

Weekly Report

CIRA
STAR/NESDIS
National Oceanic and Atmospheric Administration (NOAA)

Submitted by: Maranda Hutson
Date of Submission: 23 May 2025
Prepared by: CIRA and STAR contributors

Products and Applications

New Products on SLIDER: The Day Cloud Phase Microphysics RGB (also known simply as Cloud Phase RGB) was one of the most discussed RGBs at the WMO RGB Workshop in Norrköping, Sweden (1-3 April 2025), in part because it is the only RGB available natively at 500 m resolution from the Flexible Combined Imager (FCI) onboard Meteosat-12. This RGB uses 0.64 μm (blue), 2.25 μm (green) and 1.61 μm (red) to discriminate cloud phase as well as cloud particle size. An example is shown in the figure below. There is also the indication that this RGB is sensitive to surface snow characteristics similar to CIRA's Snowmelt RGB (which is not available from any geostationary satellite). The high-resolution FCI version is also sensitive to fires. (The 2.25 μm channels on ABI [GOES-R Series] and AHI [Himawari-8/9] have 2 km resolution, and are less sensitive to sub-pixel hot spots/fires compared to FCI.) This product is now available for all sectors from GOES-18/19, Himawari-9, and JPSS/VIIRS on SLIDER. (The AMI on GK2A and SEVIRI on Meteosat-9/10 lack the 2.25 μm channel required to produce this RGB.) In addition, the experimental Layer Vapor Transport products (developed at CIRA) are now available on all Full Disk sectors and all JPSS sectors on SLIDER. Layer Vapor Transport uses output from the Advected Layer Precipitable Water (ALPW) products in combination with model winds to calculate the flux of water vapor in four layers of the atmosphere to help forecasters monitor the transport of water vapor in the atmosphere and predict the likelihood of flooding. These products may be accessed on SLIDER here: <https://rammb-slider.cira.colostate.edu/> (POC: C. Seaman, J. Forsythe, Z. Amundson and K. Micke, CIRA; curtis.seaman@colostate.edu; john.forsythe@colostate.edu; zayd.amundson@colostate.edu; kevin.micke@colostate.edu)
Funding: GEO/GOES-R and LEO/JPSS

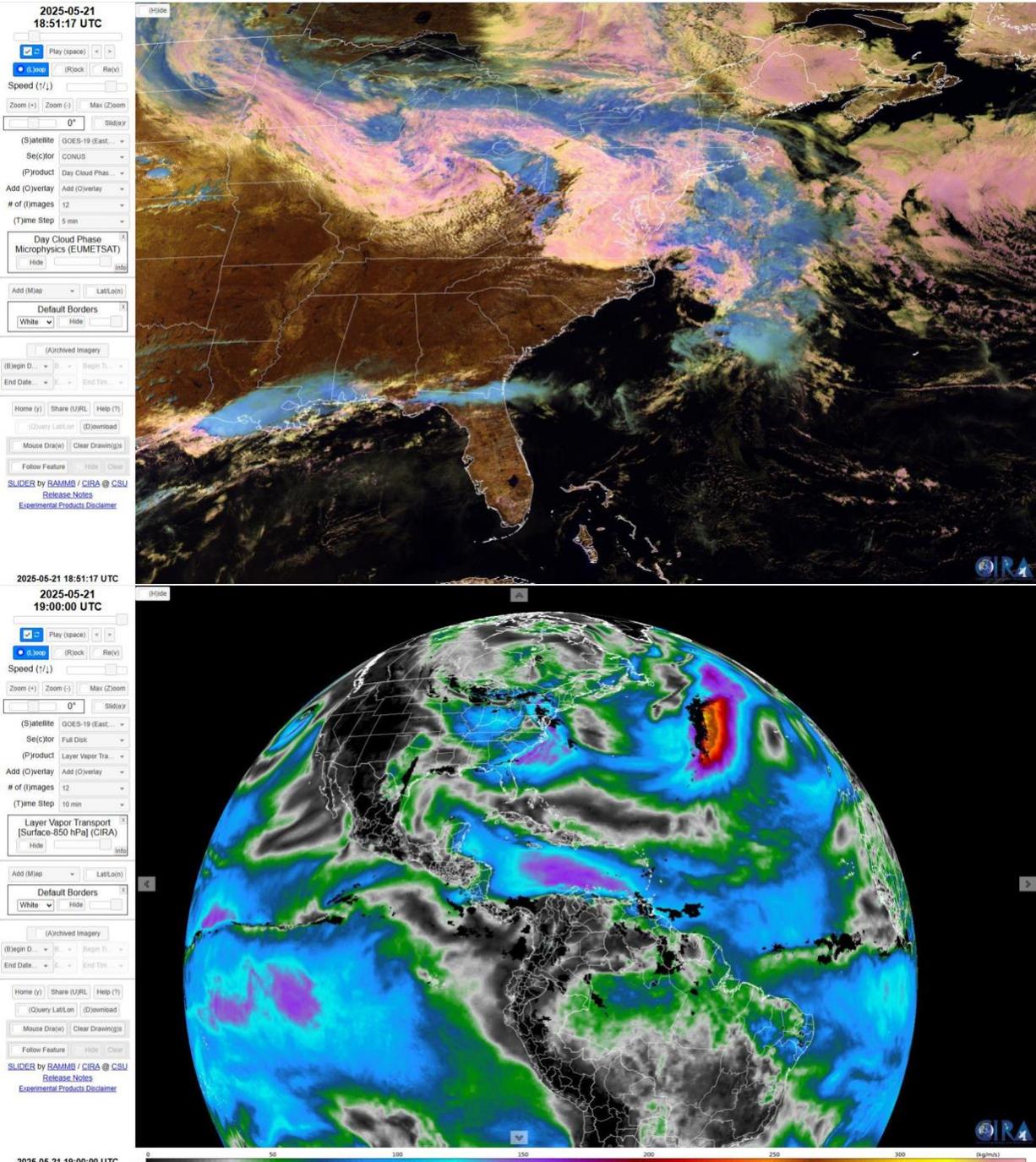


Figure: GOES-19 Day Cloud Phase Microphysics RGB (top) and Layer Vapor Transport [Surface - 850 hPa] products on SLIDER.

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

Awards and Recognition

Media Interactions and Request

Blog Posts and Social Media

Travel, Workshops, Conferences, and Meeting Reports

CIRA participation in the IWW17: J. Apke participated in the 17th International Winds Workshop hosted by the World Meteorological Organization (WMO) Coordination Group for Meteorological Satellites (CGMS). He presented on “Evaluations of Dense Optical Flow-Based Winds Products for Forecasting Operations,” which covered how forecasters engaged with new dense optical flow winds products from satellites for convection warning operations during the 2023, 2024, and 2025 Hazardous Weather Testbed experiments. (J. Apke, CIRA, jason.apke@colostate.edu; Funding: NOAA).

Training and Education activities

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

Other

Don Hillger did a second review of a manuscript for the journal *Climate*. (POC: D. Hillger, CIRA, don.hillger@colostate.edu)

Taiga Tsukada did a second review of a manuscript for the journal *npj Climate and Atmospheric Science*. (POC: T. Tsukada, CIRA, taiga.tsukada@colostate.edu)