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The enhanced X-ray Timing and Polarimetry mission

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The enhanced X-ray Timing and Polarimetry mission (eXTP) is a flagship observatory for X-ray timing, spectroscopy and polarimetry developed by an International Consortium led by the Chinese Academy of Science, with a large participation of European institutions.

Thanks to its very large collecting area, good spectral resolution and unprecedented polarimetry capabilities, eXTP will explore the properties of matter and the propagation of light in the most extreme conditions found in the Universe. eXTP will investigate three fundamental science areas: the equation of state of ultra-dense matter, the effects of strong-field gravity, the astrophysics and physics of very strong magnetic fields. eXTP will, in addition, be a powerful, wide-ranging X-ray observatory.

The scientific payload includes four instruments. The Spectroscopy Focusing Array (SFA) and Polarimetry Focusing Array (PFA) are based on grazing incidence X-ray mirrors, equipped with focal plane Silicon Drift Detectors (SDDs) and Gas Pixel Detectors, respectively.

The Large Area Detector (LAD) is a 1-degree collimated instrument, based on large-area SDDs.

The Wide Field Monitor is a coded aperture instrument also based on large-area SDDs, with a total field of view of about 4 steradians.

The mission is currently undergoing its phase B study, targeting a launch in late 2020's.

In this contribution I will present the mission and the current status of its development.

Eligibility for "Best presentation for young researcher" prize

No

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