Polarized Beams at LHE: a Versatile Beam System for Spin Experiments on the Polarized Proton Target

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At present a unique physical setup for carring out of spin experiments the 140 cm^3 Polarized Proton Target [1] is placed and been operated on a beam line of the accelerator facility of the Laboratory of High Energies (LHE). Charged polarized beams, $\vec{p}$ and $\vec{d}$, have been prepared for experiments on the setup. The beams have been realized in a framework of the existing neutron beam line [2,3] and are complementary to the polarized neutron beam initially available at the Target. Changing between neutral and charged modes could be performed relatively quickly during a beam run. Three kinds of polarized beams together with the Polarized Proton Target form a flexible environment for spin experiments at the energy range of several GeV per nucleon.

References

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