Abstract Submitted
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Painting Scintillator Tiles for the STAR Forward Upgrade[1] MADISON MEADOR, Abilene Christian University, STAR COLLABORATION — Over the past 20 years, the Solenoidal Tracker at RHIC (STAR) at Brookhaven National Laboratory has been a leading experiment investigating the complex structure of nucleons through high energy collisions of proton beams. Recently, STAR has begun construction on the Forward Upgrade, which will enable charged-particle tracking and calorimetry measurements at very close proximity to the beam line ($2.5<\eta<4$). Approximately 18,000 plastic scintillator tiles are needed to construct the Hadron Calorimeter (HCal). The manufacturing effort is shared across several institutions, including OSU, UCLA, and Valparaiso University. Abilene Christian University′s (ACU) contribution to the construction of the HCal includes machining, polishing, and painting approximately 7200 of these tiles. A painting process was developed to accommodate the specific requirements of the HCal, utilizing newly renovated lab facilities at ACU. To validate the procedure, we measured the wavelength of light absorbed by the scintillator tile as a function of paint thickness. These data will be presented in the poster, along with the details of the painting process.

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Madison Meador
Abilene Christian University

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