

IRIM - InfraRed Imaging Magnetogram

The InfraRed Imaging Magnetograph (IRIM) is an imaging solar spectropolarimeter employing a Fabry-Pérot etalon capable of providing a bandpass as low as 0.01 nm over a FOV of 50 arcsec. The Fabry-Pérot and filters cover the two highly Zeeman sensitive Fe I lines at 1565 nm (Landé factors $g = 3$ & $g = 1.53$). A rotating waveplate and polarizing beamsplitter are used for dual-beam differential polarimetry providing high Zeeman sensitivity and high cadence (<1 min for full Stokes profiles) solar spectropolarimetry. IRIM is located in the NST Coudé Lab, and is fed light corrected by Adaptive Optics (AO), which facilitates diffraction-limited imaging (0.2 arcsec) with IRIM. The spectrometric and/or polarimetric data are recorded by a cryogenic 1024×1024 HgCdTe IR array camera.

Species	Wavelength	Bandpass	Field of view	Image scale	Vector spectro-polarimetry
Fe I	1564.85 nm	0.1 Å	50" by 25"	0.049"/pix	45 sec
Fe I	1565.29 nm	0.1 Å	50" by 25"	0.049"/pix	45 sec