

Abstract Submitted
for the DNP20 Meeting of
The American Physical Society

Preparing the HCal for the Forward Calorimeter System (FCS) Upgrade at STAR ANAND AGRAWAL, WILLIAM BAKKE, MICHAEL BUKOWSKI, CLAIRE KOVARIK, JOSEPH (J.D.) SNAIDAUF, Valparaiso University, STAR COLLABORATION — The Solenoidal Tracker at RHIC (STAR) detector based at Brookhaven National Laboratory uses collisions of polarized protons to study QCD processes. The forward region of the detector, $2.5 < \eta < 4$, is undergoing an upgrade to improve particle tracking and calorimetry. The new Forward Calorimeter System (FCS) will provide both hadronic (HCal) and electromagnetic (ECal) calorimetry that will support various physics programs. Di-jet reconstruction in this region of the detector will be possible and will provide insight into the gluon spin contribution, ΔG . The FCS consists of a refurbished PHENIX sampling ECal and a newly constructed HCal, which will be a sandwich steel scintillator plate configuration. Both calorimeters will share the same cost-effective readout electronics, with SiPMs as photo-sensors. Fabrication of the 18,720 scintillation tiles for the HCal involves polishing of the two long edges, detailed painting to the two shorter edges, and preparation for shipping to STAR. Several institutions worked complementarily on the effort. This presentation will describe the work done by the authors at Valparaiso this summer as they spent part of their time each day to complete the preparation of 9,600 of these scintillation tiles, including the attendant QA.

Joseph Snidauf
Valparaiso University

Date submitted: 31 Jul 2020

Electronic form version 1.4