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New Trigger Logic for the STAR Forward Meson Spectrometer[1]

JOHN CALVIN MARTINEZ[2], Texas A&M University Kingsville — The Forward Meson Spectrometer (FMS) is an electromagnetic calorimeter in the STAR Experiment at RHIC that covers the pseudorapidity region $2.5 < \text{eta} < 4$ 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 x 1.5 in azimuth-pseudorapidity space. The new trigger logic and the expected rates for 200 and 500 GeV pp collisions will be presented.

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