2011 HysplRI Science Workshop

Objectives, Overview and Update

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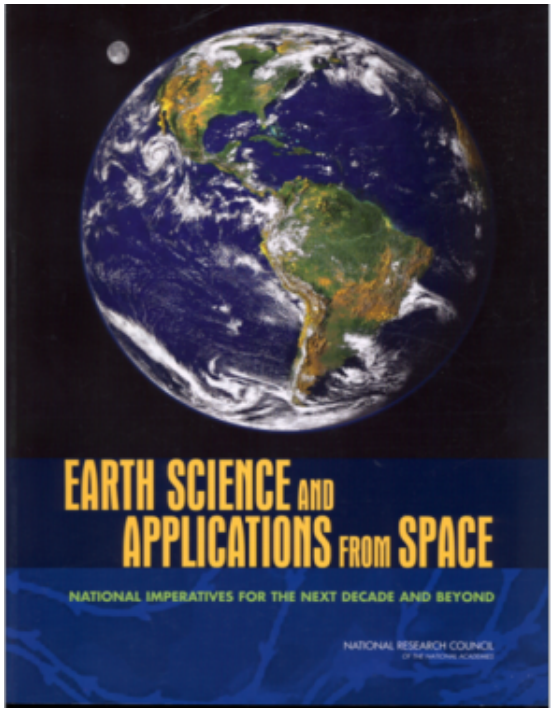
HyspIRI

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 and
- an 8-channel multispectral TIR instrument operating between 3 and 12 microns capturing the same area at 60m spatial resolution every 5 days.



As a global mission, HyspIRI meets the needs of the Earth System Science community.

HyspIRI Management Structure

Earth Science Division
Michael Freilich, Director
Peg Luce, Deputy Director

Research	Flight Programs	Applied Sciences	Technology (ESTO)
Jack Kaye, Associate Director Lucia Tsaoussi, Deputy A.D.	Steve Volz, Associate Director Steve Neeck, Deputy A.D.	Lawrence Friedl, Associate Director	George Komar, Associate Director Bob Bauer, Deputy A.D.

HyspIRI Steering Committee
W. Turner, J. LaBrecque (PS Co-leads); S. Neeck (PE Lead); W. Turner (AS Lead);
R. Green/JPL; S. Hook/JPL; E. Middleton/GSFC;
S. Ungar/GSFC ret.; C. Bruce/JPL; B. Oaida/JPL; B. Knox/GSFC;
B. Edwards (Data); C. Norton (ESTO); A. Mason/C. Wu (Program Office);
M. Fladeland (Airborne)
D. Wickland (Terrestrial Ecology); P. Bontempi (Ocean Biology)

HyspIRI Science Study Group
Co-Chairs R. Green, S. Hook, B. Middleton

HyspIRI International Science Group

HysplRI Science Study Group

Mike Abrams	JPL
Rick Allen	UID
Martha Anderson	USDA
Greg Asner	Carnegie
Paul Bissett	FERI
Alex Chekalyuk	LDEO
James Crowley	USGS
Ivan Csiszar	UMD
Heidi Dierssen	U. Connecticut
Friedmann Freund	NASA Ames
John Gamon	U. Alberta
Louis Giglio	UMD
Greg Glass	JHU
Robert Green	JPL
Simon Hook	JPL
James Irons	NASA GSFC
Bob Knox	NASA GSFC
John Mars	USGS
David Meyer	USGS EROS
Betsy Middleton	NASA GSFC
Peter Minnett	U. Miami
Frank Muller-Karger	USF
Scott Ollinger	UNH
Thomas Painter	JPL
Anupma Prakash	UAF
Jeff Privette	NOAA
Dale Quattrochi	NASA MSFC
Mike Ramsey	U. Pittsburgh
Vince Realmuto	JPL
Dar Roberts	UCSB
Dave Siegel	UCSB
Phil Townsend	U. Wisconsin
Kevin Turpie	NASA GSFC
Steve Ungar	NASA GSFC
Susan Ustin	UC Davis
Rob Wright	UHI

Workshop Objectives

- Update Community on HyspIRI Status
- Review recent projects addressing HyspIRI precursor science
- Focus on applications for HyspIRI Data
- Present Technologies, Tools, and Products supporting a HyspIRI Mission
- Explore Domestic and International Partnership Opportunities
- Examine options for a HyspIRI mission

Workshop Overview

Tuesday:

Programmatic Context, Measurement Concepts, Mission Requirements, Advances in HyspIRI Science

Wednesday:

Global and Regional Applications of HyspIRI data, including: volcanology, mineralogy, fires, agriculture, urban development, energy; along with a few talks on ecosystem science and an overview of Japan's HISUI mission

Thursday:

Mission Design and Precursor Activities, Partnership Opportunities, Cool Coastal Science, Lessons Learned from Previous Missions, Requirements Review, Wrap Up

Past HysplRI Science Workshops

Since the Last Workshop

- ROSES 2010 *HyspIRI Preparatory Activities Using Existing Imagery*
- Regular Steering Committee and Science Study Group Teleconferences
- Reports from two Subgroups addressing issues raised in earlier workshop
  - Sun Glint
  - High-Temperature Saturation
- 2 Workshops on Global HyspIRI Products for Climate Science Research
- 2nd HyspIRI Science Symposium on Ecosystem and Climate Data Products
  - May 2011, NASA GSFC
- Summative Briefing to NASA Management
  - November 2010, NASA HQ
  - Continue focused and limited technology maturation
  - Proceed with excellent community interactions and workshops planned
  - Work with ESD across missions on delivery of low-latency data
  - Support Program Office on TRL assessments of critical HyspIRI technologies
- Finalizing Formation of HyspIRI International Science Group

HysplRI Next Steps

Remember what we are:

- A *global* mission providing VSWIR imaging spectrometry (380 to 2500nm) and multispectral day/night thermal imaging in 8 bands at 60m spatial resolution for global lands and waters <50m depth, with a 19-day repeat for the VSWIR and 5-day repeat for the TIR, and ice sheets and open oceans averaged to 1km
- A broad-based Earth System Science mission
- A mission with mature technologies

Work on:

- Cost reduction
- Retiring risk
- Developing precursor scientific opportunities
- Seek partnerships with domestic and international partners for:
  - joint scientific campaigns; calibration/validation; data product development and use; spacecraft; launch
- Work with other NASA missions
- Be Ready!

THANK YOU