Contribution ID: **201** Type: **Poster**

Accounting for systematic uncertainties in the Imaging X-ray Polarimetry Explorer (IXPE) detector response

Thursday, 26 May 2022 15:49 (1 minute)

Launched on December 9, 2021, the Imaging X-ray Polarimetry Explorer (IXPE) is the first imaging polarimeter ever flown providing sensitivity in the 2–8 keV energy range, and during the 2-year prime phase of the mission will sample tens of X-ray sources among different source classes. While most of the measurements will be statistics-limited, for some of the brightest objects observed an for long integration times, the systematic uncertainties on the detector response (primarily the effective area, the modulation factor and the absolute energy scale) will be important.

In this contribution, we describe a framework to propagate on high-level observables (e.g., spectro-polarimetric fit parameters) the systematic uncertainties connected with the response of the detector, that we estimate from the relevant ground calibrations and from observations of celestial point sources. We shall illustrate our approach in a few real-life case studies.

Collaboration

IXPE

Primary author: SILVESTRI, Stefano (Università di Pisa)

Presenters: SILVESTRI, Stefano (Università di Pisa); SILVESTRI, Stefano (Istituto Nazionale di Fisica Nucleare)

Session Classification: Detectors Techniques for Cosmology and Astroparticle Physics - Poster session