

STATUS OF THE POLARIZED ATOMIC H-JET DEVELOPMENT FOR PRECISION ABSOLUTE POLARIZATION MEASUREMENTS OF RHIC PROTON BEAMS

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Status of the H-jet polarimeter development for RHIC will be reviewed. A number of design issues will be discussed, including vacuum system, polarimeter integration into the RHIC storage ring, scattering chamber and uniform, vertical, holding field magnet design. The absolute proton polarization of the hydrogen target will be measured to 3% accuracy by a Breit-Rabi atomic beam polarimeter, which is designed as an integrated part of the polarized H-jet setup. An electron-beam ionizer will be used for hydrogen molecular beam density measurements in the collision region.