



UNIVERSITÀ
DI TRENTO

Dipartimento di
Fisica



PhD Program in Space Science and Technology - SST

The Imaging X-ray Polarimetry Explorer

Specific Seminar – Curriculum 5
2023, April 12, 10 a.m.

Speaker:

Luca Baldini, University of Pisa and National Institute for Nuclear Physics (INFN) -Pisa

Abstract:

Successfully launched in December, 2021, the Imaging X-ray Polarimetry Explorer (IXPE) is a NASA Small Explorer mission, developed in collaboration with the Italian Space Agency, and the first ever to provide imaging-polarimetry capabilities in the 2--8 keV energy band. During its first year in orbit, IXPE has observed 39 distinct sources, across many different source classes, detecting polarization with high statistical significance for about half of them.

The scientific payload of the mission includes three identical telescopes, each one comprised of a mirror module assembly---focusing the X-rays---and a detector unit placed at its focus, holding the polarization-sensitive gas pixel detector and the associated readout electronics and thermal system. In this seminar we shall review the design drivers and the development of the mission, with particular emphasis on the optimization and qualification for space of the focal-plane detectors, and the operation of the observatory in orbit.

Online attendance:

Zoom link:

<https://infn-it.zoom.us/j/82350754251?pwd=VmtuRFJLRU9UcEd5NVpPN2lIV2RGUT09>

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