**Minutes of the Meeting of the Virtual PERLE Collaboration Board (CB) October 27th 2021**

Present (Meeting held via Zoom):

BINP: -

CERN: Oliver Brüning,

Cornell: Georg Hoffstaetter

STFC: Deepa Angal-Kalinin,

Cockcroft Institute: Peter Ratoff

JLaboratory: Andrew Hutton

Liverpool U: Max Klein

IJCLab / Orsay: Achille Stocchi

Ex officio: Walid Kaabi and Max Klein

Apologies: Mike Lamont, Carsten Welsch, Evgeni Levitchev, Pavel Logatchov

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

The following agenda was agreed:

1. Minutes of the last meeting
2. Update on the Final CB agreement by Walid
3. Update on the Funding Opportunities and Network collaboration (Walid+ Achille)
4. Update on the PERLE Lab activities (Walid)
5. Report from the ERL Roadmap discussions and the ERL panel discussions (Max and Andrew Hutton)
6. AOB: Next meeting

**1. Welcome**

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

Oliver started the meeting by apologizing for the late distribution of the minutes of the last meeting. There were only minor comments at this stage and the minutes will be approved within a week if no other comments have been received by then.

**2. Update on the Final CB agreement**

Walid Kaabi reports that IN2P3 prepared an addendum allowing BINP to sign Collaboration Agreement. The signature by BINP took place on August 5th. The signed addendum will be sent to all the collaborators. The ICRADA was signed by IN2P3 and send to the DOE awaiting now feedback and revisions from the DOE. It was agreed that the ICRADA agreement between PERLE and JLab should be somehow mentioned in the Collaboration Agreement, for example as an external reference or as an addendum. Walid hopes to have updates on both developments and will inform all CB members when information becomes up. Walid mentions that we still need to get an official link person from BINP for the CB.

**3. Update on the Funding Opportunities and Network collaborations**

Walid Kaabi and Achille Stocchi mention their plan to apply to the French Recovery Plan [PEPR] for PERLE funding in collaboration with CEA and CNRS (the guardianship of IJCLab). For the moment this proposal has been formulated as a Letter of Intent. The application deadline is November 4th.

A second line of funding for network activities is the Marie-Curie PhD training network MSCA for which the time left, however, is short such that likely it has to be deferred to next year. A proposal is in preparation for PhD thesis on high power ERLs in collaboration between IJCLab and Liverpool University. Max Klein mentions that training and education will also be mentioned in the ERL Roadmap~~.~~

Papers for application for an advanced grant for work on the PERLE booster and the LHeC IR had been prepared by Max Klein, but was in the end decided not to be submitted following advice of Carsten Welsch.

Applications for an ERC Synergy grant had been found not to be applicable for work in collaborations.

It is hoped, besides the French PEPR, that the outcome of the European Roadmap, in which PERLE is the central part of the ERL chapter, will positively change the attitude to ERL and especially lead to significant support for PERLE. As emphasized by Max, the partners of PERLE will then have better opportunities to raise funds in their labs and countries beyond the in-kind deliveries, including personal support as with PhD students and fellow positions. The year towards the TRD, 2022, based on strong activities at Orsay and beyond, will be crucial for PERLE to each its implementation phase.

**4. Update on PERLE Lab activities**

Walid Kaabi reports that IJCLab is preparing the international organization of the PERLE project with Work Package definitions and the assignment of task and WP leaders.

IJCLab also organized meetings with CERN and JLab to establish a clear view of the possibilities and the support that could be offered by the collaborators towards the completion and tests for cavities and a complete, optimized design for the dressed cavities. Furthermore, IJCLab is working with the partner laboratories on developing a plan for the design of the cavity and the auxiliaries, the fabrication and testing, aiming at identifying and anticipating possible missing steps.

IJCLab has published two post-doc positions in October 2021, one for the optimization of the injection line and one for the optics development and beam dynamics studies. Hiringis expected to take place between December 2021 and January 2022.

Achille Stocchi adds that IJCLab will probably get a permanent position on beam dynamics on top of the above-mentioned post-doc positions. Application would probably close by February 2022 so that the person could start in October 2022.

**5. Report from the ERL Roadmap discussions and ERL panel discussions**

Max Klein reports on the ongoing work of the ERL Panel and the recently formed Sub-Panel on the CERC and ERLC studies. A draft for the ERL Roadmap has been finalized by this week, in time for the discussion by the LDG. A final version of all Roadmap papers will be presented by the LDG to the CERN Council by 22.11.2021. A longer ERL base and overview paper, to accompany the roadmap, will be published by the end of 2021, summarizing the global ERL landscape. Max Kleinreminds on the ~~with~~ detailed timeline for the PERLE developments, which foresees the PERLE commissioning to start 7 years after the start of the studies. Year 1 for this development is 2022, implying start of the work on the PERLE source and injector in 2022. This is an ambitious, but still feasible plan, endorsed by the CB in June 2021. It would imply a maximum of the PERLE funding in 2024 and stretching for 10 years from 2022 until 2031 and implying on average a funding of ca. 3M€ per year for PERLE for the first five years.

**6. AOB-1:**

Georg Hoffstaetter announces that Cornell University, BNL and SLAC are organizing a BMAD workshop. BMAD has many ERL features and was, for example used for the C-BET design. Interested persons should contact Georg for inscription. The school starts next week and will go for 2 weeks

**7. AOB-2:**

Deepa announces that Daresbury Laboratory received funding for RUEDI, the relativistic ultra-fast Electron Diffraction facility, and underlines that Boris will be a task leader for that.

**8. AOB-2:**

The CB members agree to schedule the next CB meeting tentatively for **December 13th at 5pm Partis time** in order to have time for a discussion of the ongoing and planned PERLE activities, including preparations for a Collaboration meeting early 2022 and a discussion of the roadmap and its implementation plans.

Oliver Brüning, 23.11.2021