

Abstract Submitted  
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**Measurement of the transverse-spin asymmetries in  $pp$  elastic**

HIROMI OKADA, Kyoto-Univ./RIKEN, JET COLLABORATION — The single transverse-spin asymmetry (analyzing power  $A_N$ ) for  $pp$  elastic scattering is expected to reach a peak of 0.045 in the Coulomb Nuclear Interference (CNI) region at very small momentum transfer  $-t$  of 0.003 (GeV/ $c$ )<sup>2</sup>. During the 2004 RHIC run, we completed a measurement of  $A_N$  in the CNI region by detecting the recoil protons from  $pp$  elastic scattering using a polarized hydrogen gas jet target and the 100 GeV RHIC proton beam. In this talk, we will show the first measurements of the  $A_N$  absolute value and shape in the  $-t$  range from 0.0015 to 0.032 (GeV/ $c$ )<sup>2</sup> with a precision better than 0.005 for each  $A_N$  data point. The recoil protons were detected with an array of Si detectors. The absolute target polarization as monitored by a Breit-Rabi polarimeter was stable at  $0.924 \pm 0.018$ . At the same time, exploiting the polarization of target and beam, we have also measured the double transverse-spin asymmetry ( $A_{NN}$ ). These results allow us to further investigate the spin dependence of elastic  $pp$  scattering in the very low  $-t$  region.

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