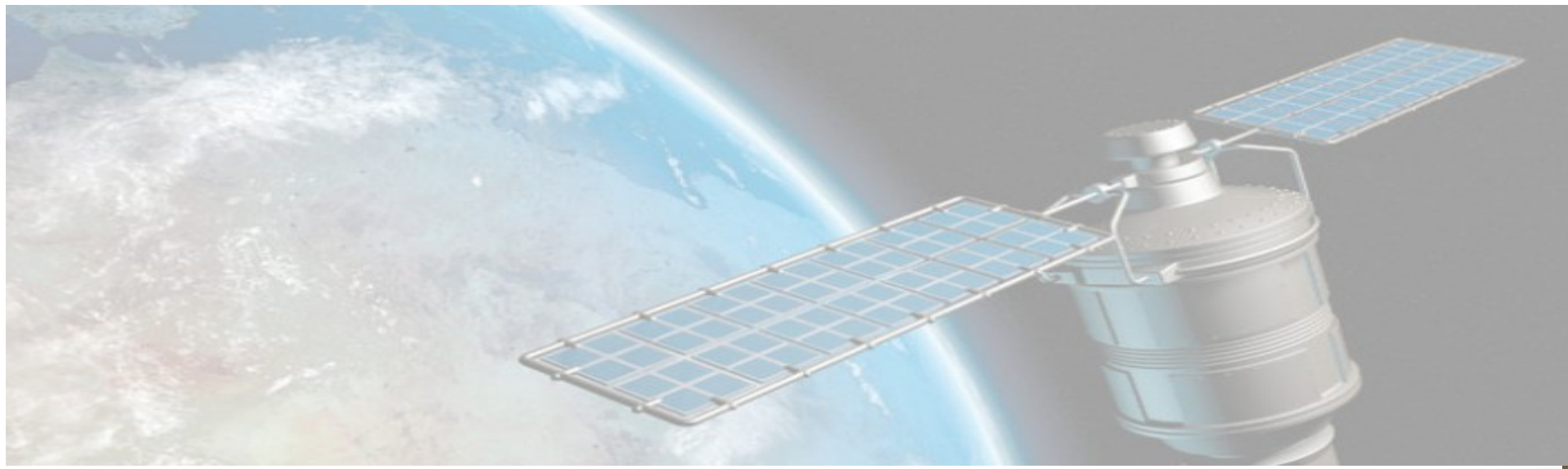


NOAA-CREST

Satellite Receiving Station

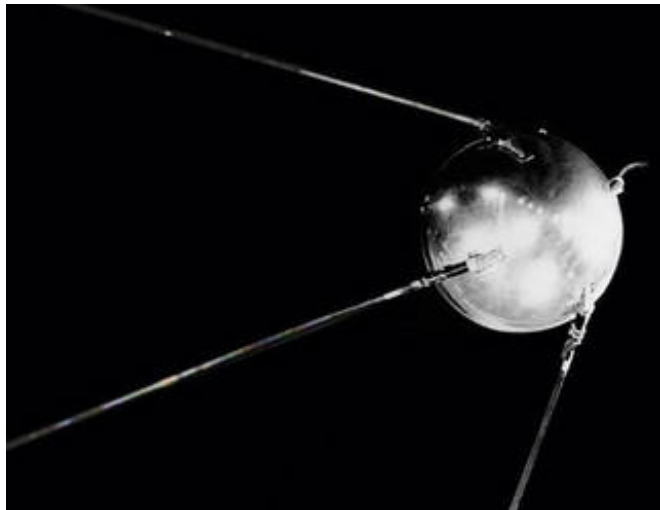
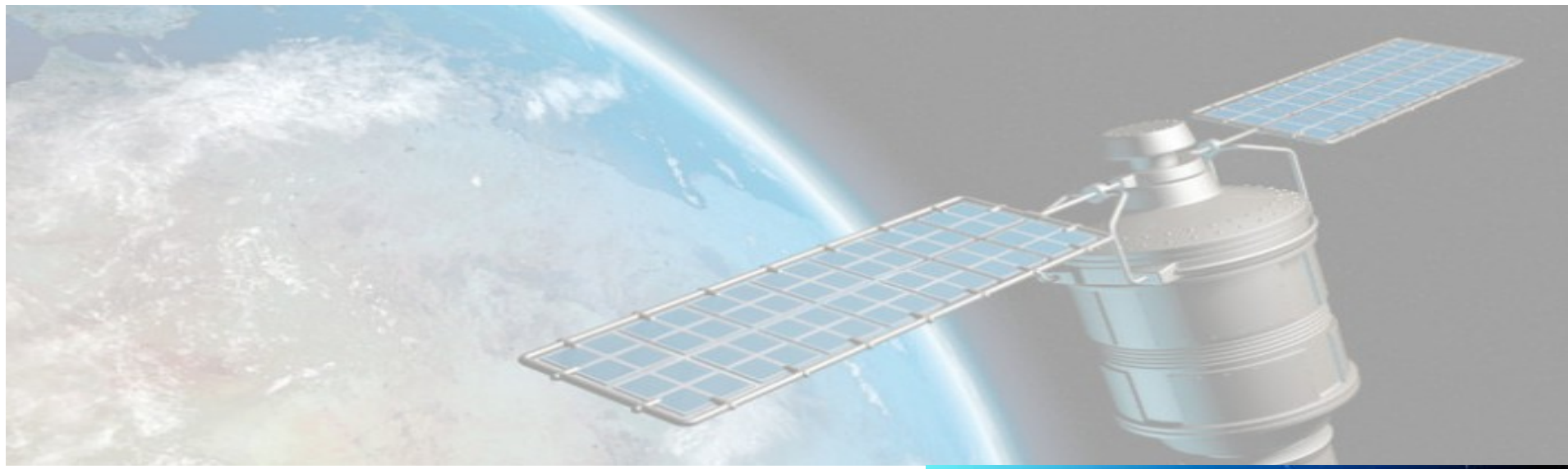


CREST HIRES

Summer 2016

Research Project

- Data processing and Visualization of NOAA Satellite
- Climate Event : Hurricane Sandy, Dust Storms, Tornadoes, Forest Fires, Hurricanes, Tropical Storms



YIKES

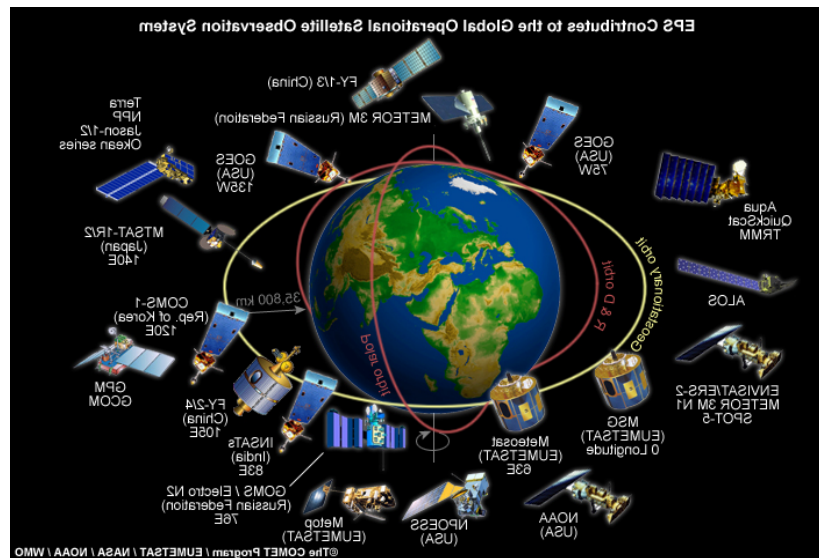
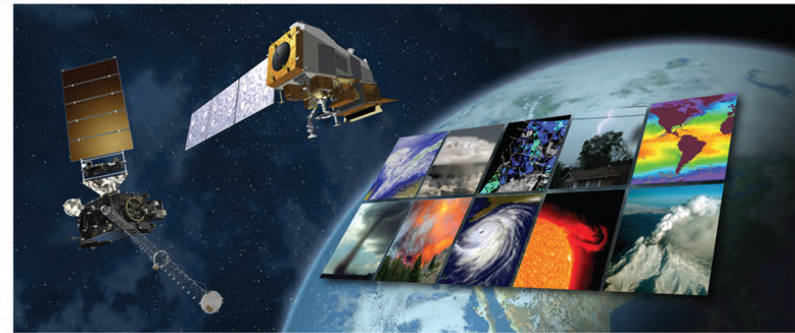
<http://www.nasa.gov/audience/forstudents/5-8/features/nasa-knows/what-is-a-satellite-58.html>



- Data processing and Visualization of NOAA Satellite

- Weather predictions
- Forecasting
- Manage Environmental Disasters and emergency management
- Food and Natural Resource Management (Climate Change..)
- Pollution
- Aviation

- And much more



- https://en.wikipedia.org/wiki/Weather_satellite

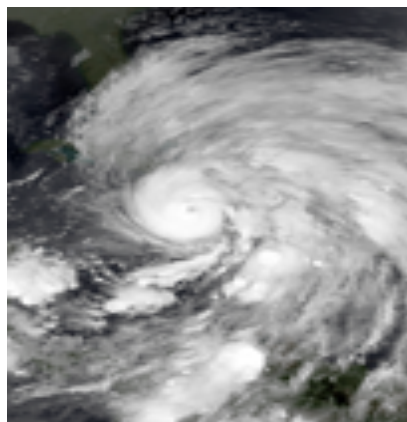
Objectives and Goals

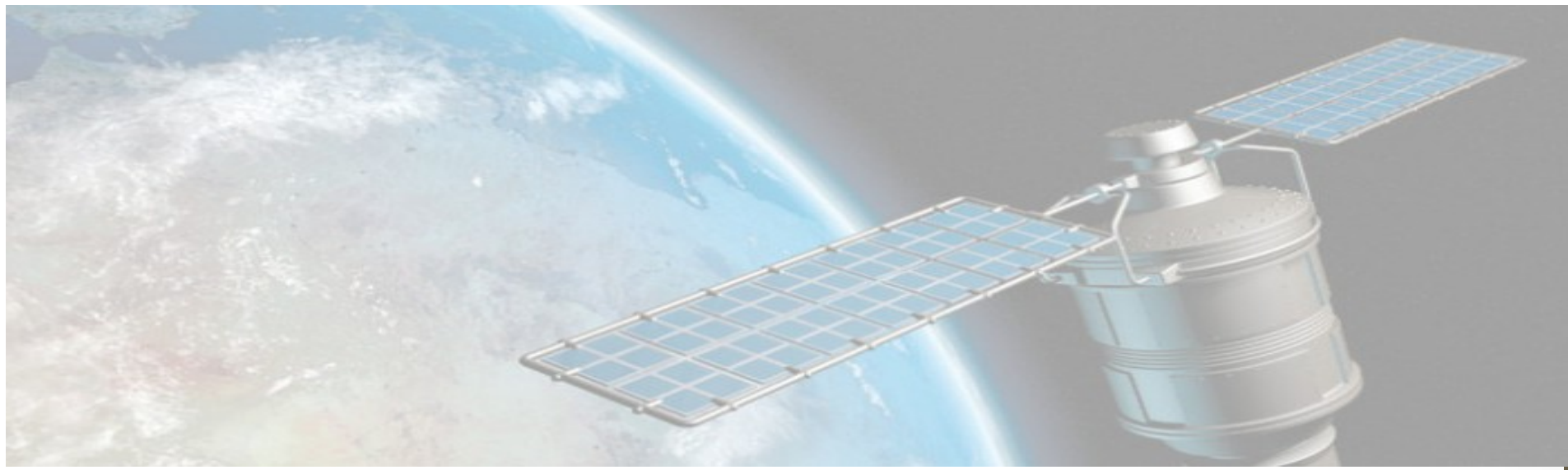
- Pick a satellite
- Pick a study region
- What's going on in that region (thunder storm maybe...)
- HURRICANE = RUN for your life
- Graphs/Maps ...maybe a movie
- At the end of the day... From satellite → forecasting → human reaction.



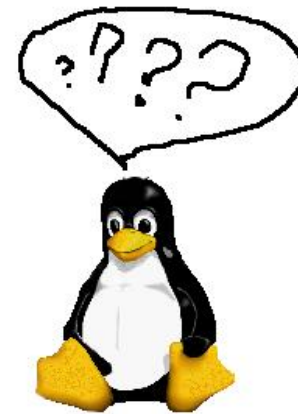
Methodology

- satellite data
- Pre-Processing
- Data analysis
- Post Processing
- Results

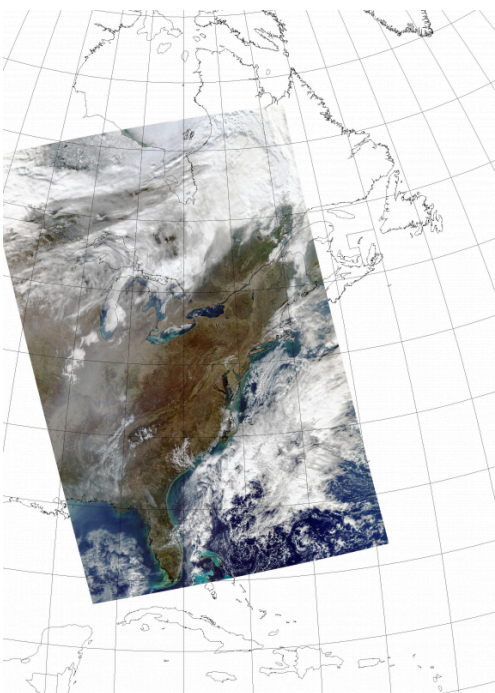
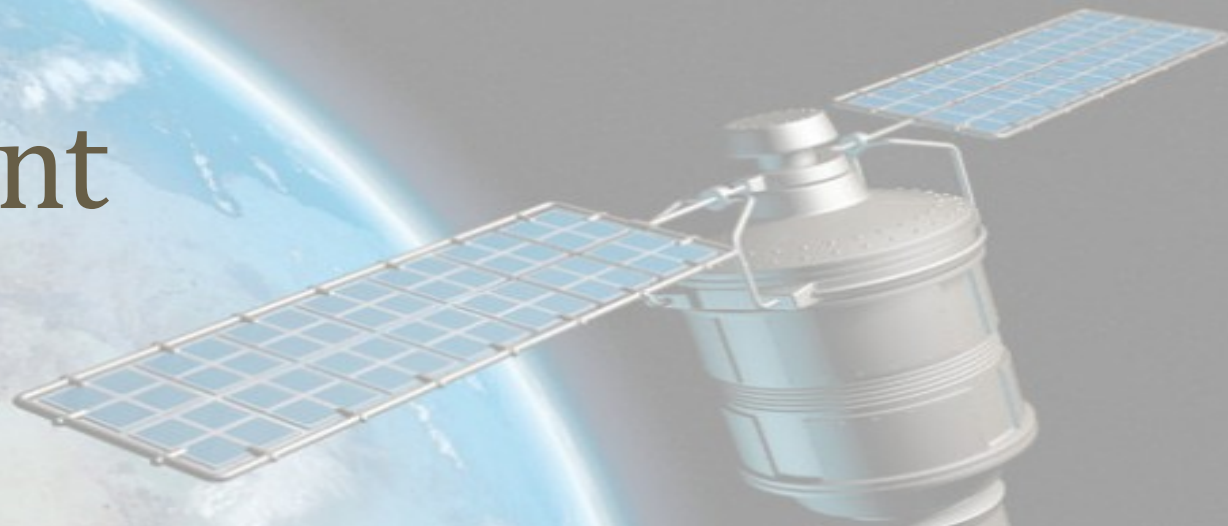




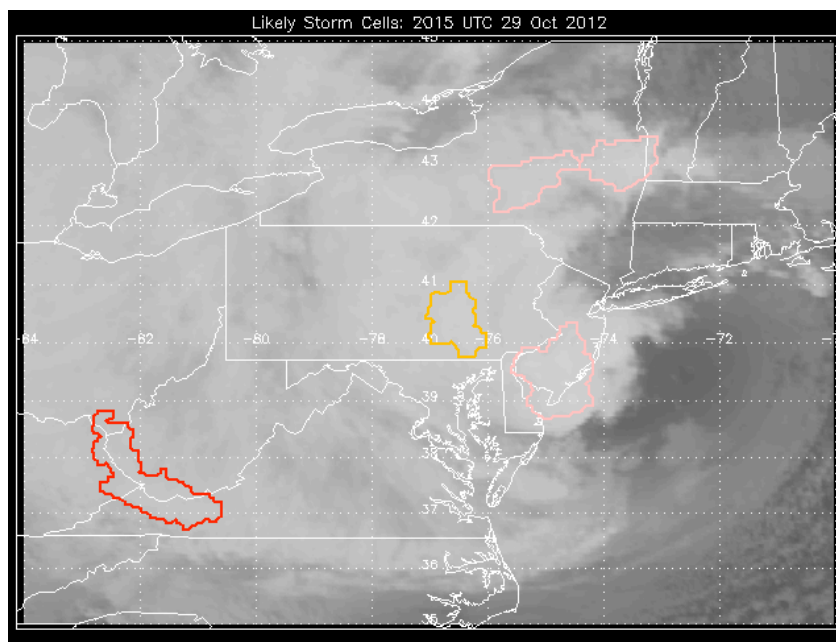
- CREST has an NOAA funded institution focuses on all aspects of remote sensing including: sensor development, satellite remote sensing, ground-based field measurements, data processing and analysis, modeling, and forecasting
- The Satellite Receiving Station is a key component of CREST research . SRS is primarily responsible to acquiring, storing and algorithm processing of all satellite related products.
- The Receiving Station currently has 2 antenna and a vast array of data collecting equipment and algorithms



Equipment



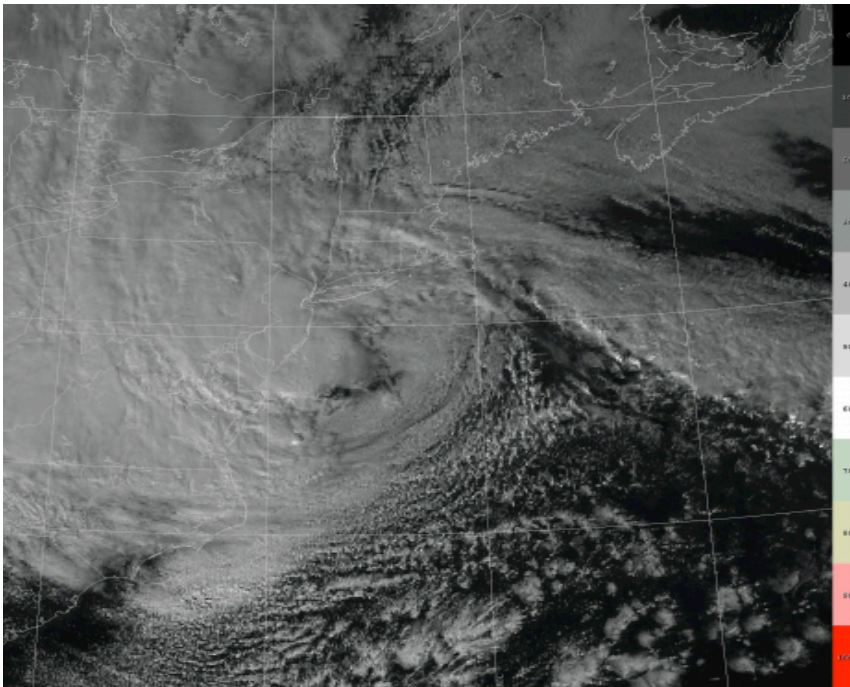
Modis RGB, Nov 2012



NowCasting(sandy .oct 2012)

Equipment & Datatypes

- The receiving station also manages ground-based measurement from IR based instrument to forecast instrument
- The Satellite Receiving station also provides data processing and analysis, modeling, and forecasting for CREST research.



Hurricane Sandy
Over New York
(2012)

Data

- SRS processes various data products from MODIS, GOES to Ground Based Gauge Measurement and Forecast measurement.
- Some other data products from the SRS Lab include,
 - - aerosol
 - - cloud properties
 - - ocean color
 - - modis reflectances
 - - sea surface temperature
 - - snow cover .. etc

Other operations ..

- The SRS Lab also provides algorithm development for CREST R20 (research to operations products)

