



2012 HyspIRI Science Workshop

Objectives, Overview and Update



Woody Turner, John LaBrecque
HyspIRI Program Scientists
Earth Science Division
NASA Headquarters
October 16, 2012

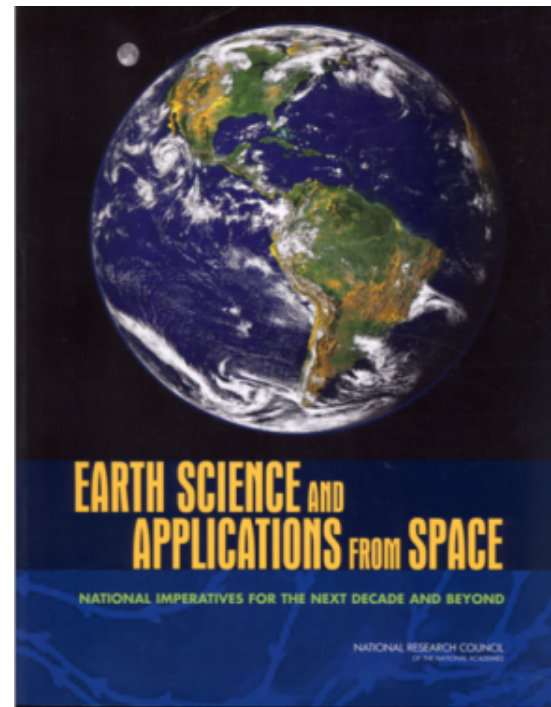


HyspIRI



HyspIRI is a Tier 2 NASA Decadal Survey *global* mission concept featuring:

- a VSWIR imaging spectrometer at 380 to 2500 nm with 10 nm sampling, capturing the Earth's complete terrestrial surface and coastal regions at 60m spatial resolution every 19 days;
- an 8-channel multispectral TIR instrument operating between 3 and 12 microns capturing the same area at 60m spatial resolution every 5 days; and
- an intelligent payload module for direct broadcast capability coupled with on-board processing for a subset of data streams



The HyspIRI mission concept is relatively straightforward, low cost, and low risk and meets the urgent needs of the Earth System Science and Climate Science communities for global measurements.



Workshop Objectives



- Overview of HypsIRI Mission Concept and Next Steps
 - Review of Preliminary Level 1 Requirements
- Update Community on HypsIRI Status
- Examine HypsIRI-related Precursor Science
 - defined by Decadal Survey and HypsIRI SSG
- Explore Potential HypsIRI Applications
- Present Technologies and Tools supporting HypsIRI
- Explore Domestic and International Partnership Opportunities
- Discuss HypsIRI Preparatory Science Activities
- Review Early Results from AVIRIS-ng, HYTES, and PRISM



Workshop Overview



Tuesday, October 16:

Programmatic Context; Global/Large-Region HypsIRI Science; Mission Concept; Panel Discussion

Wednesday, October 17:

HypsIRI Science Products; Applications of HypsIRI Data, including: energy and greenhouse gas emissions, earthquakes, urban analysis, floods, agriculture, water quality, coastal ecosystems; Poster Session

Thursday, October 18:

International Activities; Calibration; Precursor Airborne Campaign; Technology Development/New Instruments; Panel Discussion; Wrap Up



Since the Last Workshop



- Regular Steering Committee, Science Study Group, and International Science Group Teleconferences
- Mission Applications WG sets new applications missions approach 9/2011
- Pre-Formulation Workshop 12/2011
- ROSES 2011 *HyspIRI Preparatory Airborne Activities and Associated Science and Applications Research* 12/2011
- HyspIRI Spectral Libraries Subgroup 2/2012
- 3rd HyspIRI Data Products Symposium at GSFC 5/2012
- HyspIRI Independent Cost Estimate by Aerospace Corp. 7/2012
 - Aerospace estimate was within 12% of HyspIRI estimate.
 - Aerospace recommends earlier start on instruments to reduce risk and cost.
- ROSES 2011 *HyspIRI Preparatory Airborne Activities and Associated Science and Applications Research* Selections 7/2012
- HyspIRI Aquatic Data Products WG 9/2012



HyspIRI Next Steps



Remember we are:

- A global mission
- A broad-based Earth System Science mission addressing urgent needs
- A mission with mature technologies

Goals:

- Cost reduction
- Retiring risk through instrument development
- Developing precursor scientific opportunities
- Seeking partnerships with domestic and international partners for:
 - Joint scientific campaigns
 - Calibration/validation
 - Data product development and use
 - Spacecraft
 - Launch
- Working with other NASA missions

Be Ready!



Thank You

