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Current Status and Plan of the enhanced X-ray Timing and Polarimetry (eXTP) Observatory

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The enhanced X-ray Timing and Polarimetry (eXTP), a large international space science mission led by China with major contributions from many European countries and other international partners, is designed to study fundamental physics under extreme conditions of density, gravity and magnetism. eXTP will carry two sets of focusing X-ray telescopes for spectroscopy (9 telescopes) and polarimetry (4 telescopes) observations, 40 modules of collimated X-ray detectors for timing observations, and a wide field monitor made of 4 cameras. The mission aims at determining the equation of state of matter at supra-nuclear density, measuring effects of QED, and understanding the dynamics of matter in strong-field gravity. In addition to investigating fundamental physics, eXTP will be a very powerful observatory for astrophysics that will provide observations of unprecedented quality on a variety of galactic and extragalactic objects. As the core of a large science program called "Explore the eXtreme Universe"(EXU) in China, eXTP is a high priority mission in China's space science program before 2030 and through 2035. The Phase B study of eXTP has been approved in China, targeting for launch around 2027 with a nominal mission lifetime designed for 5-8 years.

Topic

Future missions

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