

SES16-2016-000025

Abstract for an Invited Paper
for the SES16 Meeting of
the American Physical Society

Silicon Photomultipliers in Astroparticle Experiments

NEPOMUK OTTE, Georgia Inst of Tech

The majority of astroparticle detectors are photon hungry and use large-area photon detectors. While the classical photomultiplier tube still plays a dominant role in the field, SiPMs are on the rise and are being used in a number of experiments already. With the recent boost in performance of SiPMs it is to be expected that SiPMs will outnumber PMTs in astroparticle experiments in the not so distant future. In this presentation I discuss the requirements of photon detectors in astroparticle experiments, how existing SiPMs meet these requirements, and what improvements remain to be done. I focus on imaging atmospheric Cherenkov telescopes like the planned Cherenkov Telescope Array but will also address the needs of other techniques in astroparticle physics, which use large numbers of photon detectors.