HyspIRI:

Enabling the Evolution of Land Imaging with New Approaches and Products

How can HyspIRI strategies meet Sustainable Land Imaging requirements?
8:00-9:00am  Registration/Poster Set-ups/Coffee Service, Foyer

Evolving the HyspIRI Mission and Products [Chair, Elizabeth Middleton, NASA/GFSC] Room W150
9:00-9:15am  Welcome and Overview of Symposium (Elizabeth Middleton, NASA/GSFC)
9:15-9:30am  Status of HyspIRI (Woody Turner, NASA HQ)
9:30-9:45am  NASA’s Evolving Vision for Space (Steve Volz, NASA HQ)
9:45-10:00am Summary: Comprehensive Mission Report, 2008-2013 (Rob Green, JPL)
10:00-10:15am Systems architecture for distributed spacecraft missions (Jacqueline Le Moigne, NASA/GSFC)
10:15-10:30am White Paper Summary: Science Impact, Deploying VSWIR & TIR Instruments on Separate Platforms (Simon Hook, JPL)

10:45-11:00am  Coffee Break/Posters, Foyer

Session 1: HyspIRI’s compatibility with other US Missions and Sustainable Land Imaging, SLI [Chair, Petya Campbell, UMBC] Room W150
11:00-11:15am  SLI for NASA (David Jarrett, NASA HQ)
11:15-11:30am  SLI for USGS (Tim Newman, USGS)
11:30-11:45am  SLI Architecture Study at GSFC (Del Jenstrom/ Jeff Masek, NASA/GSFC)
11:45-12:00pm Landsat 8 (Jim Irons, NASA/GSFC)
12:00-12:15pm CEOS/Essential Climate Variables and SLI (Miguel Roman, NASA/GSFC)
12:15-12:30pm VIIRS and MODIS (Robert Wolfe, NASA/GSFC)
12:30-12:45pm ORCA/PACE and HICO (Carlos Del Castillo, NASA/GSFC)

1:00-2:00pm  BOXED LUNCH, Foyer & Lunch Discussion, Room W120B

Can spectrometers provide Landsat Data Continuity from past to future Missions? [Chair, Steve Ungar, UMBC]

Session 2: Science & Application Studies [Chair, Sustin Ustin, UC Davis] Room W150
2:00-2:15pm Retrieving LUE with Hyperion Globally (Fred Huemmrich, NASA/GSFC)
2:15-2:30pm Retrieving the new fAPARchl Product from Space (Qingyuan Zhang, NASA/GSFC)
2:30-2:45pm Retrieving GPP in Forests and Agriculture (Ben Cheng, NASA/GSFC)
2:45-3:00pm Hyperion Spectrometer Simulation of LDCM Products (David Landis, NASA/GSFC)
3:00-3:15pm Vegetation feature analysis and spectral comparison using the USGS PRISM software (Ray Kokaly, USGS)
3:15-3:30pm Title TBD (Philip Townsend, UW)
3:30-3:45pm Mapping Fire Scars Using Hyperspectral Imagery and Kernel Based Image Analysis (Saurabh Prasad, UH)
3:45-4:00pm *TBD

4:00-4:15pm  Coffee Break/Posters, Foyer

Session 3: Coastal/Aquatic, Public Health, Disasters/Natural Hazards [Jeff Luvall, MSFC] Room W150
4:15-4:30pm Coastal/Aquatic Initiative (Wesley Moses, NRL)
4:30-4:45pm CEOS Disaster Risk Management for Societal Benefit (Stu Frye, NASA/GSFC)
4:45-5:00pm Inland and coastal aquatic remote sensing - international activities (Title TBD, Arnold Dekker, CSIRO)
5:00-5:15pm Decomposition of Hyperspectral data for use in Case 2 environments (Joseph D. Ortiz, Kent State University)
5:15-5:30pm Title TBD (Mike Ramsey)
5:30-5:45pm Health and Air (John Haynes, NASA/HQ)
5:45-6:00pm Volcanoes (Rick Wessels, USGS)

6:00pm  ADJOURN, Day 1

7:00-9:00pm  Dinner/Evening Event in Honor of Susan Ustin, UC Davis (Sir Walter Raleigh Restaurant, Greenbelt, MD)
Day Two: Thursday, June 5

Session 4: New HyspIRI Like Data Sets & Calibration Topics [Chair, Rob Green, JPL]  Room W150
8:30-8:45am HyspIRI Airborne Campaign Overview (Ian McCubbin, NASA/GSFC)
8:45-9:00am Preliminary Products from Spectrometers & TIR @ 30m and 60m (Glenn Hulley, JPL TBD)
9:00-9:15am NEON activities related to HyspIRI airborne campaign (Shelly Petroy, NEON)
9:15-9:30am Products Generation and Atmospheric Correction (David Thompson, JPL)
9:30-9:45am Campaign PI (TBD-Steve U. to confirm)

10:15-10:30am Coffee Break with Demo Presentations, Foyer
GEO-social/API Demo (Pat Cappelaere, Vightel) AND Fast AC Demo (Vuong Ly, NASA/GSFC) Room W120A

Session 5: Calibration Studies [Steve Ungar, NASA/GSFC]  Room W150
10:30-10:45am HyspIRI Airborne (AVIRIS, JPL TBD -Rob Green to confirm talk)
10:45-11:00am Atmospheric corrections (Bo-Cai Gao, Naval Research Lab)
11:00-11:15am Monitoring Hyperion stability and sub-pixel heterogeneity in a pseudo-invariant desert site (Chris Neigh, NASA/GSFC)
11:15-11:30pm Lunar Hyperion & ALI Cals (Lawrence Ong, NASA/GSFC)
11:30-11:45am Landsat-7&8/Hyperion/G-LiHT/CLARREO (Joel McCorkel, NASA/GSFC)
11:45-12:00pm Geo-correction or Geo-corruption (Steve Ungar, NASA/GSFC)

12:15-12:45pm Poster Speed Talks (10 @ 3 min. each)

12:45-1:30pm BOXED LUNCH ($10pp)

Session 6: Intelligent Payload Module [Chair, Dan Mandl, NASA/GSFC]  Room W150
1:30-1:45pm Intelligent Payload Module (PM) Concept Evolution (Dan Mandl, NASA/GSFC)
1:45-2:00pm Prototype and Metrics for Data Processing Chain Components of IPM (Vuong Ly, NASA/GSFC)
2:00-2:15pm On Orbit Experiment for Synthesize Landsat Bands From Hyperion (Steve Chien, TBD-Dan to confirm)
2:15-2:30pm Onboard Atmospheric Correction (FLAASH) (Vuong Ly, NASA/GSFC)
2:30-2:45pm Onboard Data Compression, Geo-Rectification and Co-Registration (Vuong Ly, NASA/GSFC)
2:45-3:00pm CubeSat Onboard Processing (Charles Norton, JPL)
3:00-3:15pm Onboard Product Generation & Vectorization (Pat Cappelaere, Vightel)
Dan to confirm Vuong Ly combined presentations

3:30-3:50pm Coffee Break/Posters, Foyer

Session 7: Ground Data Processing and Distribution [Chair, Pat Cappelaere, Vightel] Room W150
3:50-4:05pm Data Products on Cloud - Update (Vuong Ly, NASA/GSFC)
4:05-4:20pm A Cloud-based Scanning Framework for Analyzing Large Volumes of Hyperspectral Data (Maria T. Patterson, UChicago)
4:35-4:50pm Data Fusion and Compression (Woytek Czara, UMD)
4:50-5:05pm OpenGeoSocial API: Product Discovery/Distribution via Social Networks (Pat Cappelaere, Vightel)
5:05-5:10pm Distributed Disaster Architecture (John Evans, GST)

Preparing for Next Decadal Survey [Chair, TBD-Woody to confirm – possibly Steve Volz]
5:15-5:30pm Presentation: Summary on Decadal Survey Opportunities (TBD/SSG)
5:30-5:45pm Presentation: How HyspIRI Can Compete (Woody Turner, HQ)

5:45-6:00pm Group Discussion

6:00pm ADJOURN, Day 2

Day Three: Friday, June 6
HyspIRI Aquatic Study Group Forum
2nd Annual Forum, Coastal and Aquatic Studies

HASG Forum

8:00-10:00am

**New Studies and Products for Coastal & Aquatic Science with HyspIRI [Chair, Kevin Turpie, UMBC] Room W150**

- 8:00-8:20am Overview Progress Report (Kevin Turpie, UMBC)
- 8:20-8:40am Airborne Campaign: Results, Lesson's Learned, and Outstanding Issues (Heidi Dierssen)
- 8:40-9:00am Airborne hyperspectral instrument PRISM and observations of submerged aquatic (Heidi Dierssen, UCONN)
- 9:00-9:20am Atmospheric Correction over Water (Bo-Cai Gao, Naval Research, Lab)

*Forum Discussion (exit criteria - form clear recommendations for each topic and summarize)*

- 9:20-9:30am Atmospheric Correction Improvements
- 9:30-9:40am Glint Correction
- 9:40-10:00am Calibration, Characterization, and Validation

10:00-10:15am Coffee Break, Foyer

- 10:15-10:30am VSWIR/TIR Instrument Separation
- 10:30-10:45am Alternative Orbits and Platforms
- 10:45-11:00am Coastal Mask Development

11:00-11:40am Further Aquatic Algorithm Development: Efforts and Directions

- Can the HASG expand to support other coastal and inland water RS efforts?
- What resources can be exploited for community algorithm development?
- Will there be funding to support algorithm development?
- How does the community support operational production of Level 3-4 data?

11:40-12:00pm Review Results and Input for Final Report

12:00pm ADJOURN

Spectroscopic (PRISM) Tutorial

9:00-4:00pm Processing Routines in IDL for Spectroscopic Measurements (PRISM) Tutorial (By Invitation Only) [Instructor: Ray F. Kokaly, USGS] Room 120A

- 10:00-10:15am Coffee Break, Foyer
- 12:00-1:00pm BOXED DELI LUNCH ($10pp), Foyer
- 3:00-3:15pm Coffee Break, Foyer
- 4:00pm ADJOURN