

Abstract Submitted  
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**Online Trigger Simulations for the sPHENIX Detector**<sup>1</sup> ERIN BOSSARD, Univ of Colorado - Boulder, SPHENIX COLLABORATION — sPHENIX is a new detector being built to succeed the previous PHENIX experiment at the Relativistic Heavy Ion Collider (RHIC). sPHENIX is designed to measure jets and upsilons with high precision to further our understanding of the Quark Gluon Plasma (QGP). sPHENIX will take data from a variety of collision systems including  $p+p$ ,  $p+Au$ , and  $Au+Au$  at  $\sqrt{s} = 200$  GeV. To successfully collect a large sample of data in  $p+p$  collisions, the capability of an online trigger to select rare events of interest must be understood. In this study, GEANT4 simulations of the detector were used to calculate the efficiency and rejection power of photon, hadron, upilon, and jet triggers.

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