



IUPAP

C4 & CII Commissions

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IUPAP aims

The aims of the Union are:

- to stimulate and promote international cooperation in physics;
- to sponsor suitable international meetings and to assist organizing committees;
- to foster the preparation and the publication of abstracts of papers and tables of physical constants;
- to promote international agreements on other use of symbols, units, nomenclature and standards;
- to foster free circulation of scientists; to encourage research and education.

Commissions (20 in total)

- C4: Astroparticle Physics (Joakim Edsjö)
- C11: Particles and Fields (Johan Rathsman)
- C14: Physics Education
- C18: Mathematical Physics
- C19: Astrophysics
- **New: Neutrino panel formed**

C4 commission: Astroparticle Physics

- C4 was renamed from *Cosmic Rays* to *Astroparticle Physics* in 2013. Mandate:

“...to promote the exchange of information and views among the members of the international scientific community in the general field of Astroparticle Physics.”

- Motivation of name change: to broaden C4 and include also e.g. dark matter
- Connects to C11 (Particles and Fields) and C19 (Astrophysics)
- Chair: Sunil Gupta (2018-2021)
Member from Sweden: Joakim Edsjö (2018-2021)

Work in commission

- Conference support
- IAB for the ICRC conference
- Award nominations
- Newsletter to IUPAP ← **Sign up at iupap.org**
- Sometimes answer enquiries from IUPAP
- Telecons a few times a year and face to face meetings at the ICRC conference

Conferences

- C4 can support conferences in Astroparticle Physics:
Category A: up to ~11500€ for the main conference, in our case ICRC
Category B: up to 5000€ (apply to C4 Chair Sunil Gupta)
Category C: only moral support, i.e. recognition as IUAP recognized conference which often helps for receiving third party support.
Category D: workshops for developing countries, ~7000€
- Main conference: ICRC (bi-annually).
2019: Madison, WI, USA
2021: Berlin, Germany (hybrid)
2023: Osaka, Japan
Important that also e.g. dark matter community participates!
- Other conferences: idm, TeVPA, TAUP, ISVHECRI, ECRS...
- Note: conferences need to follow IUPAP rules, e.g. have reasonable VISA conditions

Awards

- C4 selects winners of several awards. This is a good way to recognize outstanding scientists (young and old), so **please nominate** (to Sunil Gupta) your excellent candidates!
- IUPAP Young Scientist Prize in Astroparticle Physics
in recognition of outstanding contribution of a young scientist to the area of Astroparticle Physics
2019: Siyao Xu and Anna Nelles
- IUPAP-TIFR Homi Bhabha Medal and Prize
to an active scientist who has made distinguished contributions in the field of high-energy cosmic-ray physics and astroparticle physics over an extended academic career
2019: Takaaki Kajita
- O'Ceallaigh Medal
to honour scientists who have made distinguished contributions to Cosmic Ray Physics
2019: Piergiorgio Picozza
- Shakti Duggal Award
to recognize an outstanding young scientist for contributions in any branch of cosmic ray physics
2019: Irene Temborra
- Yodh Prize
to recognize a scientist whose research career has had a major impact on the understanding of cosmic rays
2019: Francis Halzen

Deadline for nomination is usually in February the year of an ICRC (2021, 2023, ...)

ICRC 2021

THE ASTROPARTICLE PHYSICS CONFERENCE
Berlin | Germany

37th International
Cosmic Ray Conference
15–22 July 2021



Planned to be hybrid

Summary C4

- My mandate in the C4 commission is primarily to represent our field, i.e. astroparticle physics
- I encourage more participation at ICRC
- Nominate for awards! (there are in general too few nominations)
- Conference support possibility

CI I: Particles and Fields

Johan Rathsmann

- Main conference: ICHEP2020
 - organized by Prague but given on-line, 3000 registered participants, no fee, all presentations were recorded and are available online
- <https://ichep2020.org>

The banner features a background image of a particle detector's internal structure, showing a circular arrangement of detector layers with a central dark region. The text is overlaid on the left side of the image.

ICHEP 2020 | PRAGUE

40th INTERNATIONAL CONFERENCE
ON HIGH ENERGY PHYSICS

**VIRTUAL
CONFERENCE**

28 JULY - 6 AUGUST 2020

PRAGUE, CZECH REPUBLIC

CII Awards

- YSP 2020:
Marco Lucchini of Princeton University,
“For his pioneering work in the development of fast crystal sensors for the precision timing of charged particles”.

Benjamin Safdi of the University of Michigan,
“For groundbreaking theoretical contributions to the search for dark matter, in particular the development of innovative techniques to search for axion dark matter, and to separate dark matter signals from astrophysical backgrounds.”
- YSP 2022: nominations next winter.

Future main conferences

- Lepton Photon 2021, Manchester, August 9-14, 2021
- ICHEP 2022, Bologna, July 6-13, 2022
- Lepton Photon 2023, Melbourne, dates TBA
- ICHEP 2024, Prague, dates TBA (rerun of 2020, to mitigate cancellation fees)
- Other supported conferences: LHCP2021, CHEP2021, Neutrino2022, ...

CI I: Freedom of movement of Data

- **DRAFT:** IUPAP Statement on Collaborative Access to Facilities and Data:

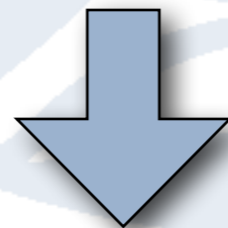
"Physics increasingly involves international collaborations that share in the planning, construction and operation of common apparatus and in the analysis of the resulting data. Such collaboration is most successful when all collaborating scientists have unimpeded access to both physical facilities and to the data that result from their common efforts. We observe a disturbing international trend of restriction of access to facilities, shared data and methods of communication. While nations have legitimate needs to protect their critical facilities and computing systems, they also have a responsibility to find ways to maintain and facilitate access for all international scientific collaborators."

Neutrino Panel

- Composed of nominees of C4, C11, C12, WG1, WG9, and WG19 and coordinated by C11
- 3-year mandate to
"promote international cooperation in the development of an experimental program to study the properties of neutrinos and to promote international collaboration in the development of future neutrino experiments to establish the properties of neutrinos."
- 3 co-chairs: Nigel Smith, Takaaki Kajita and Manfred Lindner

What about COVID?

- Johan's and Joakim's mandates should have ended 2020. Nomination process of potential new members were ongoing.
- New committees should have been selected at IUPAP general assembly in Beijing in October, 2020
- Cancelled by COVID



- All committees stay one more year, new general assembly planned for 2021
- Swedish nominations from 2020 remain for 2021

