**Minutes of the Meeting of the PERLE Collaboration Board (CB) June 21st 2023**

Present: Meeting held via Zoom

BINP: -

CERN: Oliver Brüning

Cornell: -

ESS Bilbao: Ibon Bustinduy [remote]

STFC: Peter Williams

Cockcroft Institute: -

JLaboratory: Andrew Hutton [remote], Alex Bogacz

Liverpool U: -

Al-Najah U: Hadil Abualrob [remote]

IJCLab / Orsay: Achille Stocchi

LPSC /IN2p3: Maud Baylac

Ex officio: Walid Kaabi and Max Klein [remote]

The meeting was called by Achille. The meeting was chaired by Oliver Brüning.

The following agenda was agreed:

1. Welcome and approval of the minutes of the last meeting
2. Report on the PERLE Project – Achille Stocchi
3. Recent Technical Progress – Walid Kaabi
4. Activities in Partner Institutes
5. AoB

**1. Welcome**

Oliver Brüning welcomes the participants and thanks Walid for the preparation of the meeting.

The minutes of the last meeting were approved and there were no actions triggered at the last CB meeting.

**2. Report on PERLE Project**

Achille Stocchi reports on several promising new initiatives that have the potential of changing the progress of PERLE. Among others there is the ongoing call for proposals to benefit from the French Recovery plan, France 2030 will propose new project-oriented calls in fall 2023, the new iSAS initiative that is currently applying for EU funding and the new opportunity of buying a gun from RI. Achille Stocchi underlines though that more contributions, both financially and in form of manpower, from international partners is desirable. The PERLE timeline beyond 2023 depends on the available resources for the coming years. The progress in 2023 was quite encouraging with the highlights of the decision on using the ESS cryomodule and ESS-Bilbao joining the collaboration, the initiative of obtaining the DC gun from Research Instruments and the progress of the task force on obtaining ASN authorization to build and run the PERLE machine in France.

Achille Stocchi recalls the overall time plan for the PERLE development, with the publication of the PERLE TDR being planned for 2023, followed by a Prepare to Build phase until 2025. A discussion evolves around the form and the best timing for the TDR publication. Oliver Brüning recalls that the LHC TDR was only published after the machine installation and that all technical relevant information was previously published in form of Technical Notes and Reports. It was agreed that a similar approach would be beneficial for the PERLE project and that a suitable format for PERLE Technical Notes should be identified.

Action: Walid Kaabi

The key challenge for the next steps is still the allocation of the required funding for the program, with the support of the ERL panel mandated by the ESPP and CERN Council.

**3. Recent Technical Progress**

Walid Kaabi reports on the technical advancements since the last CB meeting. Most notably among these are:

* The progress on the SRF system design where the collaboration between IJCLab, JLab and CERN has finalized the HOM coupler designs and have produced first prototypes using 3D printers and copper coating at CERN.
* A 5-cell copper cavity is under fabrication at JLab, using the same design as for the 5-cell cavity produced in 2017, to allow an optimization of the end-group design and to test HOM couplers.
* Vacuum pumping of the Daresbury gun after ultrasonic cleaning in December 2022.
* Purchasing of a new laser for the source.
* Negotiations with Research Instruments [RI] on the purchasing of a DC gun that had been produced in collaboration with Cornell [400pC, 50MHz demonstrated].
* First simulations for the Buncher Cavity design with ESS-Bilbao.

**4. Activities in Partner Institutes**

LPSC IN2p3: Maud Baylac states that Grenoble has hired a new person for beam dynamics studies and that there is a plan for an internship at EPFL on injection studies.

STFC: Peter Williams reports that he has an invited talk on ERLs at IPAC 2023.

Liverpool University: Max Klein reports that more efforts are injected by Liverpool University and that LU contributed to the preparation of the baseline papers for the ERL Roadmap.

JLab: Andrew Hutton reports on the publication of a Nature ERL Review paper.

IJCLab: efforts are ongoing on setting up the organization of PERLE as a truly international collaboration and to review the manpower needs.

**5. AOB:**

Max Klein underlines that the PERLE organization needs strengthening and proposes the creation of the position for a Deputy Spokesperson. The CB members agree and vote unanimously Achille Stocchi as the Deputy Spokesperson for the PERLE Collaboration.

The date of the next PERLE CB meeting is still to be fixed after the summer break.

Oliver Brüning, 3.8.2023