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Cartographic Potential of New Technologies: HU:CARE

William B. Moore
Hampton University

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The logo for HUCARE is displayed in a white, outlined, sans-serif font. The letters are 'H', 'U', ':', 'C', 'A', 'R', 'E'. The background of the logo is a horizontal strip of a sunset or sunrise sky, with a gradient from dark blue at the top to orange and red at the bottom, where a thin line of clouds is visible.

HUCARE

Hampton University Center for
Atmospheric Research and Education
Direct Broadcast Receiving Station

William B. Moore
Atmospheric and Planetary Sciences
Hampton University

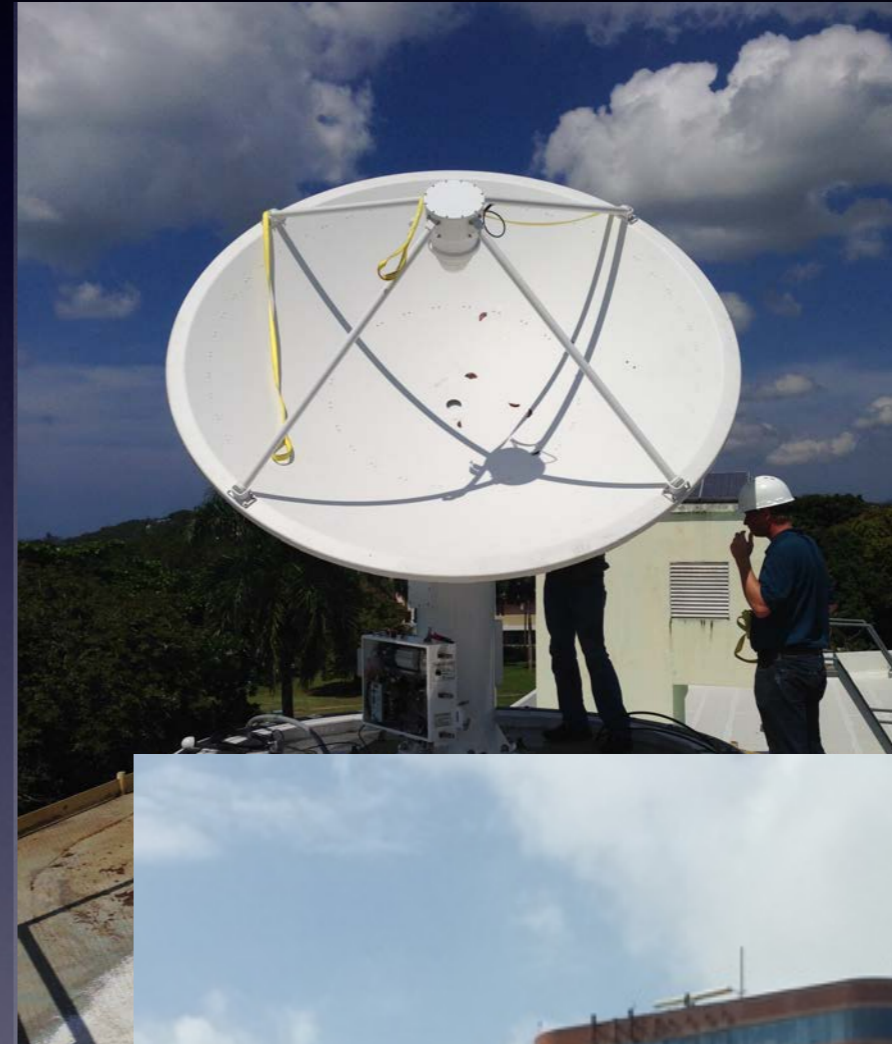
Hampton Roads Adaptation Forum

HU: CARE

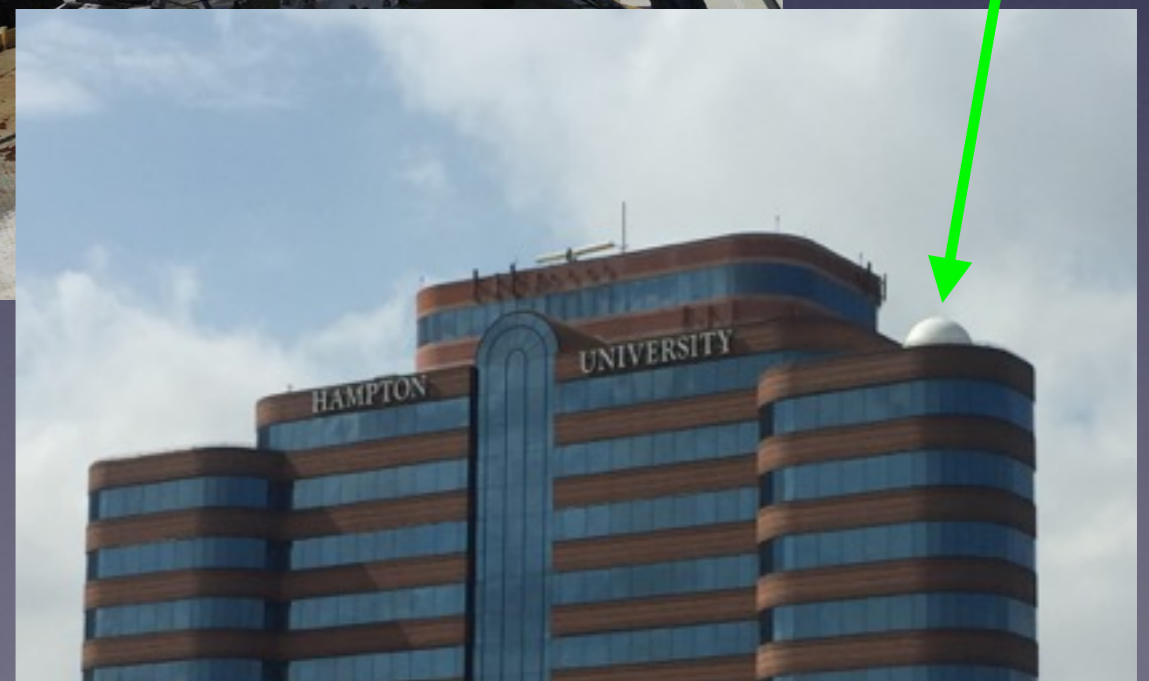
- Creating research opportunities and career pathways for underrepresented minorities in Atmospheric Science
- High-School, Two-Year College, Undergrad and Graduate Education programs
- Partners: NASA Langley Research Center, Univ. Wisconsin Madison, Univ. Maryland Baltimore County, VA Space Grant Consortium and National Institute of Aerospace.

Direct Broadcast Receiving Station

- Automated satellite tracking receives data from any satellite above the horizon.
- Suomi-NPP, AQUA, TERRA, NOAA-18 & 19, Metop-A & B (ESA), FY-3B & 3C (China), GCOM-WI (JAXA), SARAL (India)
- Data is near-real time (processing lag of seconds + transfer) received from swath beneath the satellite track.

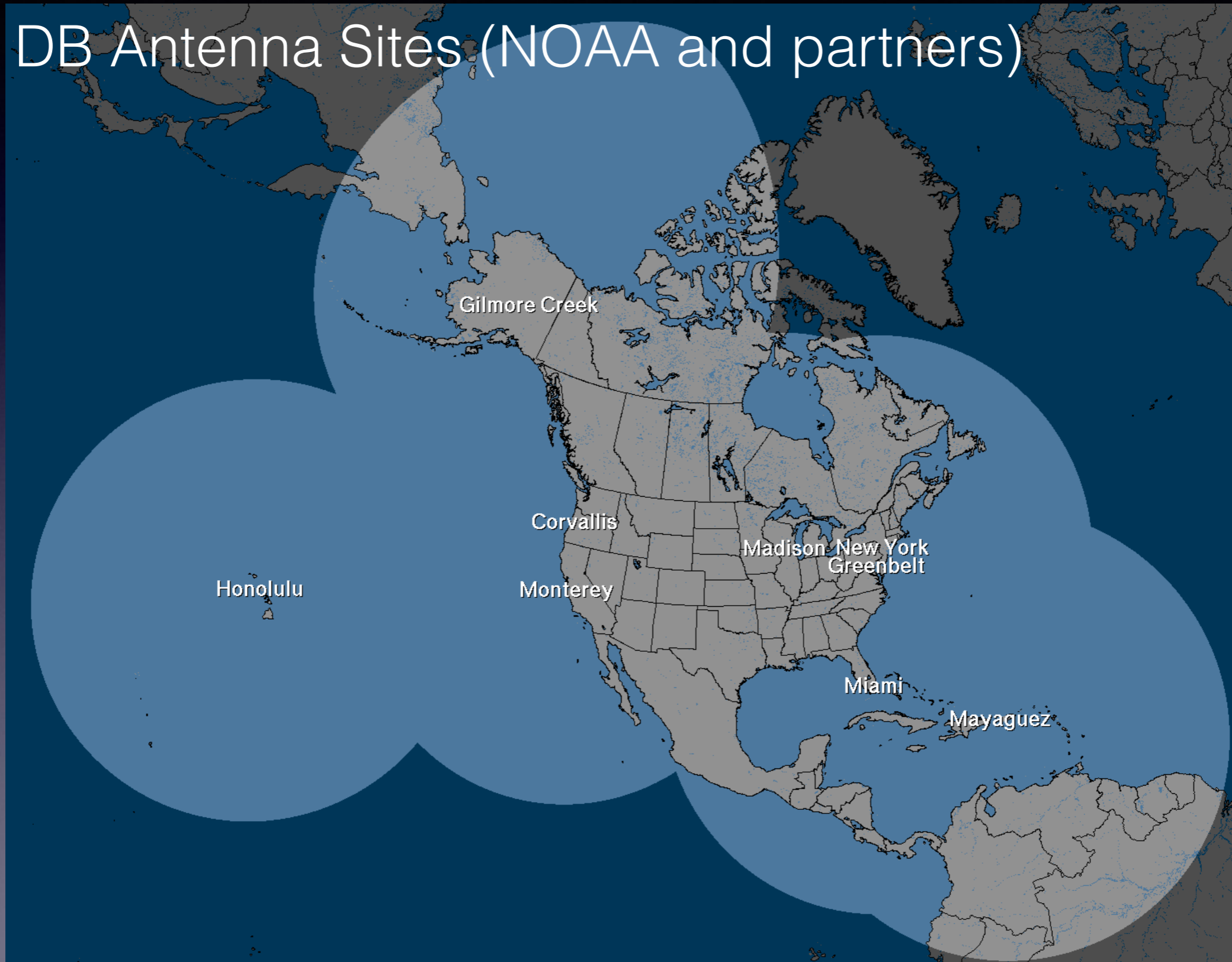


It's here!



Joining a Nationwide Network

DB Antenna Sites (NOAA and partners)



The View from HU

Legend
Satellite Visibility

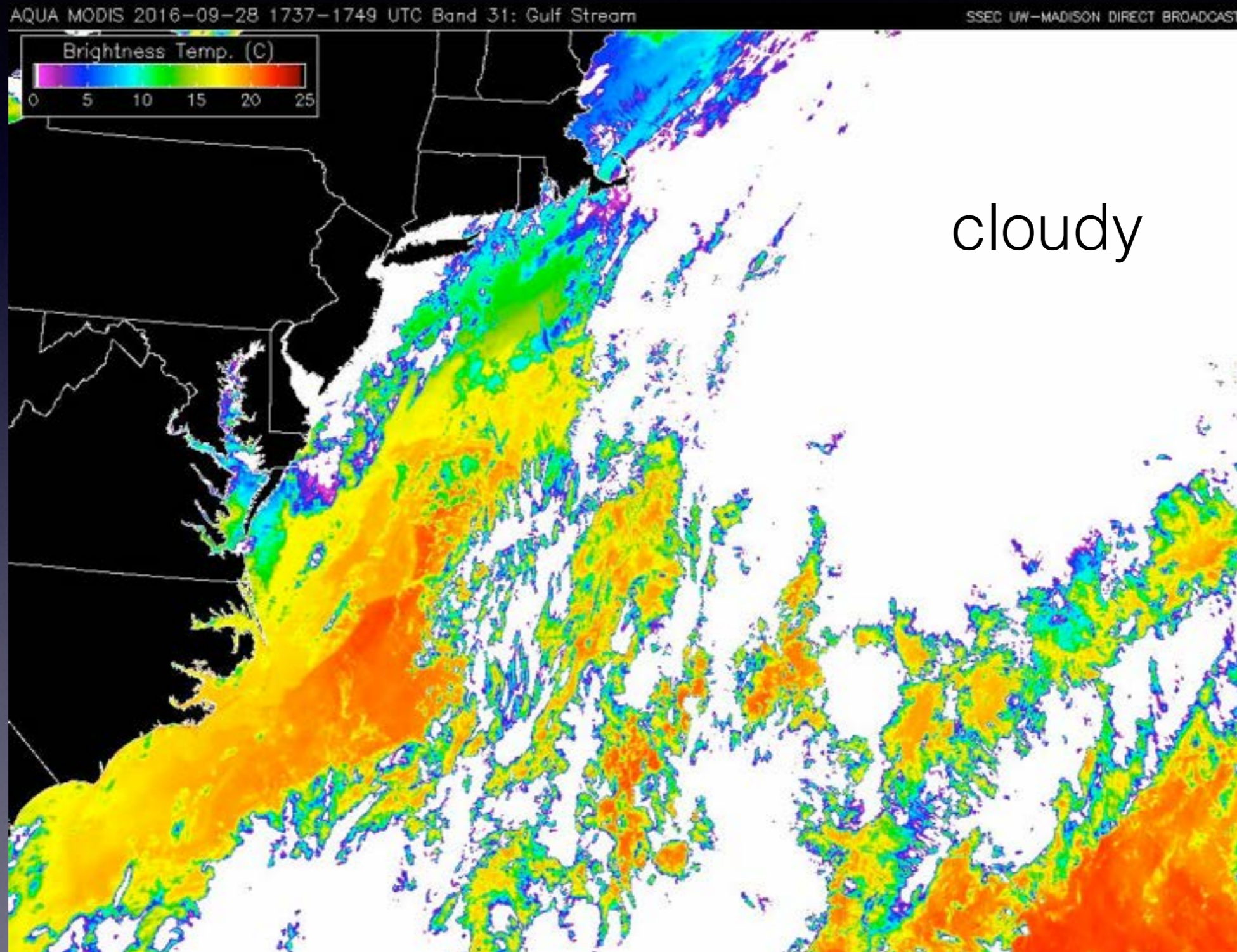
Google earth

Image Landsat
US Dept of State Geographer
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
© 2016 Google



View from Space (Altitude: 4383 mi)

Sea Surface Temperature



Day-Night Band Sees Power Outage



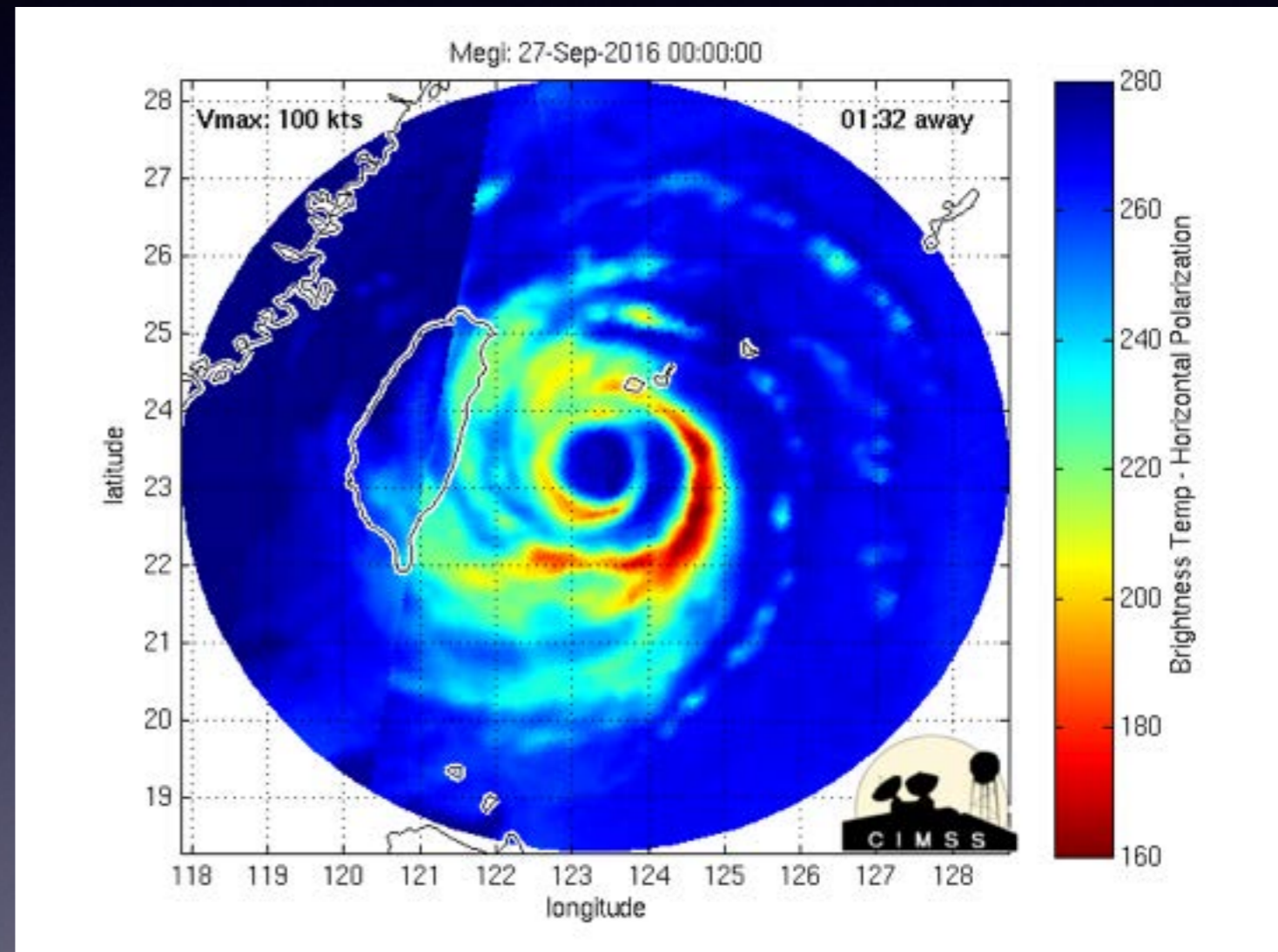
9/21



9/22

Atmospheric Properties

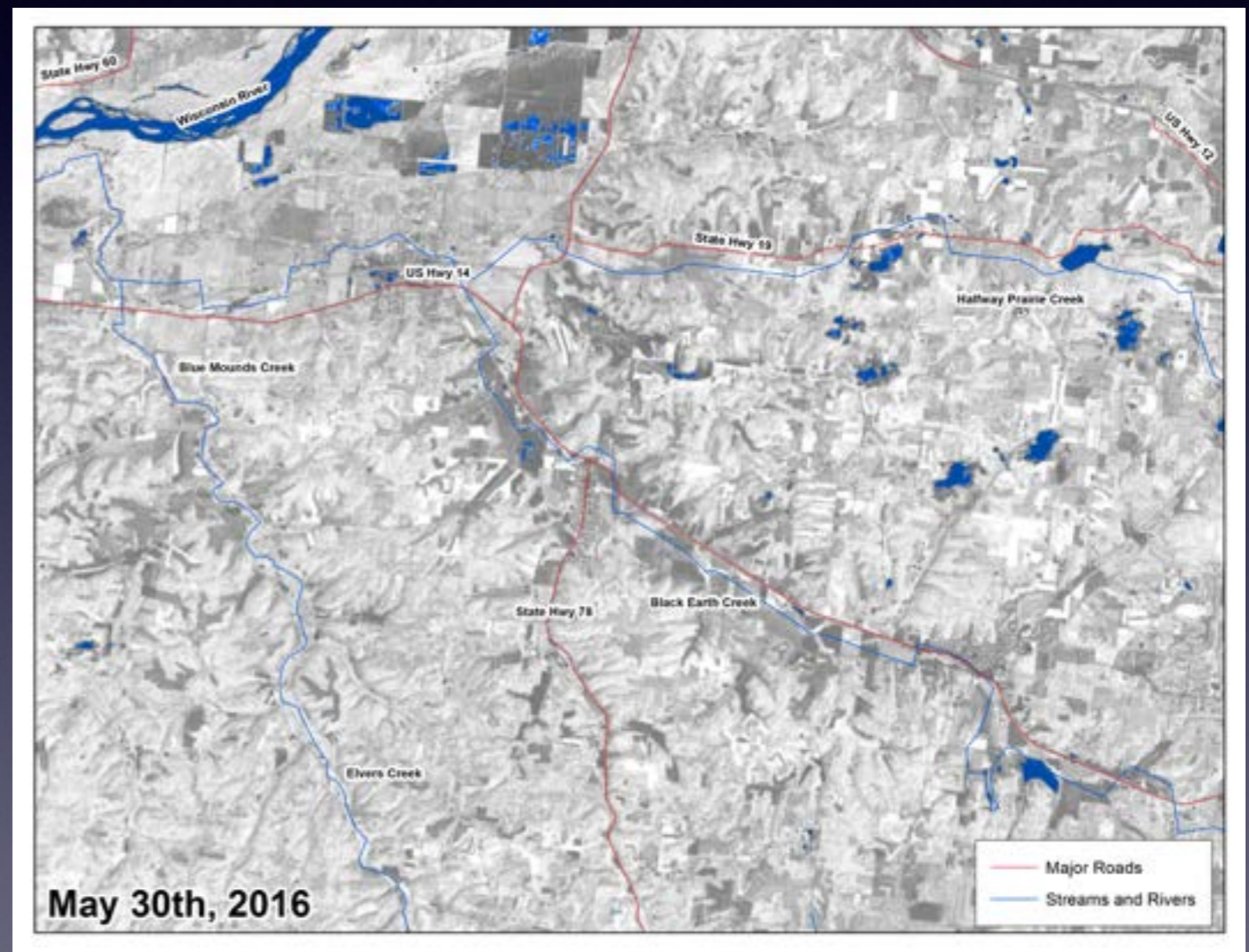
- Air Quality Indicators
- Smoke/Ash
- Cloud Phase
- Severe Weather
- Storm Tracking
- Lightning



Super-Typhoon Megi Hits Taiwan

Land Surface Properties

- Temperature
- Fire/Volcanic Eruption
- Artificial Light
- Vegetation Index
- Hydrology/Flooding



Upper-Midwest Floods, June 2016

Ideas Welcome

- Near-real Time
- Several passes per day
- Wide range of atmospheric/land/ocean parameters
- How can we make this useful for you?