

Workshop to Develop a Portfolio of Low Latency Datasets for Time-Sensitive Applications

27-29 September 2016

Langley Research Center, Hampton VA

Time-sensitive remote sensing data are designed to meet the needs of decision makers who can rapidly interpret and integrate the information to guide actions more accurately and consistently. Low latency, or near-real time satellite data, contribute to activities that deliver societal benefits including disaster risk, resilience, food security and sustainable agriculture, water and energy resource management, and ecosystem sustainability. NASA has expertise, research, observational infrastructure and partnerships to capture, process and deliver low-latency data sets, but the extent of these assets are not fully mobilized. By articulating the urgent science-informed decision making enabled by rapid response using low-latency satellite data, NASA and the stakeholder communities will be able to target resources to improve research results, advance application science, optimize data production, and guide technology development.

The goals of the workshop are:

1. Describe and characterize the existing NASA low-latency data portfolio in Earth science;
2. Determine what near real time datasets we could have in the coming decade, what is needed by the community and the process required to provide these datasets;
3. Articulate the key underlying science questions that are answered with low latency remote sensing data; and
4. Articulate the issues and challenges of near-real time data acquisition and management.

Expected Workshop Outcomes:

- *Development of a portfolio for existing NASA NRT datasets and associated data products and infrastructure;*
- *Identification of significant NRT shortfalls and opportunities for research and application science that would improve results; and*
- *Establish a community of practice and stakeholders to continue planning and coordination actions to increase and accelerate the use and utility of NRT data and target resources to address shortfalls and opportunities.*

**Tuesday, September 27, 2016
NASA Langley Reid Center Conference Room**

8:00am	Registration & Check-in	
	Speaker	Topic
9:00am	Molly Brown and/or Diane Davies	Welcome to Workshop Goals and objectives for meeting Day 1 – focus on data producers
9:10am	Michael Freilich, NASA HQ, (Remote presentation)	Charge of the workshop and NASA Earth Science priorities
9:40am	David Green, NASA Applied Science Program, NASA Headquarters	Disasters and the application science need for NRT data

10:00am	Christine Bonnicksen, NASA Headquarters	NASA HQ perspective on support for NRT data production
10:25am	Kevin Murphy, NASA Headquarters	Increasing the utility of NASA's NRT data portfolio
10:50am	Chris Justice, UMD, LANCE User Working Group Chair	LANCE NRT data and the role of UWG and key end users
11:10am	Coffee break	
11:30am	Pat Coronado /Kelvin Brentzel, Direct Readout Laboratory, NASA GSFC	Direct Readout Laboratory and their provision of NRT data
11:50am	Will Stefanov, Associate ISS Program Scientist for Earth Observations, NASA JSC	Overview of the Near-Real Time Data Potential of the International Space Station
12:10pm	Alex Fore, JPL	RapidScat
12:20 pm	Don Sullivan and Jay Al-Saadi, NASA	NRT from field campaigns
12:40pm	Ryan Boller, NASA GSFC	The Common Metadata Repository, the Earthdata Search Client and Worldview: ESDIS tools that could be leveraged towards a NRT Portal.
1:00pm	Lunch Break	
Lightning talks of products proposed to be included in LANCE		
2:00pm	Michael Goodman, NASA MSFC	NRT Lightning Imaging Sensor (LIS) from the ISS.
2:10pm	Dan Ziskin, NCAR - Atmospheric Chemistry Observations & Modeling Laboratory	Measurement of Pollution in the Troposphere (MOPITT) NRT.
2:20pm	Molly Brown	Introduction of breakout group topics, objectives and directions
2:30pm	<p>Portfolio development and gap identification for NRT data products, and discussion of NRT science questions.</p> <p>Outcomes:</p> <ul style="list-style-type: none"> ➤ Each group should review the NRT portfolio, and discuss the challenges, opportunities, data availability, and data needs for each application area ➤ Each group must report at least two conclusions from the breakout group in a single PowerPoint slide <p>LANCE user working group in parallel session.</p>	
4:30pm	Reports back from groups (5 minutes each)	Designated reporter from each group with 1 PowerPoint slide
5:20pm	Open Discussion	
6:00pm	Molly Brown	Conclusions, start time on Day 2, and invitation to Social
6:05pm	NRT Social and Poster Session at Cafeteria area	

Wednesday, September 28, 2016

8:00am	Coffee, Registration & Check-in	
	Speaker	Topic
8:30am	Molly and/or Diane	Welcome to Day 2 – Focus on Sectors Goals and objectives for Day 2. Paired NRT data producers and users in different sectors
8:40am	Lawrence Friedl, NASA HQ	Applications perspectives
9:00am	Brenda Jones, USGS	Hazards Data Distribution System / NRT Landsat
9:20am	Stuart Frye, NASA, GSFC	NRT data for CEOS and GEO
9:40am	Mike Little, NASA HQ	Advances in technology: improving delivery and accessibility of NASA’s NRT data
10:00am	Ana Prados, UMBC	NASA Applied Remote Sensing Training (ASRET): Building Capacity to access and use NASA NRT products
10:10am	Coffee break	
10:40am	Bob Tetrault US-FAS and Chris Justice, UMD/ GEOGlam	Agricultural and Drought Monitoring
10:50am	Brad Zavodsky, NASA SPoRT and Michael Folmer, NWS Weather Prediction Center	Use of Satellite Data within Weather Decision support systems
11:00am	Wilfrid Schroeder, UMD and Brad Quayle USFS RSAC	Fire data and users
11:20am	Dave Winker, NASA LARC and Kim Richardson, NRL	CALIOP- derived NRT aerosols applied in NRL NRT data products
11:40am	Doreen Neil / Jim Szykman, LARC and EPA or NOAA end user	NRT data for global air quality monitoring.
12:00pm	Patrick Minnis, NASA LaRC	NRT of NASA Langley Satellite Imager-Based Cloud Property and Clear Sky Temperature Retrieval Datasets
12:20pm	Lunch Break	
1:20pm	Ryan Boller, NASA GSFC	NRT Portal
1:40pm	Molly Brown - Introduction to breakout groups	
1:50pm	Portfolio development and gap identification for NRT data products	
	<p>Outcomes:</p> <ul style="list-style-type: none"> ➤ Each group should review the NRT portfolio, and create a list of data used, data gaps, future data needs, and science questions behind each applications area ➤ Each group must report at least two conclusions from the breakout group. 	
4:20pm	Reports back from groups (5 minutes each)	Designated reporter from each group with 1 PowerPoint slide
5:10pm	Open Discussion, Moderated by David Green, NASA HQ	
5:50pm	Adjourn for the day	

Thursday, September 29, 2016

Thursday, September 29, 2016		
8:00am	Coffee	
	Speaker	Topic
8:30am	Molly and/or Diane	Welcome to Day 3 – Goals and objectives for third day of the meeting
8:40am	William Blackwell, MIT Lincoln Labs	Cubesats and related technologies and mission opportunities for low latency data
9:00am	Questions and discussion	
9:10am	Christopher Lippitt, University of New Mexico	NRT data and Earth Science priorities
9:30am	Questions and discussion	
10:10am	Coffee break	
10:30am	Molly Brown	Overview of results from breakout groups on days 1 and 2
10:40am	Panel Discussion – objectives are to discuss the scientific, programmatic and practical consequences of the NRT portfolio, and ways we can continue to ensure NRT data is available in the coming decade. Chair: TBD Participants: David Green, Chris Justice, Kevin Murphy, Michael Goodman	
12:50pm	Sandra Cauffman, NASA HQ	Closing Remarks
1:00pm	Adjourn	