

UPXI - LPXI

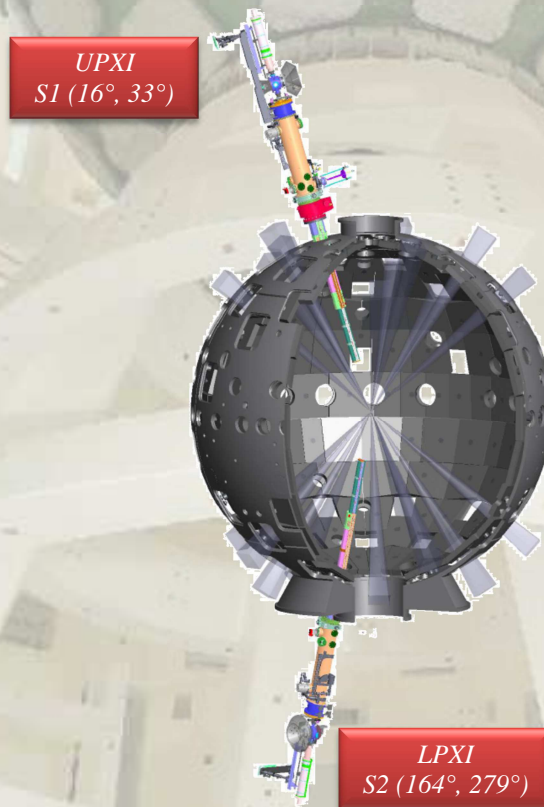
Upper - Lower Polar X-ray Imagers

The UPXI and LPXI diagnostics record time-integrated 2D image, or optionally time-resolved 2D or 1D image, in the hard X-ray spectral region. They are dedicated to precision pointing of LMJ laser beams: position and characterization of the laser spots, verification of main-target and backlighter-target positions, and time-resolved size measurement of the Laser Entrance Holes.

The image is accomplished with a single 50 μm diameter pinhole laser drilled into a tantalum foil. The maximum target to pinhole distance is 250 cm (minimum is 150 cm) for a magnification of 2 (5 or 6).

These diagnostics are available with time-integrated detectors (CID camera or Image plate IP for PETAL experiments) and time-resolved detectors (X-ray streak camera operating with a temporal resolution of 50 ps or ARGOS framing camera).

These diagnostics are set up in the target chamber at fixed place with specific mechanics.



Characteristics		Spectral range	Spatial resolution (μm) / Field of view (mm)	Time resolution (ps) / Dynamic (ns)	Setting/Operational
1 pinhole channel		> 3 keV	80 / 12 to 65 / 5	without	Specific mechanics
Passive detector	CID detector				
Magnif. = 2 to 5	Image Plate		80 / 50 to 65 / 25		
Optional camera	Streak camera		65 / 2	17 / 2 to 120 / 25	2019
	Framing camera	110 - 130 / 20			