

Minutes of the Executive Board Meeting on 20.11.2023 via ZOOM

Present:

1. Anosov V. (JINR)
2. Baldin A. (JINR)
3. Denisenko I. (JINR)
4. Guskov A. (JINR)
5. Guzman F. (InSTEC) - invited
6. Kim V. (PNPI)
7. Korzenev A. (JINR)
8. Kulikov A. (JINR)
9. Ladygin V. (JINR)
10. Lobko A. (INP BSU) - invited
11. Tomasi-Gustafsson E. (CEA Saclay)
12. Tumasyan A. (AANL)

Meeting duration: 11:00-12:10 of Moscow time.

Agenda:

- 1) MoU with INP BSU (Minsk) A. Lobko
- 2) MoU with InSTEC (Havana) F. Guzman
- 2) End of the first term of the physics coordinator I. Denisenko
- 4) AOB

Short summary:

The Board discussed and unanimously approved the signing of the MoU with the Institute of Nuclear Problems of Belarusian State University (Minsk, Belarus). The INP BSU group, led by Dr. A. Lobko, presently consists of the group leader, 3 chief researchers, 11 senior researchers, and 1 engineer. The size of the Group is expected to grow further with students and PhD students. With main expertise in high energy physics, spin physics, detector technologies, development of electronics, and data analysis, the Group will primarily contribute to the following topics:

- design and manufacturing of electronics for the SPD straw tracker and straw detectors of the SPD test zone;
- participation in R&D for the ZDC detector;
- data simulation and analysis;
- study of spin effects in polarized deuteron-deuteron collisions with particular interest for the first observation of the deuteron birefringence effect of the coherent transformation vector to tensor polarization and tensor to vector transformation, study of possible CP violation;
- participation in the development and maintenance of the GRID infrastructure (BY-NCPHEP) for SPD simulation and data analysis;

- participation in the development and maintenance of engineering infrastructure of the SPD setup.

The Board discussed and unanimously approved the signing of the MoU with the Higher Institute of Technologies and Applied Sciences (InSTEC) of Havana University (Havana, Cuba). The InSTEC group, led by Prof. F. Guzman, presently consists of the group leader, 3 senior researchers, and 5 junior researchers. The structure and number of participants of the group may further vary depending on the plan and nature of the future work. In addition, a group of students is involved in the activities of the project through their degree thesis. With main expertise in high-energy physics phenomenology, standard and machine learning techniques and Monte Carlo simulation, the group plans to participate in the physics program of SPD NICA. The primary contributions will be aimed at Monte Carlo simulation for physics analyses, as well as in future data analyses, focusing in the following topics:

- contribute to the understanding of the physics behind the transverse single spin asymmetries, inclusive light mesons production at forward rapidities, as well as development of QCD-based approaches to the cross-section calculations at energies of SPD;
- development and optimization of the data processing and analysis algorithms;
- phenomenological study of non-perturbative mechanisms like the emission of soft gluons in initial state of parton cascades using the TMD approach at SPD energies.

The Board took note of the report of the physics coordinator I. Denisenko on two years of activities and plans for the next two years. He was unanimously recommended to be approved by the CB for the next two-year term. I. Denisenko asked to appoint A. Datta (JINR) as a deputy physics coordinator.

V. Kim informed the Board of the proposal of the Kazakh group to hold the next SPD Collaboration meeting in Almaty in May 2024.