RHIC Performance with Polarized Protons in Run-6*

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The RHIC polarized proton run (Run-6) in 2006 year started on February 1 and continued for 21 weeks. The Run-6 included the machine operation at different beam energies and with different orientation of beam polarization at the collision points. The machine operation at 100GeV and 31.2 GeV provided the physics data from polarized proton collisions for STAR, PHENIX and BRAHMS experiments. Record levels of the luminosity (up to 3.5e31 cm^{-2} s^{-1} peak) and proton beam polarization (65%) were achieved during the 100GeV operation. The beam polarization was preserved during the acceleration by using the Siberian Snakes, based on helical magnets. The control of polarization orientation at STAR and PHENIX experiments was done with helical spin rotators. On different stages of the run the physics data were provided with longitudinal, vertical and horizontal orientations of beam polarization at the collision points. Total luminosity integrals of 45 pb^{-1} at 100 GeV and 0.35 pb^{-1} at 31.2 GeV were delivered to the experiments.

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