the presentation of the **2011 Kanwal and Gaurang Yodh prize** to **W. Vernon Jones (USA)** and the **2011 IUPAP-TIFR Homi Bhabha medal and prize** to **Sir Arnold Wolfendale**. The **2011 Duggal award** was given to **Lukasz Stawarz (Poland)** and the **2011 IUPAP Young Scientist awards** were won by **Viviana Scherini (Italy)** and **Jose Bellido Caceres (Australia)**.

The C4 Commission held 3 meetings at Beijing on August 10, 13 and 17, 2011. The Commission received the final report on the ICRC 2009 held in Lodz, Poland, in July 2009 and reviewed the arrangements and the scientific program for the ICRC 2011. An impressive presentation was made by Prof. Ron Shellard, Dy. Director, CBPF, Brazil, giving details of the progress made by him and his colleagues for organizing the **33rd ICRC 2013 at Rio de Janeiro, Brazil, in July 2013**. Following this presentation, the Commission gave its final approval for the proposal to hold the ICRC 2013 in Brazil. Prof. Ad M. van den Berg from the University of Groningen, Netherlands, was invited to the meeting of the Commission to present the details of his proposal to organize the 34th ICRC in Netherlands in July 2015. After receiving all the details of various facilities available in Groningen, Amsterdam and The Hague for organizing a large scientific meeting like the ICRC, the Commission gave its tentative approval for organizing the 34th ICRC in The Hague in July 2015. The Commission has invited proposals for the ICRC 2017 to be held in July 2017 from the members of the cosmic ray community.

The **12th International Conference on Topics in Astroparticle and Underground Physics (TAUP 2011)**, co-sponsored by IUPAP, Technische Universitaet Muenchen, German Federal Ministry of Education and Research, Max-Planck-Gesellschaft and several other organizations was held at Munich, Germany, during September 5-9, 2011. The conference was attended by about 350 participants and the scientific program included 31 talks in plenary sessions, 177 papers in parallel sessions and 32 poster presentations. Among the topics covered at the conference were neutrino mass, neutrino oscillations, cosmology and dark matter, highest energy cosmic rays and neutrino astronomy. The proceedings of the conference will be published in a forthcoming volume of the Journal of Physics: Conference Series and will be available online.

The Commission reviewed the progress of the proposals to organize conferences and symposia to commemorate the 100th anniversary in 2012 of the historic balloon flight of Victor Hess in 1912 which led to the discovery of cosmic rays. Prof. Michael Walter of DESY, Zeuthen was invited to present the details of the organization and scientific program for the conference being organized by him and his colleagues. The conference, "100 Years of Cosmic Ray Physics: Anniversary of the Victor Hess Discovery" will be held in Bad Saaraow/Pieskow in Germany, about 80 km from Berlin, during Aug 6-8, 2012, rather close to the place where the 5th and the confirming flight of Victor Hess landed in 1912. The commission has advised the organizers of this conference to apply for the IUPAP sponsorship and partial financial support. A commemoration meeting is also being planned to be held at the University of Denver, USA, in June 2012 by Prof. Jonathan Ormes and his colleagues. Another meeting entitled "Cosmic Ray Origin: Victor Hess Centennial Anniversary: is being organized by Prof. Eun-Suk Seo and Prof. Igor Moskalenko and their colleagues at Mysore, India, during July 2012 as part of the 2012 COSPAR General Assembly which generally consists of a large number of symposia and workshops related to research in space sciences. The Commission has advised Prof. Moskalenko to apply for the IUPAP sponsorship and partial financial support.

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