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As Aug 7, 2012

Hydrology Applications Joint Mission Tutorial for SMAP with GPM, GRACE-FO & SWOT

Hosted by
USGS National Center
12201 Sunrise Valley Dr. Reston, VA 20192

October 17-18, 2012

This unique joint tutorial will explore the collaborative opportunities for the future use of SMAP, GPM, GRACE Follow-On (FO) and SWOT data with existing satellite observation capabilities. This effort will create a platform for joint mission research, prepare users for future mission data, identify collaborators for pre-launch efforts and identify topics where remote sensing data can help improve operational products used for policy, management and decision-making in water resource management.

Goals of the workshop:

- Identify a large target audience for multi sensor Hydrology data.
- Understanding the needs for soil moisture and other NASA data in various fields of Hydrology
- Merging missions in order to address the broad needs of hydrology and water management
- Identify data models and research where SMAP, GPM, GRACE FO and SWOT can help address climate and hydrology policy questions
- Promote Early Adopter research and collaboration opportunities

DAY 1		Wednesday, October 17, 2012 (Presentations and Break-outs)
8:00am	Registration and Coffee	
8:30am	Jared Entin, NASA HQ (15 min)	Workshop Welcome
8:45am	USGS Representative (VIP) (15 min)	Welcome to USGS
9:00am	Molly Brown, NASA GSFC (10 min)	NASA Applications Requirements and strategy
9:10am	Dara Entekhabi, MIT (15 min)	SMAP Mission Overview
9:25am	Arthur Hou, NASA GSFC (15 min)	GPM Mission overview
9:40am	Matt Rodell, NASA GSFC (15 min)	GRACE Mission overview
9:55am	Doug Alsdorf, Ohio State University (15 min)	SWOT Mission Overview
10:10am	Molly Brown, NASA GSFC (10 min)	Define Joint Tutorial Objectives
Morning Break 10:10am to 10:20am (Please take time to fill out your surveys)		
Part 1: Proposed presentation topics that provide a brief description of anticipated mission products (current and future) and their potential applications to hydrology and water management (15 min per presentation) Speakers have not yet been confirmed		
	Client/User/researcher	Sample Presentation Category
10:20am	Speaker confirmation pending	Hydrology of inland water using SMAP and ICESat-2 data.
10:35am	Speaker confirmation pending	Hydrology, Transnational River Boundaries and SWOT

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10:50am	<i>Speaker confirmation pending</i>	<i>Agricultural yield estimation and satellite estimation of soil moisture (SMAP)</i>
11:05am	<i>Speaker confirmation pending</i>	<i>Drought monitoring with satellite rainfall Estimation (GPM)</i>
11:20am	<i>Speaker confirmation pending</i>	<i>Groundwater Management and GRACE-FO</i>
11:35am	<i>Speaker confirmation pending</i>	<i>Soil moisture state for weather models (SMAP and GRACE-FO)</i>
11:50am	<i>Speaker confirmation pending</i>	<i>Flooding, SMAP Data and GPM</i>
12:05pm	<i>Speaker confirmation pending</i>	<i>Hurricane and tropical storms, using SMAP radar to locate eye and GPM to estimate rain rates</i>
<i>LUNCH from 12:05 to 1:00pm (Poster displayed for discussion from 1:00 to 1:45pm)</i>		
Part 2 Breakout Sessions in four different application groups: (1) Water Management and Hydrology (2) Weather and Extreme events (3) Flooding (4) Drought <ul style="list-style-type: none"> • Charge to the breakout groups <ul style="list-style-type: none"> ○ Identify primary products, institutions, and organizations within application areas that could benefit from satellite observations • Describe research agenda for joint mission work as it applies to Operational Agencies • Identify data challenges and needs (resolution, format, latency, access, etc) • Define next steps forward for each application group. 		
1:45-3:45pm	Break Out Groups-by application interests	
3:45-4:25	<ul style="list-style-type: none"> • 5-10 minute informal (no presentation) summaries from each breakout group lead • Comments and questions open to all attendees 	
4:20pm	Transition remarks for Day 2-Brad Doorn	
4:30pm	Day 1 Adjourn	
DAY 2 Thursday, October 18, 2012		
(Description of instrument measurements followed by panel discussions)		
8:00am	Registration and Coffee	
8:30am	Vanessa Escobar, NASA GSFC	Welcome to Day 2 Introduction SMAP Early Adopters and Program <i>(15 min)</i>
8:45am	Barry Weiss, JPL	SMAP Data Products and the DAAC <i>(40 min)</i>
9:20am	George Huffman, GSFC	GPM Products <i>(20 min)</i>
9:40am	Felix Lenner, JPL	GRACE FO Products <i>(20 min)</i>
10:00am	Philip Callahan, JPL	SWOT Proposed Products <i>(15 min)</i>
10:15am	Q&A Panel between Data Reps and Attendees <i>(25 min)</i>	
<i>Morning Break 10:20am to 10:40am (Please take time to fill out your surveys)</i>		
10:40am	Vanessa Escobar, NASA GSFC	Introduction to SMAP Early Adopters Panel
10:50am-12:00pm	Early Adopter Panel <ul style="list-style-type: none"> • (8-10min overview of each EA research followed by open discussion with attendees) 	
<i>LUNCH from 12:00 to 1:00pm (Poster displayed for discussion from 1:00 to 1:45pm)</i>		

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Proposed Afternoon Discussion: Synergistic Efforts. Presentations to be given by users and potential users to help expand joint uses of potential products. <i>(15 min)</i>		
1:45pm	Gary McWilliams, SMAP EA with DoD	Military mobility using SMAP data
2:00pm	<i>Speaker confirmation pending</i>	SMAP, GPM and SWOT-Drought monitoring
2:15pm	Ed Beighley (FM Global, Insurance)	GRACE, SMAP and SWOT, Flooding and Insurance
2:30pm	Arthur Hou, GSFC	Using SMAP land emissivity for GPM precipitation retrievals over land
2:45pm	Q&A Panel Discussion-Identify opportunities and next steps forward. <i>(45 min)</i>	
3:30pm	Brad Doorn, NASA HQ	Concluding comments Final questions from Attendees for NASA HQ
3:45pm	TUTORIAL ADJOURNED <i>Please remember to turn in your survey!</i> <i>Thank you for your attention</i>	