

Indus Hyperspectral



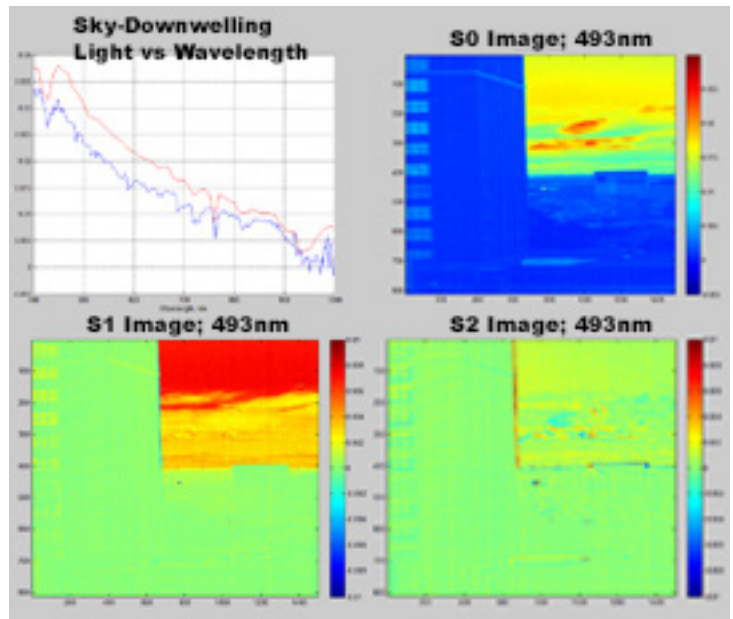
Spatial Pixels	1600
Spectral Pixels	240 (2x binning in spectral)
Pixel Size	5.5mm
Spectral Resolution	2.5nm
Slit Width	15mm
Lens Focal Length	70mm
F/#	3
Cross-Track FOV	7.2°
Cross-Track IFOV	78mrad
Smile (Peak-To-Peak)	2mm
Keystone (Peak-To-Peak)	6mm
Size with Standard Lens (LxWxH)	12" x 8" x 12"
Weight with Standard Lens	25lbs
Bit Depth	14-bits
Exposure Range	0.032ms-32sec
Partial Image Modes	Pixel Binning, ROI
Data Interface	GigE
Max Frame Rate	242

Summary

- A new class of airborne instruments that can accurately characterize ground spectral polarization signatures.
- From an aircraft the sensor scans ground surface spectral polarization and radiometric properties.
- Uses an array of push-broom hyperspectral sensors that are scanned across the ground to measure surface reflectance and polarization as a function of wavelength.
- A data viewer allows the user to explore the images of the ground at particular wavelengths and polarization state.
- Polarization is reported as Stokes images (S0, S1, S2)
- A degree of linear polarization and orientation of linear polarization are a function of wavelength.
- Fully automated and collects a data cube (wavelength, radiance, S0, S1, DOLP, orientation) in image form.
- Provides comparison of various data products to understand relative signature strengths.
- The data cube can be explored with a convenient and intuitive set of line plots and false color maps.

Applications

- Crop health
- Soil moisture
- Industrial residue detection



Calibrated Polarization and Radiometric Data

