

## Weekly Report

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

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### **Products and Applications**

**CISESS Proving Ground and Training Center:** The CISESS Proving Ground and Training Center (PGTC) has begun feeding data from its Satellite Broadcast Network (SBN) antenna to the new GOES-R cloud instances of AWIPS. Many exciting applications are planned for the cloud AWIPS, and this data feed will underpin these efforts. The PGTC is supported by the JPSS and GOES-R programs.



(POC: S. Rudlosky, [scott.rudlosky@noaa.gov](mailto:scott.rudlosky@noaa.gov), Funding: JPSS PGRR, GOES-R PGRR, GOES-R AWG, OCIO/HPCC)

**JPSS River Ice Product Improved:** The JPSS River Ice Mapping product, created by CISESS Scientist Naira Chaouch and her team (CUNY CESSRST) has been updated and improved (Version 5.1). This new version uses the CLAVR-x as the cloud mask for both S-NPP and NOAA-20 data. The Clouds from AVHRR Extended (CLAVR-x) System is a cloud product generation system that generates a complete suite of cloud products from NOAA's and EUMETSAT's AVHRR sensors. Ice thickness and roughness is now adjusted using the JPSS Ice Product in the Hydrologic Engineering Center's River Analysis System (HEC-RAS) model. The section over the Connecticut River between Spring Field and Hartford was used for sensitivity tests (see the figure).



Figure 1: Water level and flooded area simulated by HEC-RAS model (a) without ice jams (b) with ice jams

The ice information is updated through the adjustments of the ice thickness and roughness using the JPSS ice product. Ice jams information can be defined for specific cross section or for all cross sections. Figure 1 shows the results of the comparison between simulated water levels with and without ice jams over the entire identified section. It shows clearly the effect of the ice jams presence on the water level upstream the river and the simulated discharge. In their new task, which began this month, Chaouch and her team are working on using Visible/Infrared Imager Radiometer Suite (VIIRS) Day-Night Band images to mitigate the impact of cloud coverage.

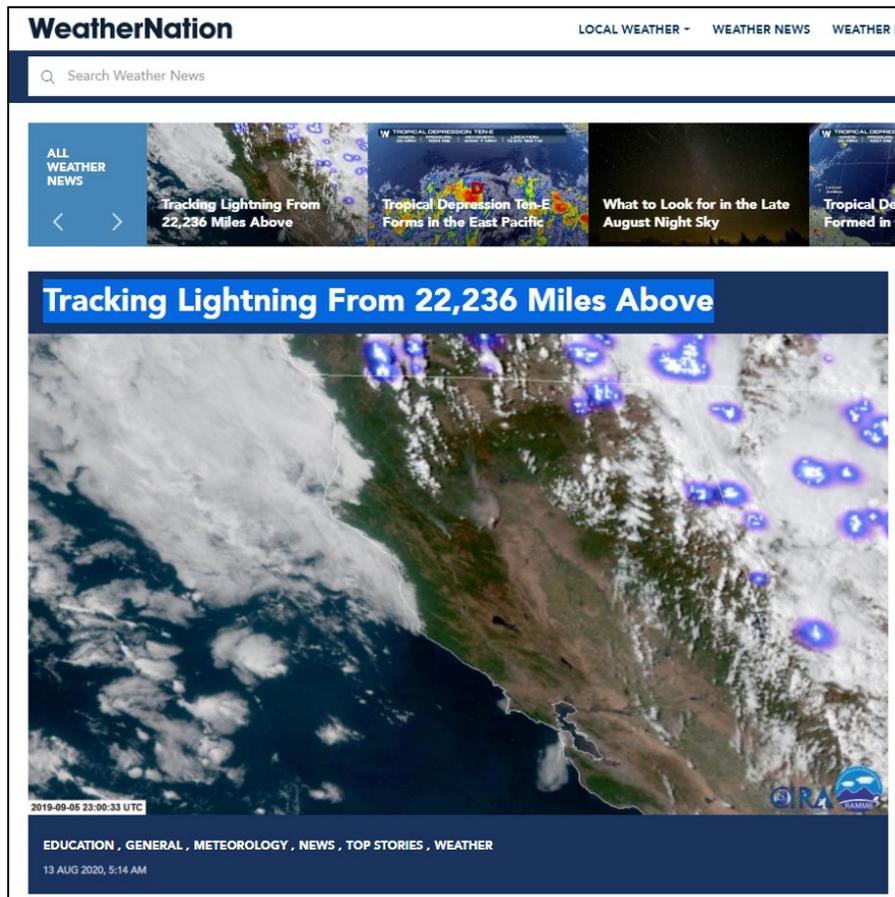
(POC: N. Chaouch, [nchaouch@ccny.cuny.edu](mailto:nchaouch@ccny.cuny.edu), Funding: JPSS PGRR)

### **Media and Outreach**

**WeatherNation Interview on GLM:** Scott Rudlosky was interviewed by WeatherNation meteorologist Meredith Garofalo for an article entitled "Tracking Lightning From 22,236 Miles Above". The article discussed the dramatic GOES-East images of the [August 11 derecho crossing the Midwest](#), which included Geostationary Lightning Mapper (GLM) data. Rudlosky explained the purpose of the GLM instrument on GOES -16 and GOES-17:

“They detect total lightning so that’s both intracloud and cloud-to-ground lightning throughout most of the Western Hemisphere, said Scott Rudlosky, a Physical Scientist with the National Oceanic and Atmospheric Administration. “Since these new satellites launched, they’ve been helping weather service forecasters across the country to better diagnose the threat from lightning and also severe weather.”

“The forecasters that are watching the long line of thunderstorms, in this case, had to put out warnings for the entire line because of the hazards associated with it, but typically the lightning can help the forecasters clue in to what parts of that line are more intense,” Rudlosky said.



To read the full article, see: <https://www.weathernationtv.com/news/tracking-lightning-from-22236-miles-above/>.

(POC: S. Rudlosky, [scott.rudlosky@noaa.gov](mailto:scott.rudlosky@noaa.gov), Funding: JPSS PGRR, GOES-R PGRR, GOES-R AWG, OCIO/HPCC)