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Measurement of the Angular Distribution of Drell-Yan Production in p+Fe Interactions at 120 GeV Beam Energy

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We report on progress towards a measurement of the angular distributions of Drell-Yan dimuons produced at the SeaQuest/E906 Fermilab experiment, using the 120 GeV proton beam on a Fe target. The beam dump upstream of the dimuon spectrometer, which serves as the iron target, is expected to provide a very large statistical significance for this measurement. To extract the Drell-Yan signal, a combinatorial background subtraction method was developed. After this subtraction, the detector, trigger, and reconstruction efficiency is corrected using a Bayesian unfolding method that takes into account acceptance, efficiency, and bin migration. The result from this analysis will provide a test of the validity of the Lam-Tung relation. In this presentation, we will demonstrate the validity of these analysis techniques.

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