

Commission C4 – Astroparticle Physics

Report on the period April-October 2015

1. Membership

At its last meeting in April 2015, the council approved

- Steve Barwick (USA); neutrino astronomy
- Ilya Usoskin (Finland); Heliospheric physics
- Albert de Roeck (Belgium); Particle physics
- Laura Baudis (Switzerland); Dark Matter searches

as associate members of C4. Steve Barwick has served in this role already in 2011-2014.

Elisabete de Gouveia Dal Pino (Brazil; Gamma-astronomy) is willing to serve as inter-union member of IAU. Despite several reminders and promises from IAU, there is still no answer from the IAU president. Mark Lester (UK; Heliospheric physics) serves as inter-union member from SCOSTEP.

2. International Cosmic Ray Conferences and Related Matters

C4 conducted three face-to-face meetings (July 29, August 3, and August 5, 2015) during ICRC, the type A conference of C4. The conference venue was the World Forum in The Hague (Netherlands) and the conference was chaired extremely smoothly by Prof. Ad van den Berg from Groningen. It attracted about 1000 participants from 56 countries. About 1200 presentations were given in plenary and in parallel sessions.

A highlight was the opening ceremony where the IUPAP young scientist awards were given to Prof. Julia Tjus (Germany) and Prof. Claudio Kopper (Canada). Prof. Jun Nishimura (Institute of Space and Astronautical Science, Japan) was awarded the O'Ceallaigh Medal and Prof. Tom K. Gaisser (Bartol Research Lab, USA) the Bhabha Medal. All these prize winners were selected by the C4 commission. Moreover, the Yodh prize was awarded to Prof. Werner Hofmann (Max Planck Institute, Heidelberg) and the Shakti Duggal Award for young scientists was awarded to Dr. Damiano Caprioli from Princeton.

The proceedings will be published in Proceedings of Science (PoS) and C4 supports the idea that PoS should also be used to publish proceedings of future ICRCs.

To promote poster presentations and to give them more visibility, C4 agreed to award at future closing ceremonies three to four best-poster prizes. They will be furnished with a few hundred Euro to be paid from the commission budget.

ICRC 2017 will be conducted in Busan (South Korea) from July 13 to 20 under leadership of Prof. Il Park. Amongst two proposals for hosting the 36th ICRC in 2019, C4 accepted Memorial Union at University of Wisconsin-Madison (USA) as venue of the 2019 ICRC. The University site has been given preference over a convention center in order to keep conference fees at an acceptable level.

Several countries expressed already firm interest to host the ICRC 2021 and C4 has asked to present corresponding proposals at the C4 meetings 2017 in Busan.

The strong interests to host future ICRCs can be considered a proof for the attractiveness and high scientific quality of the ICRC.

3. Proceedings of previous ICRCs

Thanks to the continuous efforts of current and previous C4 members, the proceedings of all but the first three ICRCs (1947, 1949, 1953) are now available via ADS, see http://ads.harvard.edu/pubs/icrc_status.html. The efforts will continue, to get also the proceedings of these first three ICRC digitized and made available electronically. This is a very important service for the

community, as many important results of the past can only be found in ICRC proceedings.

4. ApPIC & C4:

Michel Spiro (CNRS), chair of ApPIC, attended the ICRC and a special evening session was arranged for all conference participants to discuss ApPIC matters and future open data policies.

5. New IUPAP / C4 Webpages:

As reported previously, the improved system and almost instant response time by the new IUPAP administration helped to clean-up and improve the C4 pages. This work will continue to improve in particular the collection and accessibility of previous reports and resolutions.

6. Tbilisi Neutron Monitor:

The Tbilisi Cosmic Ray Station in Georgia has been playing a very important role by providing data on the ground level flux of cosmic rays (since ~1966) at a unique latitude of 41° 41' N. Its operation was discontinued recently because of economic reasons and without interaction with the scientific community in Georgia. C4 has informed the Prime Minister and other local authorities about the relevance of the station and kindly asked reconsidering their decision.

7. Nobel Prize in Physics 2015:

C4 is delighted that this years Nobel prize went to Astroparticle Physics: Prof. Dr. Takaaki Kajita, University of Tokyo, Japan and Prof. Dr. Arthur B. McDonald, Queen's University, Kingston, Canada, were decorated with the Nobel Prize for the discovery of Neutrino Oscillations found by detailed measurements of atmospheric and solar neutrinos with the SuperKaminokande and SNO Experiments. On behalf of the worldwide Astroparticle Physics community, C4 has sent their warm congratulations to the two Laureates.

Karl-Heinz Kampert
Chair, IUPAP C4 – Astroparticle Physics
October 15, 2015