SPD physics at the first phase: intro

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Goals of the group

- Main goal: to accelerate the effort on physical tasks of SPD Phase 1 and make it closer to reality. Obtain expected results with the realistic inputs (beam mode, particles, energies; detector setup etc): event counts, significance, etc.

- Our initial plan of physics measurements during the first phase is here. It can be improved and extended. However currently **some tasks are fully uncovered**.

- We have ~20 proposals for the physics studies. Just 4-5 of them have SPDRoot reconstruction level study. Some of them have only theoretical basis without any experimental humanpower. Our goal is to increase the fraction of advanced studies.

News and plans

- 1st phase physics meeting:
- Meetings are held **monthly: on the first Tuesday of the month at 3pm Moscow time.**
  Topics of the talks should be related to the updates on the 1st phase physics proposals (status reports) and to the presentation of the brand-new proposals. Any other Phase 1 related physics talks are also welcome!

- **Note that all physics results should be shown on regular meetings (this one or any other) before presentation on the Collaboration meeting.**

- Document summarizing advanced analyses:
- We plan to have the second mature draft of the paper before the end of year.

- Main links:
  - Our 1st workshop: https://indico.jinr.ru/event/5351/
  - Our 2nd workshop: https://indico.jinr.ru/event/5966/
  - Last SPD Collaboration meeting: https://indico.jinr.ru/event/5928/

Schedule

Today:

SCIENCE BRINGS NATIONS TOGETHER

SPD first stage physics N21

вторник 3 нояб. 2026 г., 15:00 → 16:40 Europe/Moscow

Zoom

Описание Zoom link

15:00 → 15:10 **Introduction, news** 10m

Speaker: Евгений Солдатов

15:10 → 15:40 **Aspects of meson production at the SPD NICA** 30m

Speakers: Igor Diachkov (National University of Science and Technology «MISIS»), Mikhail Dubinin (SINP, Moscow State University), Roman Shorkin

15:40 → 16:10 **Quark-counting rules for inclusive processes in the high-transverse-momentum region in pp collisions** 30m

Speakers: Semyon Yurchenko (Saint Petersburg State University, Laboratory of ultra-high energy physics), Vladimir Vechernin (St. Petersburg State University)

16:10 → 16:40 **Constraining Intrinsic-Charm Proton Content with SPD@NICA** 30m

Speaker: Leonid Gladilin (M.V.Lomonosov Moscow State University, Skobeltsyn Institute of Nuclear Physics (SINP MSU))