IUPAP | ACTIVITY REPORT

Highlights 2025–2026

International Union of Pure and Applied Physics

Reporting period: 31 October 2025 – 30 October 2026

A global community advancing physics

THE UNION'S CORE MISSION

- Supporting high-level international conferences remains IUPAP's principal activity.
- Sponsorship connects disciplines, strengthens scientific exchange and supports international collaboration.
- The year's examples show physics addressing both fundamental questions and societal needs.

IUPAP combines scientific excellence with international access and cooperation.

Two examples: science and people

CONFERENCE AND EDUCATION HIGHLIGHTS

ICPS 2026 | Tokyo

Physics of Semiconductors

800 participants

- Energy efficiency and sustainability
- Quantum technologies and future computing
- International scientific cooperation

African School | Nairobi

Fundamental Physics and Applications

Two weeks of intensive study and engagement

- Bringing students together
- Building scientific exchange and collaboration
- Strengthening the international physics community

A common thread: high-level science, international exchange and future capacity.

The International Year of Quantum Science and Technology 2025

INTERNATIONAL VISIBILITY AND PARTNERSHIPS

- IYQ2025 closed in Accra in February 2026; IUPAP contributed to its steering and closing discussions.
- IUPAP–UNESCO Physics for Society colloquia connected quantum science, net-zero emissions and climate sustainability.
- Opening and closing events each drew 700+ registrations and 300+ simultaneous participants.
- IUPAP is a founding partner of UNESCO's Global Quantum Initiative (2026–2028).

  building on the legacy of the International Year of Quantum Science and Technology

Physics for society and sustainable development

OUTREACH, EDUCATION AND REGIONAL ENGAGEMENT

- Pacific Physics Summit in Fiji built a collaborative network and explored links between physics and industry. The summit resulted in the establishment of a collaborative network among physicists in the Pacific region, with the aim to form a regional physics body.

- LAAAMP–Lightsources for Africa, the Americas, Asia, Middle East, and Pacific–expanded access to advanced light sources and crystallographic science in developing regions.

- At the International Particle Accelerator Conference (IPAC 2026), a hands-on accelerator-science “hackathonino”, combining accelerator science, engineering, computing, and societal applications. 65 students participated.

- IUPAP supported

  * Youth STEM engagement through Youth@STEM4SF in Slovakia and the Big Science Business Forum (BSBF) in the Netherlands.

  * The development of a global community on the Zenodo platform for transdisciplinary sustainability research.

A stronger voice in the international science system

PARTNERSHIPS AND POLICY

- Active participation in the International Science Council (ISC), including the Beijing Science Dialogue and ISC mid-term meeting.

- A new IUPAP–COSPAR Memorandum of Understanding has been signed for the benefit of global physics and space communities in various dimensions of research, education, outreach, and development.

- IUPAP contributes to CODATA, Standing Committee for Gender Equality in Science (SCGES), metrology and terminology initiatives through C2: Commission on Symbols, Units, Nomenclature, Atomic Masses and Fundamental Constants.

- IUPAP endorsed a statement on scientific migration in crises, brought forward at StatPhys29, and signed the Rome Declaration on AI and nuclear weapons, an outcome of the Summit of Nobel Laureates, World Leaders, and AI Experts held at the Pontifical Gardens of Castel Gandolfo.

Rejuvenation: turning proposals into structure

GOVERNANCE AND FUTURE PRIORITIES

- The rejuvenation process is being implemented, with new Standing Committees on Ethics and Collegiality, Diversity, Equality and Inclusion, Membership and Development, and Physics Outside Academia

- Several working groups have become standing committees, reinforcing coordination across physics disciplines:

  WG1 →– ICFA – International Committee for Future Accelerators (C11), **WG7 → ICUIL** – International Committee on Ultrahigh Intensity Lasers (C16, C17)

  WG9 → ICNP – International Cooperation in Nuclear Physics (C12), **WG11 → GWIC** - Gravitational Wave International Committee (C4, C19, liaison with AC2)

- A new standing committee on major neutron research facilities is being developed.

- Potential future working group areas include fusion, multimessenger astrophysics, advanced light sources, and bioimaging; AI/ML remains to be established.

Membership, access and financial stability

MAINTAINING A GLOBAL UNION

52
active territorial members

8
corporate associate members
(9 IUPAP units)

1
associate territorial member
(Nepal)

≈⅓
of annual budget typically
reserved for conference support

- Financial stability maintained, although some members face payment difficulties.
- Membership outreach focuses on Africa and Pacific Island nations.
- Visa-processing delays remain a concern; no sponsored event reported exclusion based on nationality or affiliation.

Looking ahead

2027 and beyond

- General Assembly and sustainable-development physics conference: Johannesburg, 17–23 October 2027.
- Continue raising IUPAP’s visibility at major conferences worldwide.
- Build membership and regional networks while advancing inclusion and international cooperation.
- Keep physics connected to society—from quantum technologies and accelerators to climate and sustainability.

IUPAP: advancing physics as a global public good.