501077731-39039-19823-178-122
From: "Roger N. Clark" <rclark@usgs.gov>
Sent: Thu, 02 Sep 2010 14:41:58
To: FOIA0105@usgs.gov
Subject: [Fwd: Re: Imaging Spectroscopy for oil]

-------- Original Message --------

Subject: Re: Imaging Spectroscopy for oil

Date: Tue, 25 May 2010 15:59:28 -0600 (MDT)

From: Roger N. Clark <rclark@speclab1.cr.usgs.gov>

Reply-To: rclark@speclab.cr.usgs.gov

To: matthew.fladeland@nasa.gov, rclark@usgs.gov

CC: gswayze@usgs.gov

Fladeland, Matthew M. (ARC-SG) wrote:

> Roger:
>
> I've been asked by NASA HQ to provide advise on additional airborne imaging spectrometers to the oil response community in lieu of AVIRIS.
> I understand from John Brock that you are using AVIRIS and so hoped you could let me know the wavelengths of interest, S:N tolerance at spectral regions of interest, and desired spatial resolution. If you have particular systems you'd like us to include please also include in your response.
>
> Feel free to call my cell below if you prefer.
>
> Best regards,
>
> Matt

Hello Matt,

I am currently in Italy, so if there are follow-up questions, please

contact Gregg Swayze.

To do the oil work a very high S/N imaging spectrometer is needed.

AVIRIS is on the edge of doing it S/N wise. We also need better than 12 nm FWHM with better than 12 nm sampling and a range from 0.6 to 2.46 microns (and 2.4+ microns still needs good response). Hyperion falls way short. We also need better than 10 meters/pixel surface sampling. Off nadir angle must be minimized (12 degrees of AVIRIS is OK but sometimes we run into sun glint problems). A sensor with a wider off-nadir angle would suffer more from sun glint.

Gregg can probably add to the list; its after midnight here.

Roger