



SPoRT Quarterly
January – March 2014

The SPoRT REPORT

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Short-term Prediction Research and Transition (SPoRT) Center
NASA Marshall Space Flight Center (MSFC), Huntsville, AL
<http://weather.msfc.nasa.gov/sport/>

The SPoRT Center is a NASA- and NOAA-funded project to transition unique observations and research capabilities to the operational community to improve short-term weather forecasts on a regional scale. While the direct beneficiaries of these activities are selected Weather Forecast Offices (WFOs) and National Centers, the research leading to the transitional activities benefits the broader scientific community.

Quarterly Highlights

The Transition of SPoRT Satellite Products to AWIPS II

With the transition of several partner WFOs to AWIPS II, SPoRT has taken advantage of a baselined plug-in within AWIPS II called Regionalsat to continue the distribution of SPoRT-sponsored products. The benefits of utilizing this baselined plug-in includes its availability throughout the NWS, support by the AWIPS II development contractor, and no need for a test authorization, which is required for offices to use third-party plug-ins. The Regionalsat plug-in is able to ingest

legacy AWIPS I files with only slight modifications required to the data format. These changes are transparent to AWIPS I, allowing SPoRT to deliver the same data files to both AWIPS I and AWIPS II. This avoids the need for two separate datasets flowing through the SPoRT LDM feed and minimizes bandwidth issues.

SPoRT satellite data are ingested as netCDF files but model data including Land Information System fields and

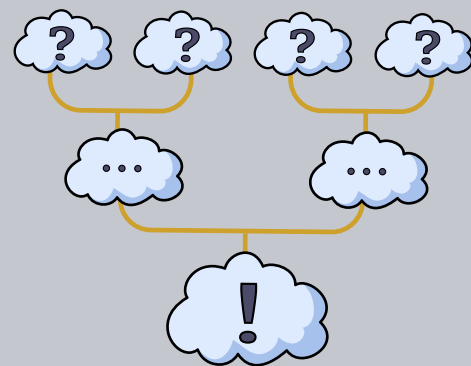
the proxy GOES-R Convective Initiation product are converted to gridded binary (i.e., GRIB2) format. AWIPS II easily handles these GRIB2 products and they are viewed from within the AWIPS II Volume Browser. The WFO Huntsville serves an important testbed role in this development process by helping to determine and document the necessary configuration changes for optimum usability.

Table 1. SPoRT Products Available in AWIPS II

Product	Format	Domain(s)
MODIS and VIIRS Single Channel Suite (LW IR, SW IR, Vis, WV, Day-Night Band (DNB), Fog)	netCDF	CONUS
MODIS & VIIRS RGB Suite (Air Mass, DNB/IR, Dust, NtMicro, Snow/Cloud, True Color)	netCDF	CONUS & Alaska
SPoRT Sea Surface Temperature (SST) and Latency	netCDF	Pacific & Atlantic basins
GOES Sounder (CIRA Air Mass RGB)	netCDF	CONUS
CIRA Layered Precipitable Water (LPW)	netCDF	East Pacific to Africa
NESDIS Quantitative Precipitation Estimate (QPE)	netCDF	CONUS, Alaska, Hawaii, Puerto Rico
GOES-R Convective Initiation (CI)	GRIB2	GOES-East & GOES-West
NASA Land Information System (LIS)	GRIB2	CONUS

2014

Virtual Workshop



About once a year, NASA SPoRT hosts a virtual workshop as a means for forecasters to share their experiences and applications of unique NASA and NOAA satellite and research data sets with the rest of the operational and research meteorological community. Importantly, this provides researchers the opportunity to learn about product utility and identify potential areas for future improvements. In the past, this collaborative effort has allowed researchers and product developers the ability to identify specific areas of needed improvement, from product design to application training. Similarly, operational forecasters are provided valuable feedback from researchers and other fellow forecasters, highlighting other potential applications and future changes and availability. The workshop has proved to be a great environment for fostering communication among researchers, product developers, and the operational community.

Based on the abstracts received, the workshop was grouped into three main sessions: Total Lightning, NASA Land Information System (LIS) and Modeling, and Satellite. With collaborators attending across the CONUS and even outside the CONUS (from Puerto Rico to Alaska), the workshop literally spanned seven time zones. NWS offices from 20 locations attended the event, which included newcomers to the SPoRT collaborative partnership, and other offices with interests in SPoRT-NWS activities. Representatives from each NWS region attended the event (with the exception of Pacific Region) as well as those from National Centers. Members of the research community also attended, including those from the JPSS and GOES-R Proving Grounds.

Opening remarks were made by SPoRT Principal Investigator Gary Jedlovec, before the Total Lightning Session kicked off the workshop. A presentation from the Huntsville NWS office began the session, followed by a presentation by the Morristown NWS office. These presentations highlighted the use of total lightning data sets for situational awareness and decision support services. Dr. Geoffrey Stano of the SPoRT program gave a short presentation about current and future total lightning activities. These presentations were followed by case studies utilizing total lightning at the Aviation Weather Center (AWC) and the NWS Cheyenne office.

Following a mid-day break, the LIS/Modeling Session began with a presentation from the NWS Houston/Galveston office, detailing their use of SPoRT MET scripts to assess the effectiveness of different physics schemes with a heavy rainfall event over the Houston metro. The Houston and Mobile offices are strong partners in the collaborative modeling effort with SPoRT. Kris White, in the Applications Integration Meteorologist role, provided an update on LIS activities, announcing the implementation of LIS in AWIPS II and detailing upcoming LIS training and operational utility of LIS at NWS Huntsville.

The Satellite Session started with a quick presentation by SPoRT's Matt Smith about the status of SPoRT product implementation in AWIPS II. This session was comprised of several interesting talks, which detailed various uses of Red, Green, Blue (RGB) and other multi-spectral VIIRS and MODIS products in particular for operational purposes. The use of VIIRS/MODIS Nighttime Microphysics (NtMicro

imagery to help validate overnight fog development was presented by Alannah Irwin of Florida International University and Jeral Estupiñán of NWS Miami. NWS Great Falls shared a unique use of VIIRS/MODIS imagery to help diagnose low-topped precipitation events in areas where lower elevation radar coverage is lacking. The final two talks from NWS offices in Tucson and Albuquerque detailed the use of RGB imagery, especially SPoRT's Dust RGB and Natural Color composites to detect dust events and aid in air quality products and services.

The final part of the workshop involved discussions between members of SPoRT and our NWS partners with a focus on the nature of our collaborations. Overall, our NWS partners expressed pleasure with the collaborative process. However, they desired more training and specific examples involving operational applications of some of the new RGB imagery in particular. Given that these products will be readily available in AWIPS II in the GOES-R era, SPoRT is undertaking the task of developing future training modules and an inventory of examples to be used by our operational collaborators.

All of the presentations from the 2014 Virtual Workshop are available from the Library menu section of the SPoRT web site at <http://weather.msfc.nasa.gov/sport/workshops/>. We greatly appreciate the efforts of the presenters for this year's workshop and the lively discussion from all of the attendees. We look forward to the next workshop, slated perhaps for later this year.

Recent Accomplishments

Product Training

MODIS and VIIRS RGB Imagery

Both MODIS and VIIRS have the channels required for multi-channel, composite imagery (i.e., RGB) and these instruments provide frequent, high-resolution imagery of high-latitude areas such as the Pacific Northwest and Alaska. The NtMicro RGB was the focus of a Southern Region WFO assessment in the fall of 2013, and a training module had been developed for this region to prepare users. The training demonstrated the value of the NtMicro product to differentiate cloud types as well as low cloud from fog. Similarly, forecasters at high latitudes were provided a separate training module that presents the application of the product near McCarthy, Alaska. The 17-minute, self-paced, web module demonstrates the SPoRT Hybrid 11–3.9 μ m imagery product (i.e., “fog” product), which combines geostationary and polar-orbiting instruments and provides a much clearer image than the geostationary alone. The training focuses on comparing the MODIS and VIIRS NtMicro RGB with this traditional “fog” imagery, but it also introduces the VIIRS Day-Night Band (DNB) RGB as a product to analyze cloud structures at night similar to visible imagery applications during daytime. The module is located on SPoRT’s training Web page and will be available on the NOAA Learning Management System.

NASA LIS Modules

The NASA LIS configured by SPoRT for real-time production is a capability unfamiliar to many NWS forecasters and hydrologists. A primer on the LIS, its structure, and the datasets that drive its output has been developed by SPoRT and reviewed by Lance Wood of the Houston/Galveston WFO. In the module, the learner is presented with how the LIS incorporates static fields (i.e., soil and vegetation classifications), satellite-derived datasets such as the MODIS Green Vegetation Fraction and precipitation estimates from radar and gauges, and atmospheric forcing from model analyses to produce simulated soil fields and heat fluxes. Select LIS sub-surface and surface output fields are defined and highlighted with specific examples. In addition, a separate training module on the application of LIS for monitoring drought and analyzing flood potential is currently being developed. Both efforts are being done in preparation for an upcoming assessment of LIS this summer by operational users at WFOs Houston, Raleigh, and possibly Huntsville and select RFCs. These offices will use AWIPS II to view LIS output with their existing datasets, as no plug-in is required for visualizing LIS in AWIPS II. Feedback from this initial LIS assessment will serve to improve the real-time LIS and/or offer possible new applications of LIS not previously considered.

De Soto National Forest Staff using NASA/SPoRT data via Google Earth

The De Soto National Forest in southern Mississippi performs about 100,000 acres of prescribed burning per burn season in their district. In the past ten years they have had several low-visibility events potentially related to smoke particulates from burn activities. The increased number of particles in the air can lead to enhanced fog development in some cases. Their need is to be able to monitor the occurrence and extent of fog events during the burn season. SPoRT WFO partners in Mobile and Slidell have a similar need for aviation/public forecasts, and in fact, the De Soto staff has met annually with these WFOs to coordinate burn plans for the season. SPoRT and the WFOs have been evaluating new RGB imagery products related to identifying fog. These same products and their associated training were introduced to the De Soto users and access to these products was provided via KML files for display in Google Earth. Feedback from foresters indicated that the KML files allowed for the type of analysis they require and the products are serving their needs.

Satellite Proving Ground Activities

Visiting Scientist Activities

One of SPoRT’s visiting scientist activities focuses on expanding collaborations with ground-based lightning mapping array owners to transition their data to operational forecasters. The sponsored trips were aimed at preparing forecasters for an expanded suite of total lightning products from the addition of the Houston, Colorado, and Langmuir Lab (New Mexico) lightning mapping arrays, helping them integrate the data into AWIPS, and preparing these new users of total lightning data for an upcoming evaluation. The new users include several Center

Weather Service Units (CWSUs) who are focused on aviation needs and concerns and directly support FAA operators. SPoRT looks forward to a strong collaboration with our new total lightning partners similar to what exists now with the current partners. A focused evaluation is planned for mid-May.

Paul Nutter (Great Falls) and Brian Guyer (Albuquerque) both recently traveled to SPoRT under the GOES-R visiting scientist program. The goal of each visit was to develop a draft version of two articles to be submitted jointly with SPoRT on

their respective WFO application of RGB imagery from MODIS and VIIRS. The peer-reviewed publications will explain the processing and integration of these RGB products and articulate their impact on forecast issues. Paul has identified the use of the NtMicro RGB product to analyze low-level precipitating clouds that are away from radar sites and therefore below the lowest tilt. Brian has applied Dust RGB imagery to more efficiently analyze small-scale blowing dust events during the day, and then to continue tracking the plume at night when IR and visible imagery are less effective. These

Satellite Proving Ground Activities *continued*

products, which are currently used on an experimental basis at these WFOs, will be routinely available from the Advanced Baseline Imager (ABI) on GOES-R.

JPSS Proving Ground

SPoRT continues to provide VIIRS and MODIS data to WFO partners and several National Centers in the form of single-channel and RGB products, as well as Geostationary/Polar-orbiting Hybrids to support product evaluation. This includes delivering products to a few

WFOs who have already transitioned to AWIPS II. The Huntsville WFO — now on AWIPS II — is receiving VIIRS and other products just as they did with AWIPS. SPoRT plans to migrate products to 6–7 partner WFOs (AWIPS II) in the coming quarter. For Alaska, this product generation and delivery is accomplished using Virtual Machines (VM) provided by the Geographic Information Network of Alaska (GINA) at the University of Alaska Fairbanks. The data are downlinked and processed locally at GINA, greatly reducing product latency. This approach

will be considered for product generation and dissemination to Pacific Region forecasters later this year. An assessment titled “RGB Imagery for Aviation and Cloud Analysis” was performed with WFOs in Alaska and the Western Region and was completed in February. Both products proved very popular with the forecasters who made an effort to learn and utilize them. Forecast feedback on the utility of these products are partially described in the assessment section of this quarterly report and will be detailed in various upcoming assessment reports.

Assessments

Summary of Assessments

As part of the transition from research to operations, SPoRT conducts assessments of new and experimental products to understand their impact on NWS forecast operations. Products to be evaluated by end users are from within SPoRT projects or collaborations with external partners. The evaluation paradigm first matches a product with a high-priority forecast challenge that can be improved through the transition of this product. Then a specific time period is identified for the assessment corresponding with when the forecast challenge is most active or at its greatest impact. The table below summarizes components of the assessments started over the last year.

NESDIS Snowfall Rate

From January 6 through April 14, 2014, SPoRT collaborated with the NOAA/National Environmental Satellite Data and Information Service (NESDIS)/Satellite Applications and Research (STAR) team to assess unique passive microwave snowfall rate (SFR) products from NOAA Microwave Humidity Sounder (MHS) and METOP Advanced Microwave Sounding Unit (AMSU) to select NWS partner offices. Forecasters at Albuquerque, Burlington, Charleston, Sterling, and the NCEP Satellite Analysis Branch (SAB) participated in the three-month assessment. The SFR products are able to detect falling snow within clouds and

supplement traditional visible and infrared satellite imagery by providing information about where snow is falling from clouds detected in these images. Also, the SFR product supplements ground-based radar data by providing information about what is snow versus what is rain and fills in gaps in radar coverage due to issues with terrain or distance from radar. Overall, the assessment concluded that there was utility in the real-time products but that additional algorithm development is needed to improve upon detection of light snow, which tended to be underrepresented in the SFR product. Light snow detection, addition of a snowfall time lag rate, and fusion with ground-based radar are some of the improvements planned for the product based on the outcome of this assessment. Follow-on SFR products are planned for evaluation from Advanced Technology Microwave Sounder (ATMS) aboard S-NPP and the microwave imager aboard GPM in subsequent years. Completed assessment reports will be available on the SPoRT web site.

RGB Imagery for Aviation Hazards and Cloud Analysis

RGB Imagery from MODIS and VIIRS combines multiple channels into a color composite that relates to the physical, phase, and thermal characteristics of clouds and hence provides a single product that can increase the operational efficiency of analyzing potential

aviation hazards (i.e., low ceilings and/or visibility) and cloud types. Users from WFOs Medford, Juneau, and Anchorage assessed the value of the NtMicro RGB product for its impact on aviation forecasts and its ability to differentiate cloud types, such as fog from low clouds. Officially, 27 online forms had been submitted by early February with WFO Medford strongly participating with 15 submissions. Of the 27 responses, 17 said that the product had “Large” to “Very Large” impact on aviation forecasts. There were seven events where users indicated the product noticeably allowed forecasters to differentiate fog from low clouds. Most forecasters (21) used this as their primary product, but some favored the traditional 11–3.9 μ m while on four occasions the VIIRS DNB RGB had significant impact. At the same time, coastal WFOs in the southeast were evaluating these same products with SPoRT in order to monitor coastal and sea fog events. While passes of MODIS and VIIRS are less frequent for low-latitude users, both groups are gaining experience with the NtMicro RGB imagery as a future GOES-R capability. Completed assessment reports will be available on the SPoRT web site.

Product Assessments CY 2014

Name	Products	WFO/National Center	Date	Description	Report ¹
Aviation and Cloud – SR Coastal	VIIRS DNB and NtMicro RGBs	CRP, HGX, LIX, MFL, MLB, MOB	Dec '13–Jan	Utility of cloud analysis products, with training in RGBs, applied to aviation hazards of low ceiling and visibility at night. Marine fog/stratus issues.	May 2014
Aviation and Cloud – High Latitudes	VIIRS DNB and NtMicro RGBs	AAWU, AFC, AFG, AJK, APRFC, TFX, MFR	Dec '13–Jan	Utility of cloud analysis products, with training in RGBs, applied to aviation hazards of low ceiling and visibility at night. Remote areas with fog and low clouds are a focus. Dec '13–Jan	May 2014
NESDIS Snowfall Rate	NESDIS Snowfall Rate	BTV, LWX, RLX, ABQ, SAB	Jan–Mar	Assessing microwave-based snowfall rate product in operations	May 2014
NCWCP and NHC Winter Demo ²	Air Mass RGB (SEVIRI), AIRS Total Ozone, Hybrid Imagery	WPC, TAFB, OPC, SAB	Jan–Apr	Demonstrate GOES-R and JPSS products in pre-operations environment within operations centers	GOES-R PG
HWT Spring Exp ²	UAH GOES-R CI, PGLM, tracking tool (AWIPS II)	NSSL/HWT	May–Jun	Testing and assessing products in a warning testbed environment	HWT
OPG Tracking Tool ²	Tracking tool (AWIPS II)	Operations PG	May 12–16	Broad WFO evaluation of Tracking Tool for operational use in total lightning and other trend applications	OPG
Total Lightning	Source Density, Flash Extent Density	CWSUs, ABQ, BOU, CYS, HGX HUN, OHX, OHX, MRX, MLB, SMG and SPC	May–Jul	Several new networks and users groups testing TL applications and cross collaborating. Emphasis is on incident/safety and aviation weather supports, and severe weather use.	Sept 2014
AWC Summer Exp ²	UAH GOES-R CI, PGLM mosaic	AWC	Aug	Evaluate aviation applications of products in a testbed environment	GOES-R PG
Drought/ Local Flooding	LIS and soil moisture	WFOs HOU, RAH	Jul–Sep	Use of LIS output to improve awareness of drought at sub-county scales as well as potential for flooding given antecedent soil moisture and forecasted precipitation.	Dec 2014
QPE in Pacific Region	NESDIS QPE	WFOs Hawaii, Guam	TBD	Assess value of remotely sensed QPE in data void regions and impact to forecasts and warnings	TBD

¹ Status and anticipated completion date for assessment report

² Not a SPoRT-led assessment

Blog Summary

The SPoRT blog received over 3,400 views during the first quarter of 2014, pushing the total number of views to over 56,000 since the blog's inception. During this quarter, we gained three new authors, representing such varied locations as GINA, SAB, and the NWS office in Charleston. We received a number of excellent posts from these new contributors and are glad to have them in our growing family of collaborators!

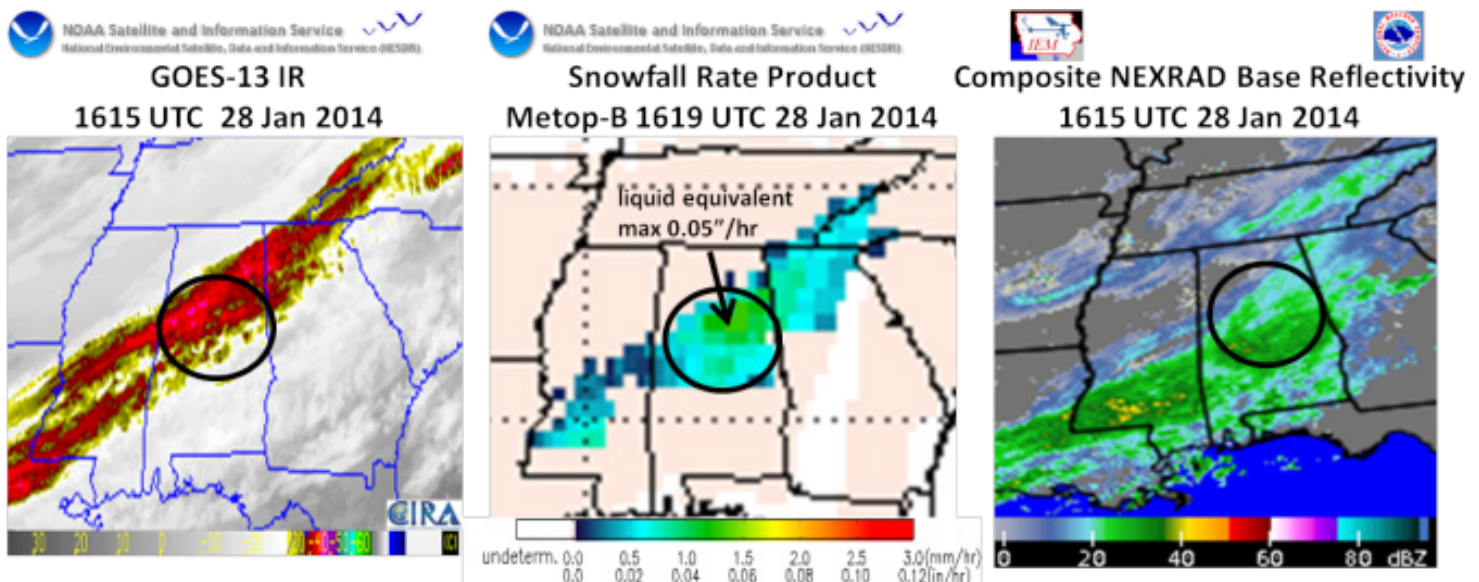
Posts during the month of January — incidentally the month with the most posts (14) — varied widely in scope, although a number of these expectedly dealt with winter weather phenomena. Several involved the evaluation of a new product: the NESDIS SFR, which is being transitioned by SPoRT and evaluated by a few NWS offices. Posts have detailed some successes and failures of the product during the evaluation.

Nevertheless, feedback from operational users is an important part of the process for product developers and posts relating this information can be valuable.

Two posts by SPoRT's own Kevin Fuell in the month of March were among the most views during the quarter. These posts detailed the use of the VIIRS and MODIS Dust RGB product to show dust storms sweeping across the southern high plains. These dust storms have been the focus of much attention in this region lately. The Dust RGB product should continue to be especially useful to NWS forecasters and other customers as long as the intense drought conditions there linger. Long-time blog author and SPoRT collaborator Michael Folmer also contributed a couple of well-viewed posts. The strong storm off the coast of California was the subject of one of these posts, "Is that a hurricane off of California?" Well, of course, it wasn't

a hurricane. But Michael showed great use of several products, including Air Mass RGB (MODIS and GOES-Sounder), and AIRS Total Column Ozone and Ozone Anomaly products to analyze aspects of this storm.

While we can't mention all posts made during the quarter, the SPoRT team is very appreciative of the efforts of our collaborative authors. We were very happy to add new authors and offices to our family this last quarter and look forward to more engaging posts in the future. Please visit the Wide World of SPoRT blog to see these and other posts when you can (<http://nasasport.wordpress.com>). If you would like privileges to post on the SPoRT blog, please send an e-mail to Kris White (kris.white@noaa.gov). Thanks, and we hope you'll keep reading!



GOES IR (left) and Composite NEXRAD Base Reflectivity (right) at approximately 1615 UTC 28 January 2014, with NESDIS Snowfall Rate Product 1619 UTC 28 January 2014 (center). Image created by blog author skusselson.

Publications and Presentations

AMS Summary

94rd AMS Annual Meeting Atlanta, GA, February 2-6, 2014

- Impact of the Assimilation of Hyperspectral Infrared Retrieved Profiles on Advanced Weather and Research Model Simulations of a Non-Convective Wind Event (Berndt, E. B., B. T. Zavodsky, G. J. Jedlovec; N. J. Elmer)
- The Transition of Atmospheric Infrared Sounder Total Ozone Products to Operations (Berndt, E. B., B. T. Zavodsky, G. J. Jedlovec)
- Bias Correction for Assimilation of Retrieved AIRS Profiles of Temperature and Humidity (Blankenship, C. B., B. T. Zavodsky, W. J. Blackwell)
- Assimilation of SMOS Soil Moisture Retrievals in the Land Information System (Blankenship, C. B., B. T. Zavodsky, J. L. Case)
- AWIPS II Application Development, a SPoRT Perspective (Burks, J. E., M. Smith, K. M. McGrath)
- Development of WMS Capabilities to Support NASA Disasters Applications / App Development (Burks, J. E., A. L. Molthan, K. M. McGrath)
- Lightning Tracking Tool for Assessment of Total Cloud Lightning within AWIPS II (Burks, J. E., G. T. Stano, K. Sperow)
- Toward improved land surface initialization in support of regional WRF forecasts at the Kenya Meteorological Service (Case, J. L., J. Mungai, V. Sakwa, E. Kabuchanga, B. T. Zavodsky, A. S. Limaye)
- Expansion of the real-time SPoRT-Land Information System for NOAA/National Weather Service situational awareness and local modeling applications (Case, J. L., K. D. White)
- Using Satellite Imagery to Identify Tornado Damage Tracks and Recovery from the 27 April 2011 Severe Weather Outbreak (Cole, T. A., A. L. Molthan, J. E. Burks, J. R. Bell)
- Identifying Hail Signatures in Satellite Imagery from the 9-10 August 2011 Severe Weather Event (Dyden, R. L., A. L. Molthan, T. A. Cole, J. R. Bell)
- Impacts of Microphysics and Planetary Boundary Layer Physics on Model Simulations of U.S. Deep South Summer Convection (McCaul, Jr., E. W., J. L. Case, B. T. Zavodsky, J. Srikishen, J. M. Medlin, L. Wood)
- Use of NASA near Real-Time and Archived Satellite Data to Support Disaster Assessment (McGrath, K. M., A. L. Molthan, J. E. Burks)
- Applications of Satellite Remote Sensing for Response to and Recovery from Meteorological Disasters (Molthan, A. L., J. E. Burks, K. M. McGrath, J. P. Camp, D. Leonardo, J. R. Bell)
- The Experimental Regional Ensemble Forecast System: Its Use in NWS Forecast Operations and Preliminary Verification (Reynolds, D., W. Rasch, D. Kozlowski, J. Burks, B. T. Zavodsky, L. Bernardet, I. Jankov, S. Albers)
- Using the SPoRT LEO/Geo Hybrid Product in OCONUS Forecasting (Smith, M. R., K. K. Fuell, J. A. Nelson Jr., M. Lawson)
- Development and implementation of dynamic scripts to support local model verification at NWS WFOs (Zavodsky, B. T., J. L. Case, J. H. Gotway, K. D. White, J. M. Medlin, L. Wood, D. B. Radell)

Presentations

- Using the Pseudo-GLM in Warning and Impact-based Decision Support in Preparation for GOES-R (Stano, G. T.). NOAA Satellite Science Week Virtual Meeting 2014.
- High Spatial and Temporal Resolution Satellite-Derived Land and Sea Surface Datasets for Local Operational Forecasting (Case, J. L., B. T. Zavodsky, C. B. Blankenship, K. D. White). NOAA Satellite Science Week Virtual Meeting 2014.

Publications

- Stano, G. T., C. J. Schultz, L. D. Carey, D. R. MacGorman, and K. M. Calhoun, 2014: Total lightning observations and tools for the 20 May 2013 Moore, Oklahoma, tornadic supercell. *J. Operational Meteor.*, 2 (7), 71–88.
- Goodman, S. J., R. J. Blakeslee, W. J. Koshak, D. Mach, J. Bailey, D. Buechler, L. Carey, C. Schultz, M. Bateman, E. McCaul Jr., and G. Stano, 2013: The GOES-R Geostationary Lightning Mapper (GLM). *Atmos. Res.*, 125-126, 34-49.

Seminars

- January 9, James Banks (Wyle and Vanderbilt Center for Environmental Management Studies) - Development of Decision-Support Tools for Transportation Infrastructure Adaptation in Response to Climate-Induced Flood.
- March 17, John Thompson, Vadiza, gave a presentation on “Visualization of Data with Scalable Adaptive Graphics Environment (SAGE)” to the SPoRT team, members of the UAH ITSC, and NASA / MSFC Information Technology personnel.

Visitors

- John Thompson, CEO and Matt Doering, CTO of Vadiza, Inc. visited with MSFC IT and SPoRT personnel to discuss development plans and support for their Scalable Adaptive Graphics Environment (SAGE) used at multiple NASA sites and other research, academic and commercial organizations around the world to manage large flat panel display walls to visualize large scale graphics, 3D images, movies, video conferences and more. SAGE walls can be connected to share information between remote sites for events and meeting to foster and facilitate training, collaboration, modeling & simulation and sharing. This is of particular interest to SPoRT to enhance scientific collaborations not only with other NASA collaborators but with others in the community as well. IT security issues were identified for this desired capability and a go forward plan is being worked to address them.



- Paul Nutter (Great Falls) and Brian Guyer (Albuquerque) traveled to SPoRT under the GOES-R visiting scientist program. The goal of each visit was to develop a draft version of two articles to be submitted jointly with SPoRT on their respective WFO application of RGB imagery from MODIS and VIIRS.

Calendar of Events

- April 1–3, 2014: AWIPS II EPDT Training, Huntsville, AL
- April 9–10, 2014: SMAP Applications Workshop, Boulder, CO
- April 16–18, 2014: NOAA Testbed and Proving Ground Workshop, College Park, MD
- May 5–9, 2014: Pacific Region Visit (VSP), Honolulu, HI
- May 12–16, 2014: STAR/JPSS Annual Science Team Meeting, NCWPC, College Park, MD
- June 2–6, 2014: Satellite Proving Ground and User Readiness Meeting, Kansas City, MO
- July 28–31, 2014: CONUS Proving Ground Meeting, Honolulu, HI
- July 29–August 1, 2014: JPSS OCONUS R2O Interchange Meeting, Honolulu, HI
- July 30, 2014: WRF Regional Climate Tutorial, NCAR, Boulder, CO
- September 22–26, 2014: EUMETSAT Meteorological Satellite Conference, Geneva, Switzerland
- November 18–20, 2014: Suomi-NPP Applications Workshop, Huntsville, AL
- December 15–19, 2014: AGU Fall Meeting, San Francisco, CA

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