

Measurements of the Deuteron and Proton Beam Polarization at Nuclotron

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The deuteron beam vector polarization was obtained at the Nuclotron Internal Target Station using the proton-proton quasielastic scattering on the polyethylene target at the beam energies of 200, 500, 550, and 650 MeV/nucleon. The selection of useful events was performed using the time and amplitude information from scintillation counters and the position of the target inside the ion tube. The asymmetry on hydrogen was obtained by the subtraction of the carbon background. The polarization values were compared with the data obtained using the deuteron-proton elastic scattering at the beam energy of 135 MeV/nucleon. The polarization of the proton beam, firstly accelerated at Nuclotron, has been measured at 500 MeV.

Primary author: VOLKOV, Ivan (LHEP-JINR, Dubna, Moscow region, Russia)

Co-authors: TISHEVSKY, Aleksey (JINR); ISUPOV, Alexander (JINR); TEREKHIN, Arkadiy (JINR); REZNIKOV, Sergey (JINR); LADYGIN, Vladimir (VBLHEP, JINR)

Presenter: VOLKOV, Ivan (LHEP-JINR, Dubna, Moscow region, Russia)

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