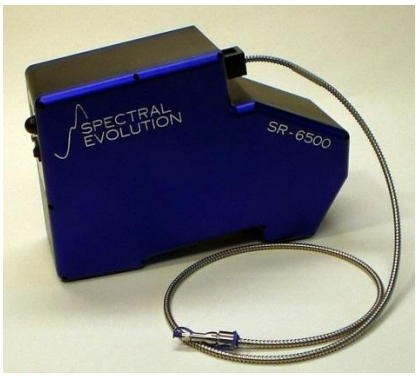

PRESS RELEASE

First SR-6500 ultra high resolution spectroradiometer delivered to USGS.

Ability to meet <5nm resolution measurement to meet Aviris-NG standard is key to application

Lawrence, MA – November 30, 2016 – The just introduced SPECTRAL EVOLUTION SR-6500 full range spectroradiometer has been delivered to the U.S. Geological Survey in Denver, CO. The SR-6500 covers the UV/VIS/NIR range from 350-2500 nanometers. It features ultra high resolution and very stable performance with three high density thermoelectrically cooled photodiode arrays.

The instrument will be used to scan samples in the USGS spectral library so the library data can be used with data from the Airborne Visible-Infrared Imaging Spectrometer – Next Generation (AVIRIS-NG). AVIRIS-NG provides access to high-signal-to-noise ratio imaging spectroscopy measurements in the solar reflected range from a Twin Otter platform and will be implemented on a high altitude platform (NASA's ER-2) when that platform becomes available. AVIRIS-NG measures from 380-2510nm with a 5nm sampling. The mandate to USGS was to work with a ground instrument that could meet or better the AVIRIS-NG standard. The SR-6500 is the only full range system that meets this high spectral resolution requirement.

The SR-6500 is calculated for radiance with NIST-traceable standards. It features superior resolution at FWHM:

- 1.5nm @ 700nm
- 3.0nm @ 1500nm
- 3.8nm @ 2100nm

Resolution is achieved using three high density solid state thermoelectrically cooled photodiode arrays:

- 1024 element TE-cooled silicon phtotodiode array detector (VIS-NIR)
- 512 element TE-cooled InGaAs photodiode array detector (SWIR 1)
- 512 element TE-cooled extended InGaAs photodiode array detector (SWIR 2)

The SR-6500 features the following Noise Equivalence Radiance (NER) sensitivity with a 1.5 meter fiber optic:

- 1.0×10^{-9} W/cm^2/nm/sr @ 400nm
- 2.8×10^{-9} W/cm^2/nm/sr @ 1500nm
- 6.8×10^{-9} W/cm^2/nm/sr @ 2100nm

“The high resolution and stability of the SR-6500 will provide a ground-based instrument for re-scanning our existing mineral, soil, vegetation and man-made material spectral library along with new samples at a resolution better than the measurements from AVIRIS-NG,” said Dr. Gregg Swayze, Research Geophysicist at USGS.

Most recently, AVIRIS-NG has been used in India for measurements spanning coastal zone, mangrove forest, soils, hydrocarbon alteration, mineralogy and other application areas.

For more information on the SR-6500, please visit:

About SPECTRAL EVOLUTION
Established in 2004, SPECTRAL EVOLUTION is a leading manufacturer of laboratory and handheld portable spectrometers, spectroradiometers and spectrophotometers. SPECTRAL EVOLUTION spectrometers are used worldwide for many mission-critical lab and field applications in mining, remote sensing, vegetative studies, ground truthing, environmental and climate studies, developing satellite calibrations, and more, due to their reliable, robust, rugged design and user-friendly one-touch features.

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