BurstCube, a CubeSat for Gravitational Wave Counterparts: Performance and Current Status

ALYSON JOENS, George Washington University / GSFC, BURSTCUBE TEAM — Joint detections between gravitational waves and gamma-ray bursts (GRBs) enables multi-messenger science and allows for constraints on the neutron star equation of state, tests of fundamental physics, and insight into the origin of the prompt emission. To increase the likelihood of these coincident detections, full sky coverage in the gamma-ray regime is needed. BurstCube will expand sky coverage and assist current observatories, such as Swift and Fermi, in the detection and localization of GRBs within the energy range of 50 keV to 1 MeV. BurstCube, a 6U (10 x 20 x 30 cm) CubeSat comprised of four Cesium Iodide scintillators coupled to arrays of silicon photo-multipliers (SiPMs), is currently undergoing flight build and will reach launch readiness in the fall of 2021. We present the performance, current status of the mission, and future calibration of the instrument.