Weekly Report

RAMMB / CIRA
Cooperative Research Program Division (CoRP)
STAR/NESDIS
National Oceanic and Atmospheric Administration (NOAA)

Submitted by: Austin Boone
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Prepared by: RAMMB/CIRA contributors

Products and Applications

TC PRIMED submission agreement finalized: N. Razin and C. Slocum finalized the submission agreement between the NOAA National Centers for Environmental Information (NCEI) and STAR/CIRA for the Tropical Cyclone PRecipitation, Infrared, and Environmental Dataset (TC PRIMED). TC PRIMED provides researchers and applications developers with an artificial-intelligence-ready dataset that collocates disparate sources of data into a singular source. TC PRIMED will improve the time to science for tropical cyclone research and accelerate the development of tropical cyclone satellite applications. The finalized submission agreement marks the start of data ingest at NCEI of TC PRIMED.

(POC: Chris Slocum, STAR, 970-491-2409, Christopher.Slocum@noaa.gov, N. Razin, CIRA, Naufal.Razin@colostate.edu; Funding: PDRA/NCAI/ONR/CSU)

Delivery of software updates for the Operational Wind Speed Probability Algorithm to the National Hurricane Center: Alan Brammer provided annual updates for the operational Wind Speed Probability algorithm to the NHC Technology & Science Branch. Updates included annual retraining of coefficients utilized by the model, as well as code improvements, increased code test coverage and a change to the probability calculations for over land locations to resolve issues raised by NWS regional offices in recent years.
(POC: A. Brammer, alan.brammer@colostate.edu, M. DeMaria, A. Schumacher; Funding: Hurricane Supplemental)

CIRA ProxyVis imagery for Meteosat-11 transitioned to operations at the National Hurricane Center. CIRA ProxyVis imagery for Meteosat-11 (centered at 0 deg East, over the eastern Atlantic) was transitioned to National Hurricane Center (NHC) operations via the NWS TOWR-S ISATSS. ProxyVis uses a combination of IR channels to simulate visible imagery at night and provides enhanced display of low-level clouds over the ocean. Galina Chirokova and Mark DeMaria conducted a survey to determine which version of ProxyVis would work better for the Meteosat-11 satellite. The survey was conducted for forecasters from the NHC, Ocean Prediction Center, and Weather Prediction Center. As a result, the version preferred by forecasters was implemented in the TOWR-S ISATSS. ProxyVis for GOES-16/17 (now 18) has been operational at NHC via ISATSS since 2019. The figure shows a snapshot of Meteosat-11 ProxyVis imagery from the NHC AWIPS2.

(POC: G. Chirokova, Galina.Chirokova@rams.colostate.edu, M. DeMaria, MarkDeMaria@colostate.edu, A. Brammer, Alan.Brammer@colostate.edu, R. DeMaria, Robert.DeMaria@rams.colostate.edu, CIRA, J. Knaff John.Knaff@noaa.gov, NESDIS/STAR ;
Funding: GOES-R, PDRA)

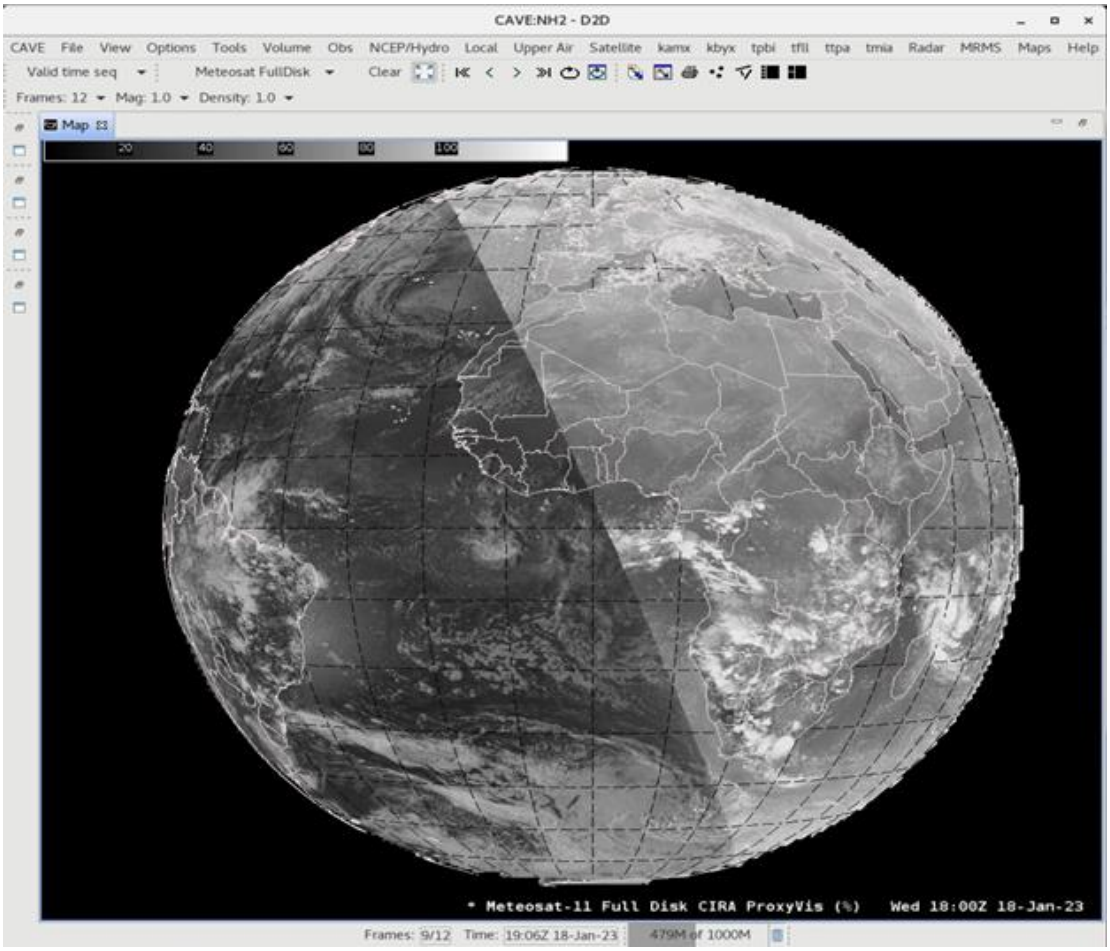

Figure. Snapshot showing Meteosat-11 ProxyVis imagery in NHC's AWIPS2.

Awards and Recognition

Publications (Citation: followed by a short Summary: (Why & so what), & detailed summary):

Citation: Rogers, M.A., S.D. Miller, C.J. Seaman, J. Torres, D. Hillger, E. Szoke, and W.E. Line, 2023: VIIRS after 10 Years—A Perspective on Benefits to Forecasters and End-Users. *Remote Sensing*, **15**(4), p.976, https://doi.org/10.3390/rs15040976.
Summary: This paper highlights a few specific and unique applications of VIIRS Imagery that have been realized since first becoming available with NPP over ten years ago.
Detailed Summary: In the ten years of VIIRS observations, a wide range of applications, both operational and research-based, have been developed, observed, and utilized at the Cooperative Institute for Research in the Atmosphere (CIRA). Training efforts to improve operational forecast use and achieve a greater understanding of the unique capabilities of the VIIRS have also been developed to better utilize the new observations made possible. Several unique forecast events, made observable using these novel capabilities of the VIIRS, are detailed. A summary of third-party end-user case studies where VIIRS observations are used for analysis of significant socioeconomic gain, part of a recent CIRA workshop, are also highlighted. Thoughts on the future utility of the VIIRS and VIIRS-like platforms are offered. (POC: M. Rogers, S. Miller, C. Seaman, J. Torres, D. Hillger, CIRA; B. Line, CoRP/RAMMB; mrogers@colostate.edu; steven.miller@colostate.edu; curtis.seaman@colostate.edu; jorel.torres@colostate.edu; don.hillger@colostate.edu; bill.line@noaa.gov; Funding: JSTAR)

Blog Posts and Social Media

Travel, Workshops, Conferences, and Meeting Reports

Training and Education activities

VISIT teletraining: D. Bikos led the VISIT teletraining session titled "Storm Signatures Observed in Satellite Imagery" on February 13, 2023. The teletraining was attended by 1 attendee at the NWS Northeast River Forecast Center (Boston, MA). Also, on February 15, 2023 D. Bikos led the VISIT teletraining session titled "Integrating GOES into Mesoanalysis". The training session was attended by 1 attendee from the NWS Northeast River Forecast Center (Boston, MA). (POC: D. Bikos, CIRA, Dan.Bikos@colostate.edu) Funding: VISIT / SHyMet

Future Meetings and Events (dates, meeting/event, location, staff involved)

Other