14th Meeting of the IUPAP Working Group on Accelerator Science (WG14) - Approved

December 7, 2023, 21:00 – 22:15 CET

Remote meeting

Attendees: Gianluigi Arduini, Bob Bingham, Ceri Brenner, Swapan Chattopadhyay, Christine Darve, Nikolai Lobanov, Anke-Susanne Mueller, Sekazi Mtingwa, Simon Mullins, Qing Qin, Suzie Sheehy, Liangting Sun

Excused: Stuart Henderson, Oliver Kester, Mats Lindroos, Lin Liu, Michael Moyers, Thomas Roser, Aliz Simon.

Agenda and slides available at: https://indico.cern.ch/event/1348000/

Topic 1: Agenda, Introduction of New Members, minutes and Follow-up of actions – G. Arduini (see slides: https://indico.cern.ch/event/1348000/contributions/5674365/attachments/2752638/4821779/Meeting_20231207_Agenda&Follow-up%20of%20actions_aspresented.pptx)

Gianluigi welcomed **Ceri Brenner, Christine Darve** and **Anke-Suzanne Mueller** as new members of WG14.

The draft minutes of the previous meeting are approved.

Follow-up of actions:

1. Communication (Web site, etc.). **We are missing support to help with the content and to suggest contributions. Action: all.**
2. A report on recent developments for accelerators for therapy and radiobiological studies will be produced. **Bob and Michael have started preparing a skeleton of the paper. Suzie commented that this could be submitted to a special issue for Frontiers in Oncology that she is co-editing. Action: Bob and Michael to share the document skeleton with Ceri and Suzie.**
3. An intern at Melbourne University could be hired to create material for communicating the benefits of accelerators. Suzie mentioned that the Melbourne university contracts team are ready to go ahead. **Action: Suzie to contact J. Vigen to arrange the transfer of funds.** Christine has contacted F. Landua from the communication team at CERN and she can support for the branding of the documentation (slides, leaflets).

Topic 2: News from the IUPAP General Assembly – G. Arduini (se e slides: https://indico.cern.ch/event/1348000/contributions/5674367/attachments/2764018/4821784/Meeting_20231207_NewsIUPAP_GA_aspresented_20231207.pptx)

Sekazi clarified that the IUPAP administrative secretariat is located in Trieste while the legal headquarters and bank account are based in Geneva.

Topic 3: Review of Web Based Accelerator Science Content: Outcome – A. Simon

The presentation has been postponed due to the unavailability of Aliz but the document describing the outcome is available at: https://indico.cern.ch/event/1348000/contributions/5689479/attachments/2767943/4821802/Review%20of%20Accelerator%20Science%20Content%20Report.pdf .

Topic 4: Discussion on possible representative from industry – S. Connell, S. Mtingwa

Sekazi and Simon proposed to invite Christoph Quitman to join WG14. Christoph Quitman was the former director of MAXIV and he is now leading the evaluation of innovative technology at Research Instruments (RI). He has organized a very interesting session on "Particle Accelerators worldwide technological trends and new projects involving Industries" at IPAC23. The meeting participants expressed their support for this proposal and it was felt that he would help the Working Group in creating an important link with industry. **Gianluigi will contact the working group members to get their feedback. Action: Gianluigi**

Topic 5: Proposals for new initiatives - all

Swapan proposed to gather information about the role of accelerators in supporting sustainable development helping to address challenges related to energy, climate change, protection of the environment. Christine added that we should highlight also the ongoing initiatives in that respect.

It was agreed that Christine will create a document (Overleaf or Google doc) where the WG members can enter the information related to this subject. **Action: Christine to create a Google doc or Overleaf document and the share the link with the other members of the group. Action: all to provide input related to the role of accelerators in supporting sustainable development.**

Some examples mentioned were:

- Synchrotron light and neutron sources for the study of new and advanced materials for energy storage
- Accelerator Driven systems for Energy production or transmutation of nuclear waste
- Experiments at accelerators to study atmospheric and climate science and to understand of aerosols and clouds, and their effect on climate (e.g. CLOUD at CERN).

Topic 6: Future Meetings

Next meetings are tentatively scheduled on:

- March (week starting 4th March) – remote
- June (week starting 3rd June) - remote

Notes written by Gianluigi Arduini (15/12/2023)

List of pending actions (→ **status as per Nov. 2024)**:

1. Communication (Web site, etc.). **We are missing support to help with the content and to suggest contributions. Action: all.**
2. A report on recent developments for accelerators for therapy and radiobiological studies will be produced. **Bob and Michael have started preparing a skeleton of the paper. Suzie commented that this could be submitted to a special issue for Frontiers in Oncology that she is co-editing. Action: Bob and Michael to share the document skeleton with Ceri and Suzie. →Doc. to be finalized**
3. An intern at Melbourne University could be hired to create material for communicating the benefits of accelerators. Suzie mentioned that the Melbourne university contracts team are ready to go ahead. **Action: Suzie to contact J. Vigen to arrange the transfer of funds. → Done**
4. The meeting participants expressed their support for the proposal to invite Christoph Quitman to join WG14. **Gianluigi will contact the working group members to get their feedback. Action: Gianluigi → Done**
5. **Action: Christine to create a Google doc or Overleaf document and the share the link with the other members of the group. Action: all to provide input related to the role of accelerators in supporting sustainable development. → Done, See accesses: CERNBox and Google Drive**