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The WFM (Wide Field Monitor) onboard of eXTP and its adaptability to future mission proposals

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The eXTP (enhanced X-ray Timing and Polarimetry) mission is a major project of the Chinese Academy of Sciences (CAS), that had a large involvement of Europe, until it was de-scoped to a “China-only” mission in 2024. The scientific payload of the former eXTP included four instruments: SFA (Spectroscopy Focusing Array) and PFA (Polarimetry Focusing Array) - led by China - and LAD (Large Area Detector) and WFM (Wide Field Monitor) led by Europe. Italy led the LAD and Spain (with M.Hernanz as PI) led the WFM. The WFM reached phase B2, after successfully undergoing the I-SRR (Instrument System Requirements Review) in mid-2023.

The WFM for eXTP is a wide field X-ray monitor instrument in the 2-50 keV energy range. It has an unprecedented combination of large field of view and imaging, with a very good spectral resolution, down to 2 keV. A reduced version, with for instance just 2 or 4 cameras, would lead to very relevant discoveries of the variable and transient X-ray sky, as a standalone instrument or complementing others.

In view of the current situation, a reduced WFM can be considered as the payload of future ESA missions or even missions of other agencies, like ISRO in India. The world done so far with the WFM of the former eXTP led by us will be presented, together with a description of the landscape in the near future.

Eligibility for “Best presentation for young researcher” or “Best poster for young researcher” prize

No

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