

Abstract Submitted
for the DNP10 Meeting of
The American Physical Society

New Trigger Logic for the STAR Forward Meson Spectrometer¹

JOHN CALVIN MARTINEZ, The Cyclotron Institute Texas A&M University, (REU Student from Texas A&M University Kingsville), STAR COLLABORATION — The Forward Meson Spectrometer (FMS) is an electromagnetic calorimeter in the STAR Experiment at RHIC that covers the pseudorapidity region $2.5 < \eta < 4$ and full azimuth. One of the goals of the FMS is to separate two possible causes of large, previously observed proton transverse single-spin asymmetries, the Sivers effect and the Collins effect. To meet this goal, it will be valuable for the FMS to trigger more efficiently on eta mesons and jet-like events than it does at present. In order to increase the trigger efficiency for non-localized events, like jets and eta decays, a new trigger algorithm has been developed that includes a system of eight overlapping jet-patches, each covering an approximate area of 1.5×1.5 in azimuth-pseudorapidity space. The new trigger logic and the expected rates for 200 and 500 GeV p+p collisions will be presented.

¹Funded by DOE and NSF-REU Program.

John Calvin Martinez
Texas A&M University Kingsville

Date submitted: 30 Jul 2010

Electronic form version 1.4