Abstract Submitted
for the DNP20 Meeting of
The American Physical Society

Zero-Suppression in sPHENIX Calorimeters SPENCER GRIFFITH, University of Colorado, Boulder, SPHENIX COLLABORATION — The sPHENIX experiment at the Relativistic Heavy Ion Collider is currently scheduled to begin taking data in 2023. sPHENIX is designed to collect data at up to 15 kHz to sample jets, photons, Upsilons, and heavy flavor hadrons with high statistics in proton-proton, proton-nucleus, and nucleus-nucleus collisions. The calorimeter system, which consists of a compact electromagnetic calorimeter and two longitudinal segments of hadronic calorimeter, will be read out with custom digital electronics. Removal or reduction of data content for towers with low energies, or zero suppression, is critical to meet the required data rates. We detail results of sPHENIX GEANT detector simulations and alternative zero suppression algorithms to meet this requirement.

Spencer Griffith
University of Colorado, Boulder

Date submitted: 26 Jun 2020 Electronic form version 1.4