

The report of WG9 2025

An action plan for the years to follow until the next in person General Assembly to be held in 2027 together

Angela Bracco

Daejeon

28 May 2025

Program and Minutes

14:00 → 15:45	Session 1 (WG9 and C12): Session	
14:00	Welcome by WG9 chair and business Speakers: Angela Bracco (Università di Milano e INFN), Iris Dillmann (TRIUMF)  Minutes IUPAP WG9...  per_wg9_may_2025...	 45m 
14:45	(*R) Report from ALAFNA Speaker: Nilberto Medina  ALAFNA-WG9-IUPA...	 15m 
15:00	Report from NUPECC Speaker: Eberhard Widmann  NuPECC report WG...  NuPECC report WG...	 15m 
15:15	Report from C12 Speaker: Maria Borge  News from C12-28...	 15m 
15:30	Report from ANPhA Speaker: Byungsik Hong  ANPhA_Hong_final....	 15m 

Program and Minutes

16:00 → 18:00	Session 2 (WG9 only): Session	
16:00	RIKEN Speaker: Hiro Sakurai RIKEN-sakurai.pdf RIKEN-sakurai.pptx	🕒 15m
16:15	FAIR Speaker: Yvonne Leifels IUPAP_Status_FAIR... IUPAP_Status_FAIR...	🕒 15m
16:30	EIC Speaker: Abhay Deshpande BNL Update IUPAP...	🕒 15m
16:45	FRIB Speaker: Brad Sherrill FRIB IUPAP WG9.pptx	🕒 15m
17:00	(*R) Report from NSAC Speaker: Gail Dodge Dodge NSAC Updat...	🕒 15m
17:15	Discussion	🕒 30m
18:30 → 21:00	Dinner (WG9, C12, and invited guests only)	🕒 2h 30m

Membership 2025

- Angela Bracco (INFN-Milano, Italy) Chair WG9
- Robert E. Tribble (Texas A&M, USA) Past-Chair WG9
- Iris Dillmann (TRIUMF/University of Victoria, Canada) Secretary WG9

- **Paola Gianotti (Director Laboratori Nazionali di Frascati, Italy)**
- Patricia Roussel-Chomaz (Director GANIL, France)
- **Luis Fraile (ISOLDE Physics Section Leader CERN/ ISOLDE, from July 1, 2025)**
- **Abhay Deshpande (Associate Laboratory Director, Brookhaven National Laboratory, USA)**
- **Thomas Nilsson (Scientific Managing Director GSI/FAIR, Germany)**
- Thomas Glasmacher (Director FRIB, USA)
- Jeter Hall (Director of Research, SNOLAB, Canada) → **Stephen Sekula (from July 2025)**
- David Dean (Deputy Director for Science and Technology, Jefferson Laboratory, USA)
- Seung-Woo Hong (Director IBS RAON, South Korea)
- **Avinash C. Pandey (Director Inter-University Accelerator Centre, India)**
- Naohito Saito (Director IPNS-KEK, Japan)

- Hiroyoshi Sakurai (Director RIKEN Nishina Center for Accelerator-Based Science, Japan)
- Nigel Smith (Executive Director and CEO, TRIUMF, Canada)
- Grigory V. Trubnikov (Director JINR, Russian Federation)
- Makondelele Victor Tshivhase (Director i'Themba Laboratories, South Africa)
- Zhiyu Sun (Director, IMP Lanzhou, China)

- **Maria J.G. Borge (Madrid, Spain) Chair of IUPAP C12**
- **Eberhard Widmann (Vienna, Austria) Vice-chair of IUPAP C12; Chair of NuPECC**
- **Nilberto Medina (Sao Paulo, Brazil) Co-Chair of ALAFNA**
- Byungsik Hong (Korea University, South Korea) Chair of ANPhA
- Gail Dodge (Old Dominion University, USA) Chair of NSAC

Update or addendum on Report 41 (delayed due to IUPAP discussion)

Items addressed in our Nuclear Science Laboratories dealing with :

- Gender equalities (well taken care already?)
- Quantum Science and Technology (declared for 2025 and 2026)
- Open Science initiatives
- Activities concerning the topic climate change action and sustainable development
- Activities designed and conducted with Industry

- **Make connections with other working groups?**

- **Add a short summary of the strategy reports (NuPECC, DoE, Canada, ect..)**

Other business

- Next AGM: 2026 with Science Symposium - where and when?
Suggestion?
- Election of new WG9 chair in 2026 (starting July 1, 2027)
- AOB?

IUPAP Evaluation Report (2024)

Disciplines and some possible initial clustering of existing disciplines:

- History and Philosophy of physics AC6
- Gravitational WG11 AC2 WG13
- Math and data C3 C18 C20
- Astronomy/Astro C19 C4
- Solid state/condensed matter C5 C8 C9 C10
- Fields and particles and accelerators C11 WG1 WG14
- Nuclear WG9 C12
- Optics, lasers and photonics C17 C15 AC1WG7
- Biophysics WG15 C6
- Plasma physics C16
- Acoustics AC3
- Quantum WG19 (also overlaps with optics or condensed matter but this discipline has a huge international focus and investment currently)
- Medical physics AC4

IUPAP Evaluation Report (2024)

Structure

IUPAP is structured with 19 Commissions, 6 Affiliated Commissions and 12+1 Working Groups. Working groups were originally temporary structures but have evolved to being quasi commissions. The self-examination report outlined discussions to move long standing WGs to become commissions. There has been the creation of two new WGs at the most recent EC. Commissions operate with clear design and seemingly complicated rules of operation.

Affiliated commissions have some issues that impact IUPAP budget and governance. There is no consistency in what constitutes the different structural categories. Some are cross cutting, some are sub-disciplines, some are sub-sub-disciplines. There are overlaps, some are governance related and some are special projects.

Greater consistency can be achieved by organizing around commissions as the discipline-based activities and working groups as cross-cutting activities that are IUPAP function based. A summary of the different commissions and working groups is in the table below:

IUPAP Executive Council and Commission Chairs

📅 13 gen 2025, 13:30 → 15 gen 2025, 17:05 Europe/Zurich

👤 Michel Spiro (Université Paris-Saclay (FR)) , Silvana Ponce Dawson

Descrizione The meeting will take place in Zoom in the room indicated below (Videoconference—only registered users can access).

13 January: EC&CC meeting (13.30 to 16.30) CET (Trieste Time)

14 January: EC&CC meeting (13.30 to 16.30) CET (Trieste Time)

15 January : EC&CC meeting (13.30 to 16.30), Executive Council Meeting (16:35 to 17:05)

Contact: Jens Vigen ✉️ jens.vigen@cern.ch

Registration

🔗 Participants

👉 **Iscriviti**

Partecipanti

- A Alfonso Munoz
- B Boris Sharkov
- B Boris sharkov
- C Cather Simpson
- C CHia-Liang Cheng
- C Christophe Rossel
- D Daniel Varela Magalhaes
- D David Garfinkle
- E Emanuele Berti
- E Eric Rosas
- 🌟 Florencia Canelli
- G Gabriella Marra
- G Gillian Butcher
- G Gloria Platero
- I Irvy (Igle) Gledhill
- J Jens Vigen
- J Joanna Trylska
- J Joseph Niemela
- K Kuijuan Jin
- L Laura Greene
- M Madan Rehani
- M Manjula Sharma
- M Marcelo Gameiro Munhoz
- M Maria Jose G. Borge
- M Michel Spiro
- N Niloofar Jokar
- P Patricia BASSEREAU
- R Ralph Engel
- R Richard Haley
- R Roberto Lalli
- R Rudzani Nemutudi
- S Shinji Yuasa
- S Shuang-Nan Zhang
- S Silvana Ponce Dawson
- S Simone Warzel
- S Stefano Fantoni
- S Sunil Gupta
- U Ursel Fantz

https://indico.global/event/7257/?print=1&view=standard_numbered

New IUPAP president: Silvina Ponce (Argentina)

On IUPAP WGs, January 2025.

All existing Working Groups were extended until the 34th GA (2027).

Working Group Charges. This message will be conveyed to the corresponding chairs. It is requested that WG1, WG7, **WG9**, WG11, WG14, WG18 and WG21 consider the recommendations, considerations and suggestions included in the external and internal evaluation reports and in the **supplementary material of this resolution** and **present by May 31st, 2025**, a proposal to the Executive Council with a recommendation of how the activities of the Working Group should continue. To this end they should liaise with relevant IUPAP Commissions as needed. **In case the recommendation is to continue as a Working Group, the proposal should include an action plan for the years to follow until the next in person General Assembly to be held in 2027 together** with a budget where the level of support from IUPAP should be indicated. The group composition and their terms of reference should be included with the action plan. In the case of WG14, it is recommended that it liaise with LAAAMP and members of the US LC interested in the creation of a WG on Major Neutron Research Facilities to bring a coordinated proposal with a renovated mandate for WG14 in case that the recommendation is to continue as a Working Group.

https://indico.global/event/7257/?print=1&view=standard_numbered

Report of WG9 2025

Background

The IUPAP working group WG9 is an ad-hoc Committee on International Cooperation in Nuclear Physics (CICNP) that was proposed by the Commission C12 in 2003 and established in the IUPAP General Assembly in 2005. The initial membership of WG9 included the Chair and Vice-Chair of C12, as well as the Chairs of NSAC and NuPECC and representatives of key laboratories from around the world. Considerable care was also paid to the geographic distribution of members, in order to ensure appropriate representation from the broad nuclear physics community.

The formation of this committee had been a topic of discussion within C12 since 1995 and perhaps even earlier. It was created to facilitate international cooperation within the nuclear physics community following the recommendations of the various committees that preceded it. The main objectives of WG9 are:

- To promote international cooperation in the broadest sense with the construction and exploitation of the large nuclear physics facilities - those which are intended for use by a worldwide nuclear physics community.
- To organize meetings on a regular basis, which are open to all wishing to attend, for the exchange of information on future plans for nuclear physics facilities, including also multi-disciplinary facilities or facilities intended to more regional use.
- To stimulate the organization of workshops and/or symposia to discuss the ongoing and future programs and development plans of nuclear physics and the need for facilities for the various subfields: high energy heavy-ion beam facilities, radioactive-ion beam facilities, multipurpose hadron beam facilities, high energy electron beam facilities and research in various applications of high societal impacts as e.g. those in the medical area.

The Mandate and the Activities of WG9

During the years the actions taken by WG9 were devoted to fulfill and implement the items constituting its mandate, namely:

1. Provide a description of the landscape of key issues in Nuclear Physics research for the next 10 to 20 years and more.
2. Produce (and maintain) a compendium of facilities existing or under development worldwide.
3. Establish a mapping of these facilities onto the scientific questions identified above.
4. Identify missing components that would have to be developed to provide an optimized comprehensive network of international facilities.
5. Explore mechanisms and opportunities for enhancing international collaboration in nuclear science.
6. Identify R&D projects that could benefit from international joint efforts.
7. Serve as a source of expert advice for governmental or inter-governmental organizations in connection with efforts to coordinate and promote nuclear science at the international level.
8. Serve as a forum for the discussion of future directions of nuclear science in the broadest sense.
9. Document the cross disciplinary impact of Nuclear Physics and o nuclear facilities and identify mechanisms for expanding (fostering) cross disciplinary research.

The document produced by WG9, the so-called Report 41, which is regularly updated (every 3-5 years) is a compendium (prepared on purely voluntary basis) of those basic nuclear physics facilities, which are considered genuine user facilities by management. The present report (from 2023) includes 79 facilities. As far as it has been possible the information is complete and accurate. In spite of the obvious difficulties to collect data, this is probably the most comprehensive summary of the research facilities available to the international nuclear physics community that has been compiled. It has been supplemented by a brief outline of how these facilities relate to the major questions facing us in key areas of nuclear science. This Report 41 is thus fulfilling the first 3 points listed in our mandate and it is widely distributed and made available on the world-wide web (https://wg9.triumf.ca/pdfs/Report41/IUPAP_WG9_Report_41-FINAL2023-comp.pdf)

To work on the points 4, 5 and 6 of our mandate, mainly concerning mechanisms and opportunities for enhancing international collaboration and the scientific plans at various facilities, we have regular meetings (every year) at locations usually alternating between America, Africa, Asia, and Europe and visits at the hosting laboratory or institution are organized. The opportunity to see the infrastructures is very important and in that way, we can appreciate more the technical complexity, the size of the instrumentation and the efforts which are being made to comply with the requests of the users, driven by the desire to enhance the quality of the scientific outputs.

The agenda of our annual meetings always include the status report of major facilities under construction but also selected reports of scientific breakthroughs at smaller scale facilities. Very important are the reports concerning the strategic plans in Europe, North America, South Africa and Asia presented by the ad-hoc Committees (ALAFNA, ANPhA, NSAC, NuPECC, etc.) taking care of them in the different geographical parts of the world. The discussions and the implementation of the plans around the world are not only a source of inspiration but also show to the scientists in this field that there is an harmonic way to proceed avoiding duplications and exploiting collaborations to be more effective.

The WG9 activity on the issues described in point 7 and 8 of the mandate, namely future directions and expert advice for governmental or inter-governmental organizations on the coordination and promotion of nuclear science, is realised every 3-4 years by closed in-camera meetings with funding organizations. The members of WG9 organize these meetings, and the funding agency representatives present a summary report.

Last, but not least it is important to point out that special attention is given to the cross disciplinary impact of Nuclear Physics and of nuclear facilities (point 9 of the mandate).

For this purpose, WG9 has regularly organized a Nuclear Science Symposium on the cross-disciplinary impact and every 2-3 years a specific symposium is organized. These symposia, made in conjunction with the annual meetings, cover timely topics such as: i) medical and energy applications, ii) nuclear data, iii) machine learning and AI techniques for nuclear science, iv) experiments in underground facilities on astroparticles and v) R&D of cross disciplinary nature.

The Future Plans

The field of Nuclear Physics is very vital and expanding in experiments and theory to provide new insight and understanding on the origin of elements, on the constituents of nuclei, and on the generation of the nuclear force. The new technical developments in this context are also being exploited in applications of societal interest and the cross disciplinary activities are enhancing their capabilities in the programs of the nuclear physics facilities.

The plan to continue with this WG9 as independent from the commission C12 is based on the following arguments that are inspiring our action plan.

- The role of WG9 has been considered outstanding in enhancing the international collaboration and from the existing experience it is clear that such an international body, under the IUPAP umbrella, is necessary. It is presently considered as an indispensable tool for making international collaborations and scientific plans more and more impactful. The discussions on strategic plans at the level of WG9 are crucial to the future of the field.

-

In the next years, recently built facilities will produce results, and the major ongoing construction and upgrades at new and existing facilities need to be presented and discussed. The special and increasing roles of machine learning and AI techniques, the contributions to quantum technologies, the nuclear reactions measured in the plasma formed with high power lasers, and the activities in underground laboratories need particular attention.

- In next years the meetings, symposia and in-camera meetings will be organized by this expert group again by choosing different locations around the world.
- Updates and /or integrations to the Report 41 are foreseen.
- Collaborations with other WGs are planned to be increased
- Needless to say, the chairs of C12 are in WG9 and all members of C12 will be always invited, as it was in the past.
- The activity of WG9 is fully supported by C12 commission and its continuation with the proposed activity, in line with the WG9 mandate, is strongly endorsed by C12.

Concerning the annual budget, working groups receive 2420 Euros. This budget is used for networking events and has been also used to print 50 copies of the Report 41 and send these hard copies to various laboratories.

Re: report and plans of WG9 of IUPAP



Mittente [Jens Vigen](#)

Destinatario [Angela Bracco](#)

Data Gio 22:13

 [Riepilogo](#)  [Intestazioni](#)

Dear Angela,

Thanks for sharing this with me—you have my full support and I hope that WG9 shall be converted to a new category, “standing committee”.

Jens

On 15 May 2025, at 22:03, Angela Bracco <angela.bracco@mi.infn.it> wrote:

Dear Jens,
this is the report of WG9 and the mail I sent to Silvana.
Please let me know about the plans of the next years...
Thank you and best regards
Angela

report and plans of WG9 of IUPAP



Mittente [Angela Bracco](#)
Destinatario silvinadfubaar@gmail.com
Data Gio 22:00
[✉ Riepilogo](#) [ℹ Intestazioni](#)

 Report of WG9_continuation.pdf (~202 KB) ▾

Dear Silvina,

I am writing to you on the WG9 (Committee on International Cooperation in Nuclear Physics (CICNP), that I presently chair) because we intend to continue with this WG of IUPAP. The main reason is that its role has been considered outstanding in enhancing the international collaboration and from the existing experience it is clear that such an international body, under the IUPAP umbrella, is really necessary. It is an indispensable tool for making international collaborations and scientific plans in the area on Nuclear Physics research (basic science and applications) more and more impactful. The discussions on strategic plans at the level of WG9 are crucial to the future of the field. The commission C12 to which we are connected is fully supporting this plan of continuation in the next years.

In attachment there is our report that will be presented at the next meeting in Corea on the 28 of May. Therefore I will send the final copy by the 30 of May. Since the main core of the report will not have major changes I like you to take a look at this level.

I give my whatsapp number if you like (with pleasure for me) to clarify some points (+39 320 9232324).

Looking forward to hearing from you

Best regards

Angela