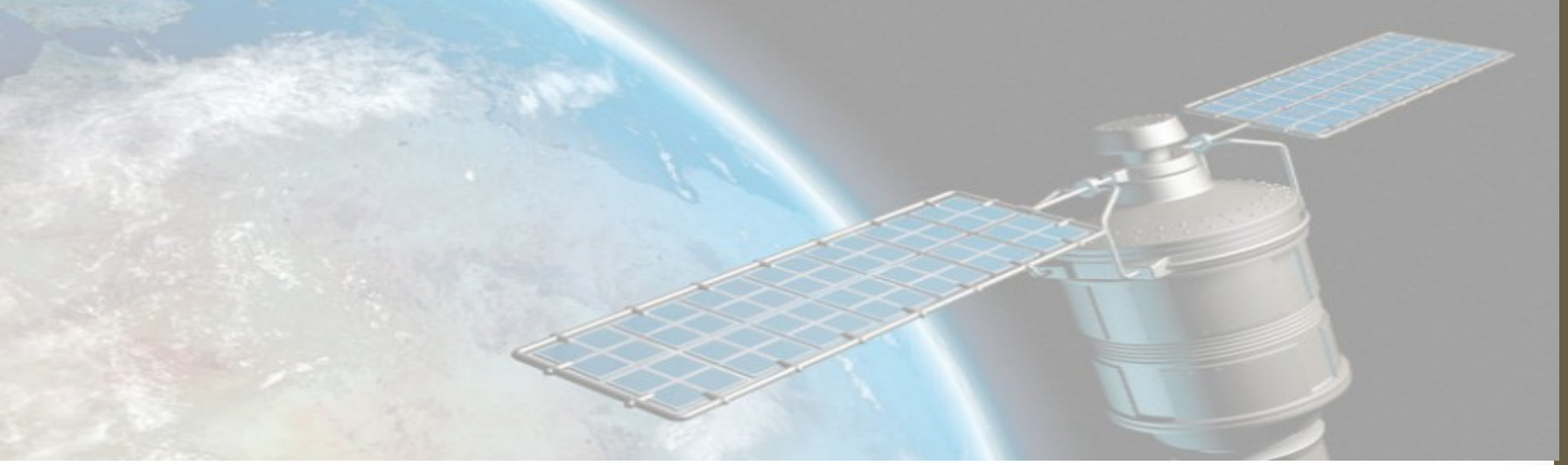
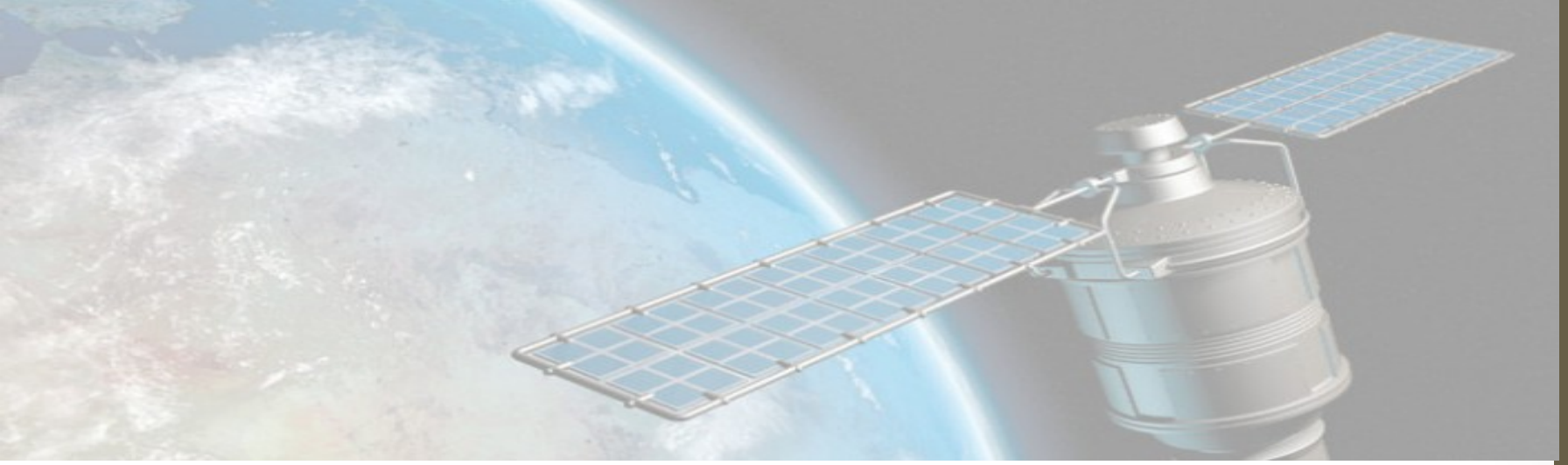


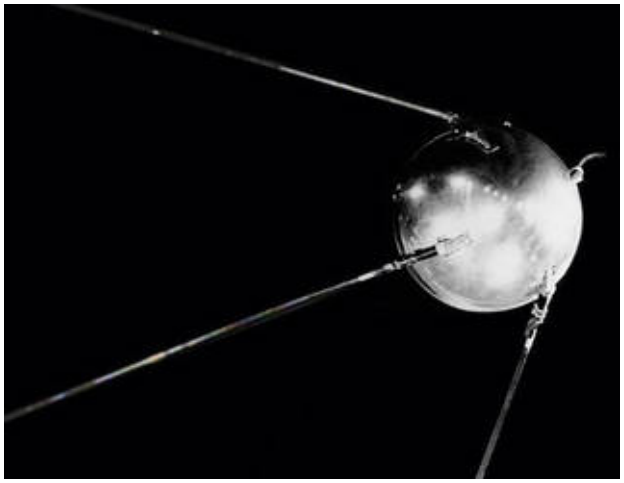
NOAA-CREST

Earth Observing Center
Satellite Receiving Station.



CREST Summer 2017 Research Project

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

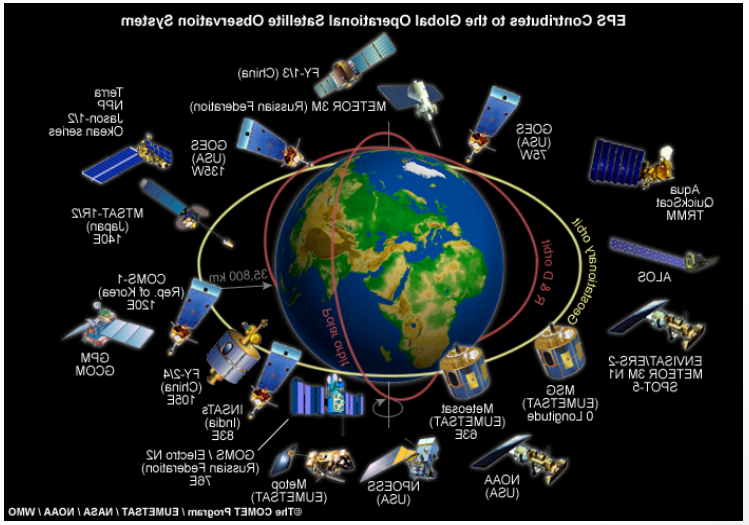


YIKES …..

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

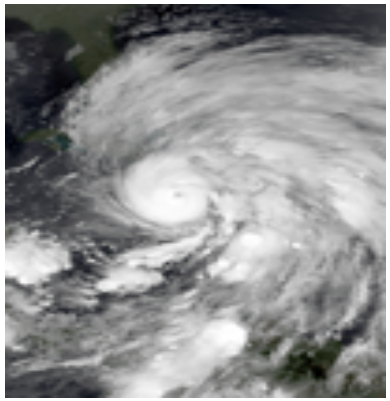
- Pick a NOAA satellite (maybe even a NASA sat
- Pick a study region
- What's going on in that region (thunder storm, hurricane

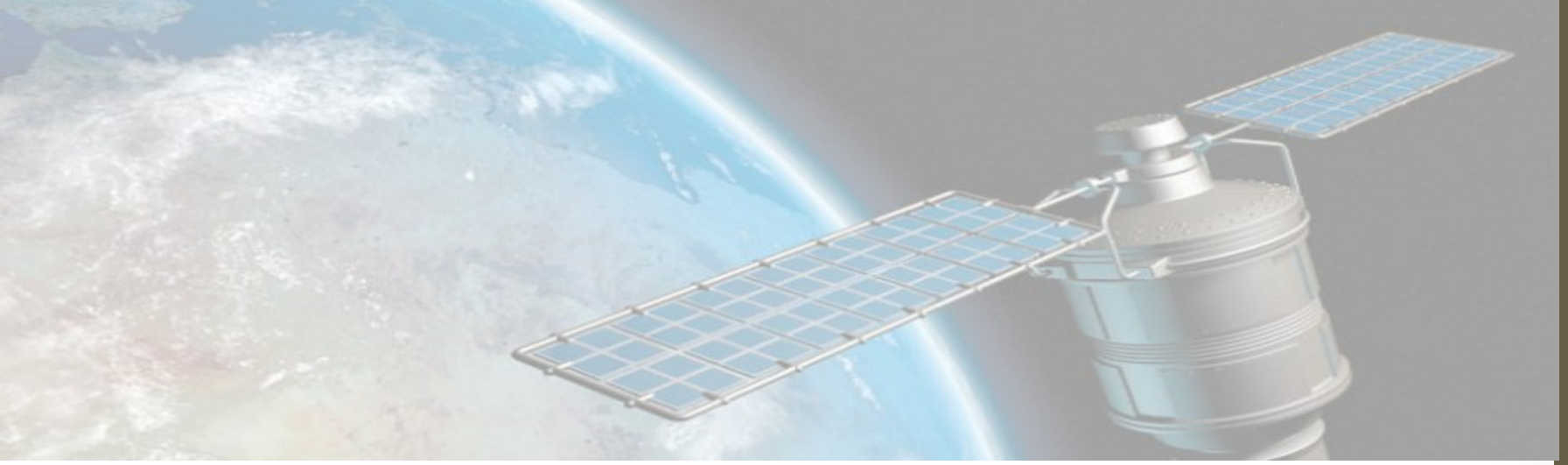
dust storms, …)

- HURRICANE = RUN for your life
- Graphs/Maps ...maybe a movie
- At the end of the day... From satellite -→ forecasting → human reaction.

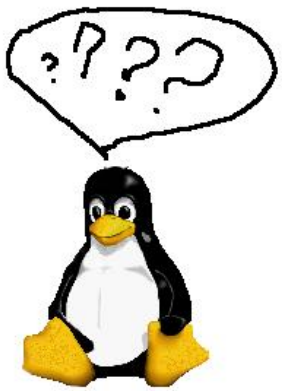
Methodology

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





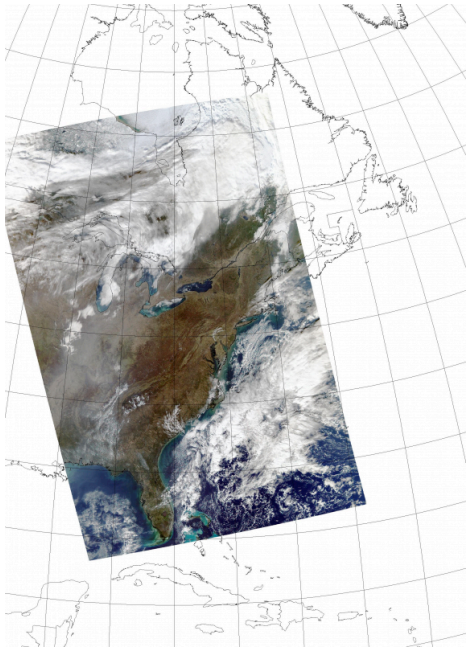
- CREST has an NOAA funded institution focuses on all aspects of remote sensing including: sensor development, satellite remote sensing, ground-based field measurements, data processing and analysis, modeling, and forecasting



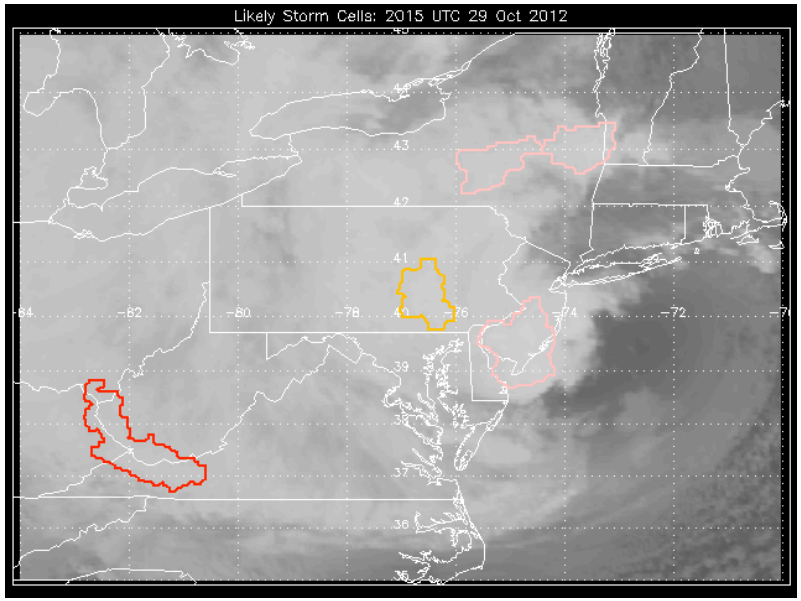
- The Satellite Receiving Station is a key component of CREST research . SRS is primarily responsible to acquiring, storing and algorithm processing of all satellite related products.

- The Receiving Station currently has 2 antenna and a vast array of data collecting equipment and algorithms

Equipment



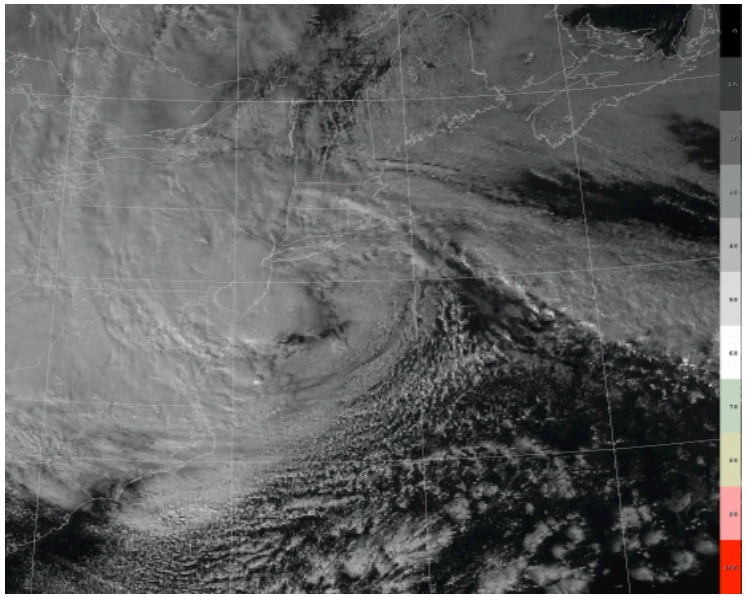
Modis RGB, Nov 2012



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)