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**Measurements of Single and Double Spin Asymmetry in pp Elastic Scattering in the Coulomb Nuclear Interference Region at RHIC** Y. MAKDISI, Brookhaven National Laboratory, I. ALEKSEEV, Institute for Theoretical and Experimental Physics (ITEP), A. BAZILEVSKY, Brookhaven National Laboratory, K. BOYLE, Stony Brook University, A. BRAVAR, G. BUNCE, Brookhaven National Laboratory, S. DHAWAN, Yale, K.O. EYSER, University of California, Riverside, R. GILL, Brookhaven National Laboratory, W. HAEBERLI, Univ. of Wisconsin, H. HUANG, Brookhaven National Laboratory, O. JINNOUCHI, RIKEN BNL Research Center, A. KPONOU, Brookhaven National Laboratory, I. NAKAGAWA, RIKEN, Wako, Japan, A. NASS, Brookhaven National Laboratory, H. OKADA, N. SAITO, Kyoto University, E.J. STEPHENSON, Indiana University Cyclotron Facility, D. SVIRIDA, Institute for Theoretical and Experimental Physics (ITEP), T. WISE, Univ. of Wisconsin, J. WOOD, A. ZELENSKI, Brookhaven National Laboratory — We report a precise measurement of the single spin $A_N$ and double spin $A_{NN}$ asymmetries in pp elastic scattering in the Coulomb Nuclear Interaction region at several energies utilizing a polarized hydrogen jet target and the polarized proton beam at the Relativistic Heavy Ion Collider. We determine the energy dependence of the hadronic single spin flip and double spin flip amplitudes and the implication for Pomeron and Oderon exchanges.

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