中華民國天文學會
The Astronomical Society of the Republic of China (Taiwan)

Contribution ID: **172** Type: **Oral**

Probing Magnetic Structures of Supernova Remnants and Pulsar Wind Nebulae with the Imaging X-ray Polarimetry Explorer

Sunday, May 18, 2025 12:00 PM (15 minutes)

X-ray polarization is a powerful tool for studying particle acceleration in high-energy astrophysical phenomena such as supernova remnants (SNRs) and pulsar wind nebulae (PWNe). Measurements of X-ray polarization provide valuable insights into the geometry and physical processes within these objects, revealing details about their magnetic field structures, particle acceleration mechanisms, and the nature of the emitting particles.
The launch of NASA's Imaging X-ray Polarimetry Explorer (IXPE) in 2021 has enabled high-resolution mapping of magnetic field structures in these remnants and nebulae at X-ray energies, significantly advancing our understanding of their complex dynamics and underlying physics.
In this presentation, I will give a brief overview of IXPE and highlight some of our recent findings on X-ray polarization and the magnetic morphology of SNRs and PWNe.

Section

High Energy

Primary author: YANG, Yi-Jung (National Central University)

Presenter: YANG, Yi-Jung (National Central University)

Session Classification: Star formation