

The SPASCHARM experiment at U-70 accelerator of IHEP

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The new SPASCHARM experiment for systematic studies of polarization phenomena in strong interactions is under construction now at IHEP, Protvino. The technical beam runs for the experiment first stage are planned for the Fall 2016 and Spring 2017. At this stage, the polarization measurements will be carried out with unpolarized hadronic beams of various compositions (π^\pm , K^\pm , p , antiprotons), using the polarized target. The universal large acceptance experimental set-up is capable detecting and identification most charged and neutral particles and reconstructing a large number of resonances produced in beam interactions at polarized proton target, and later on at the second stage, in collisions of polarized proton and antiproton beams with fixed targets of various materials. The large acceptance and wide data acquisition bandwidth would provide the capabilities for simultaneous data accumulation for a number of physics analyses from the measurements of single-spin asymmetries in inclusive and exclusive reactions to reconstructions of final state hyperon polarizations and spin density matrix elements for vector mesons in a wide range of kinematic variables (p_T , x_F).

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