ISS-Lobster: a low-cost wide-field X-ray transient detector on the ISS

ROBERT PETRE, JORDAN CAMP, SCOTT BARTHELMY, NEIL GEHRELS, JUDITH RACUSIN, FRANK MARSHALL, ANDREW PTAK, NASA / GSFC — ISS-Lobster is a wide-field X-ray transient detector proposed to be deployed on the International Space Station. Through its unique imaging X-ray optics that allow a 30 deg by 30 deg FoV, a 1 arc min position resolution and a $10^{-11}$ erg/(sec cm$^2$) sensitivity in 2000 sec, ISS-Lobster will observe numerous events per year of X-ray transients related to compact objects, including: tidal disruptions of stars, supernova shock breakouts, neutron star bursts and superbursts, high redshift Gamma-Ray Bursts, and perhaps most exciting, X-ray counterparts of gravitational wave detections involving stellar mass and possibly supermassive black holes. The mission includes a 3-axis gimbal system that allows fast Target of Opportunity pointing, and a small gamma-ray burst monitor to be contributed by the Technion (Israel Institute of Technology.)

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