

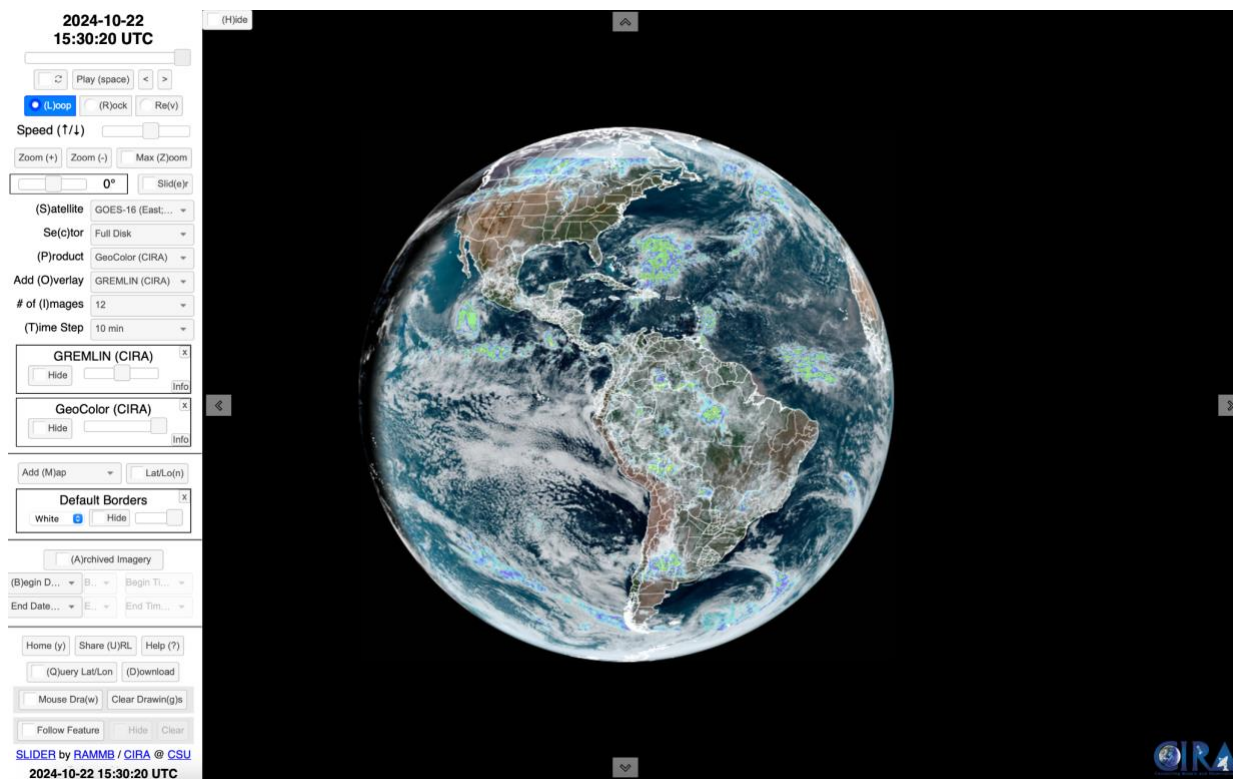
# Weekly Report

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

Submitted by: Maranda Hutson  
Date of Submission: 25 October 2024  
Prepared by: CIRA and STAR contributors

## Products and Applications

**GREMLIN in SLIDER:** GOES Radar Estimation via Machine Learning to Inform NWP (GREMLIN) imagery is now available on CIRA SLIDER. GREMLIN provides synthetic composite radar reflectivity from GOES ABI and GLM data fusion using a convolutional neural network trained to the Multi-Radar Multi-Sensor (MRMS) product. GREMLIN is available for both GOES-East and GOES-West. GREMLIN Full Disk processing is running on the AWS-based NOAA GeoCloud service and the NetCDF files are pulled from an S3 bucket to CIRA for display in SLIDER. (POC: Kyle Hilburn, CIRA, [kyle.hilburn@colostate.edu](mailto:kyle.hilburn@colostate.edu); Curtis Seaman, CIRA, [curtis.seaman@colostate.edu](mailto:curtis.seaman@colostate.edu); Zayd Amundson, CIRA, [zayd.amundson@colostate.edu](mailto:zayd.amundson@colostate.edu); Joe Zajic, TOWRS, [joe.zajic@noaa.gov](mailto:joe.zajic@noaa.gov); Funding: GOES-R).



**Figure.** GREMLIN synthetic composite radar reflectivity overlaid on GeoColor.

**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**

**Training and Education activities**

**Rapid City, SD Winter Weather Workshop:** On 18 October 2024, Bill Line and Jorel Torres presented at the NWS/WFO Rapid City, SD Winter Weather Workshop. They covered various winter weather satellite topics, including key products, best practices for integrating satellite data into operations, and valuable training resources. (POC: B. Line, SMCD/APDB, Jorel Torres, CIRA, [bill.line@noaa.gov](mailto:bill.line@noaa.gov), [Jorel.Torres@colostate.edu](mailto:Jorel.Torres@colostate.edu)) Funding: PDRA, JPSS

**NWS Anchorage, AK Winter Weather Workshop:** On 23 October 2024, Bill Line presented at the NWS/WFO Anchorage, AK Winter Weather Workshop. His presentation covered several relevant satellite topics, including sea spray detection, blowing snow detection, CrIS water vapor imagery, along with additional tips and resources. (POC: B. Line, SMCD/APDB, [bill.line@noaa.gov](mailto:bill.line@noaa.gov)) Funding: PDRA

**Virtual Presentation at the JPSS LEO Seminar Showing Satellite Analysis of the Late April/May Southeast Brazil Flood:** On 23 October 2024, Sheldon Kusselson gave a virtual presentation titled, “The April-May 2024 Rio Grande do Sol Floods in Southeast Brazil - What did CIRA’s Advected Layer Precipitable Water and NOAA’s Blended Total Precipitable Water Products and Analysis Show” at the monthly Joint Polar Satellite System Low Earth Orbiting Seminar. The presentation highlighted NOAA (developed by CIRA) and experimental CIRA satellite moisture products along with Sheldon’s analysis of these products for a three week period of almost persistent heavy rainfall from late April to mid-May of this year that produced the worst flooding in at least 80 years over Southeast Brazil. (POC: S. Kusselson, [sheldon.kusselson@colostate.edu](mailto:sheldon.kusselson@colostate.edu)) Funding: JPSS



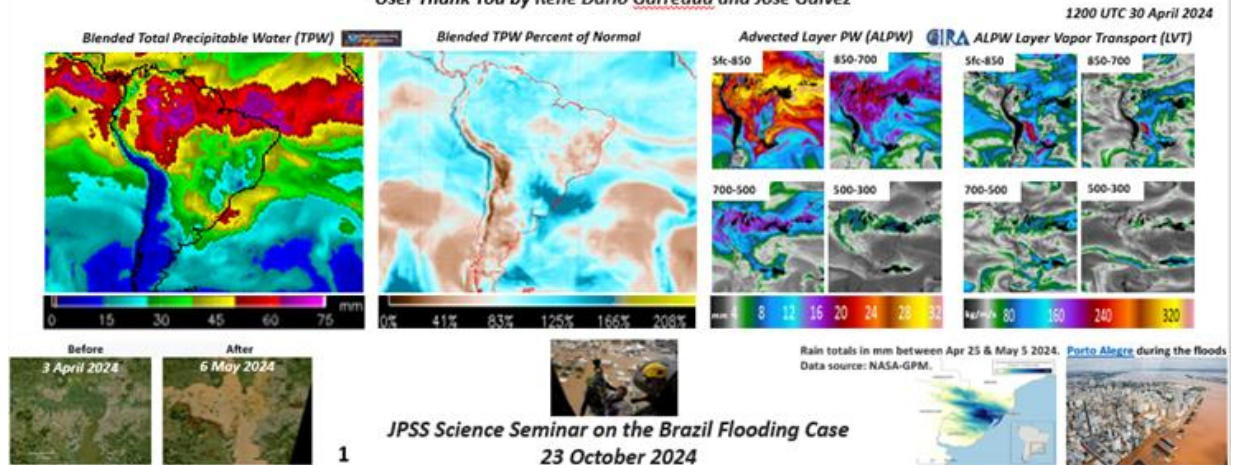
The April-May 2024 Rio Grande do Sul Floods in Southeast Brazil –  
 What Did CIRA’s Advected Layer PW (ALPW) and NOAA’s Blended TPW Products and Analysis Show



Sheldon Kusselson, Research Associate, CIRA/Colorado State University  
 John Forsythe, Senior Researcher, CIRA/Colorado State University

*Our Hydrology Team includes Stan Kidder and Dan Bikos*

*User Thank You by René Dario Garreaud and Jose Galvez*



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

**Other**