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ENHANCED X-RAY TIMING AND POLARIMETRY(EXTP)MISSION DESIGN AND IMPLEMENT

Abstract

Abstract:Enhanced X-ray Timing an Polarimetry is another large x-ray astronomy satellite mission follow Hard X-ray Modulation Telescope(HXMT) in china. by carrying large area focusing telescope and collimated telescope. The mission will realize the observation of black holes,neutron stars, magnestars and othe high-energy astronomical objects. The satellite also carries x-ray polarimetry detectors,which will realize the energy spectrum and polarization united observation of objects, and the physical laws study in extreme physical condition. The science payload of eXTP includes eleven sets of Spectroscopic Focusing Array(SPA),two sets of Polarimeter Focusing Array(PFA),forty sets of Large Area Detectors and three sets of Wide Field Monitor,will achieve energy resolution about 3.5m2@6keV,180eV. This paper based on science mission requirement,discussed that satellite system composition,observation mode design,orbit design,primary parameters budget, formation design and basically subsystems design.

keywords:X-ray timing and polarimetry, eXTP, mission design