

## **Spin Asymmetry for Proton Deuteron Elastic Collisions at Forward Angles**

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The spin asymmetries for proton deuteron elastic scattering are studied at small angles in the context of understanding spin dynamics at high energy for the purposes of measuring the polarization of proton and deuteron beams. The effects of hadronic spin dependence, dispersive spin independent amplitudes, and the Coulomb phase are addressed in particular. Electromagnetic helicity amplitudes for proton deuteron collisions resulting from single photon exchange are presented, those prominent at low momentum transfer and high energy being highlighted.

The character of the maximum analyzing power for colliding polarized deuterons and protons is discussed, focusing on the dependence upon spin and phases that is important for polarimetry.