

ZP11/Jim Smoot/Weekly Notes

8/12/14

POSTER PRESENTED AT NASA PMM SCIENCE TEAM MEETING (email: timothy.j.lang@nasa.gov / 256-961-7861): Timothy Lang (ZP11) presented a poster during the NASA Precipitation Measurement Missions (PMM) Science Team Meeting, which took place in Baltimore, Maryland, during 8/4-8/14. Titled “The Advanced Microwave Precipitation Radiometer (AMPR) - Initial Results from the Integrated Precipitation Hydrology Experiment (IPHEX),” the poster also featured other ZP personnel as co-authors: Brent Roberts (ZP11) and Anthony Guillory (ZP21). The poster described the successful operation of AMPR during IPHEX, and discussed a new open-source software package written in Python (called PyAMPR) that reads in, analyzes, and displays AMPR data from any project over its nearly 25-year history. This software assisted with the real-time display of AMPR observations during IPHEX, which were unmatched by any other imaging instrument on the NASA ER-2 aircraft during the project. Final quality control of the AMPR dataset from IPHEX is underway.

ZP11 SUMMER INTERN WINS SECOND PLACE IN POSTER COMPETITION (email: timothy.j.lang@nasa.gov / phone: 256-961-7861): Kendall LaRoche, summer intern for Timothy Lang (ZP11) from the University of North Dakota, won second place for his poster that was presented at the MSFC Intern Poster Expo on 8/5/14. The poster was titled "Electrification and Lightning within Pyrocumulus Clouds," and discussed polarimetric weather radar and lightning observations from several pyrocumulus clouds that were observed over wildfires in 2013-2014. The results highlighted how advanced polarimetric radar data and improved lightning network sensitivity are providing unique insights into the development of frozen precipitation and subsequent electrification within these pyro-clouds.

MSFC/SPoRT DISASTERS TEAM NOAA/NWS DAMAGE TOOLKIT WORKSHOP IN HUNTSVILLE (email to andrew.molthan@nasa.gov / 256-961-7474): The MSFC/SPoRT Disasters Team hosted a workshop on future development of the National Oceanic and Atmospheric Administration (NOAA)/National Weather Service (NWS) Damage Assessment Toolkit (DAT) at the NSSTC from 7/29-31/14. The Damage Assessment Toolkit is a handheld smartphone and tablet application that allows NWS meteorologists to perform detailed severe weather damage surveys following tornadoes and other severe weather events. In addition, the DAT includes a web-based interface that allows other local, state, and federal emergency managers to obtain up-to-date information on the storm survey process. As part of a recent three-year ROSES Applied Science: Disasters award, the MSFC/SPoRT Disasters Team has acquired funding to implement NASA, NOAA, and commercial satellite remote sensing products within the DAT to aid in the assessment and survey process. The workshop focused primarily on establishing a “research to operations” transition plan for the inclusion of satellite imagery within the DAT, designed to aid end users while further extending the societal benefits of NASA, NOAA, and commercial satellite imagery. Participants included representatives from the United States Geological Survey/Earth Resources Observations System Disaster Response Team in Sioux Falls, South Dakota, NOAA/NWS Headquarters, NOAA/NWS Southern Region Headquarters, NOAA/NWS Central Region Headquarters, and partnering NOAA/NWS Weather Forecast Offices in Omaha/Valley, NE, Nashville, TN, Huntsville, AL, and Atlanta, GA. At the conclusion of the workshop, a work plan was completed for the first year of activity, and all

participants expressed enthusiasm in working with the MSFC/SPoRT Disasters Team toward execution of the project.

PARTICIPATION IN SUOMI-NPP SCIENCE TEAM ROSES REVIEW PANELS

(email/call: gary.jedlovec@nasa.gov/256-961-7966 or brad.zavodsky@nasa.gov/256-961-7914): Dr. Gary Jedlovec (ZP11) and Mr. Bradley Zavodsky (ZP11) took part in the Suomi-NPP Sounder Science Team ROSES Review Panels on 7/29-30/14. The panel featured proposals aiming to develop standard data products (such as atmospheric temperature, moisture, and pressure profiles, surface temperature, and cloud properties), secondary products and applications of the Advanced Technology Microwave Sounder (ATMS) and Cross-track Infrared Sounder (CrIS) that will extend the NASA climate record started by the legacy Earth Observing System (EOS) Advanced Microwave Sounding Unit-A (AMSU-A) and Atmospheric Infrared Sounder (AIRS). In addition to the Sounder panel, Dr. Jedlovec participated in the Suomi-NPP Science Investigator-led Processing Systems (SIPS) panel on 7/28/14, which featured proposals aiming to serve as centers for computational processing and archiving of standard Earth Science data products developed under the various Science Team proposals.

MSFC DEVELOP STUDENT SUMMER PROJECTS PRESENTED AT NASA HQ (email to: jluvall@nasa.gov/256 961-7886):

MSFC Summer 2014 Digital Earth Virtual Environment and Learning Outreach Project (DEVELOP) students presented posters of two summer projects: Mapping and Modeling the Hot Stuff: Hazard Risk Assessment of Copahue (Chile), and Crops Dropping Like it's Hot! at NASA HQ DEVELOP Showcase on 8/5/14. NASA Administrator Maj. Gen. Charles Frank Bolden Jr. spent over an hour interacting with the students on their projects. This summer's MSFC DEVELOP program hosted seven students from U.S. universities. Virtual posters of the student projects can be found at: <http://www.earthzine.org/2014/08/04/earth-science-serving-society-nasa-develop-summer-2014-virtual-poster-session/>. On 8/6/14, MSFC DEVELOP student Amanda Weigel presented Copahue volcano hazards project to embassy staffs from Chile, Colombia, Brazil, Canada, and Costa Rica at part of the NASA HQ sponsored meeting "GEOSS in the Americas: Earth Observations to Benefit Society". The DEVELOP National Program is a capacity-building internship sponsored by NASA's Applied Sciences Program that provides young professionals and interns the opportunity to learn about NASA Earth Science and the practical applications of Earth observations.