NOAA SATELLITE CONFERENCE

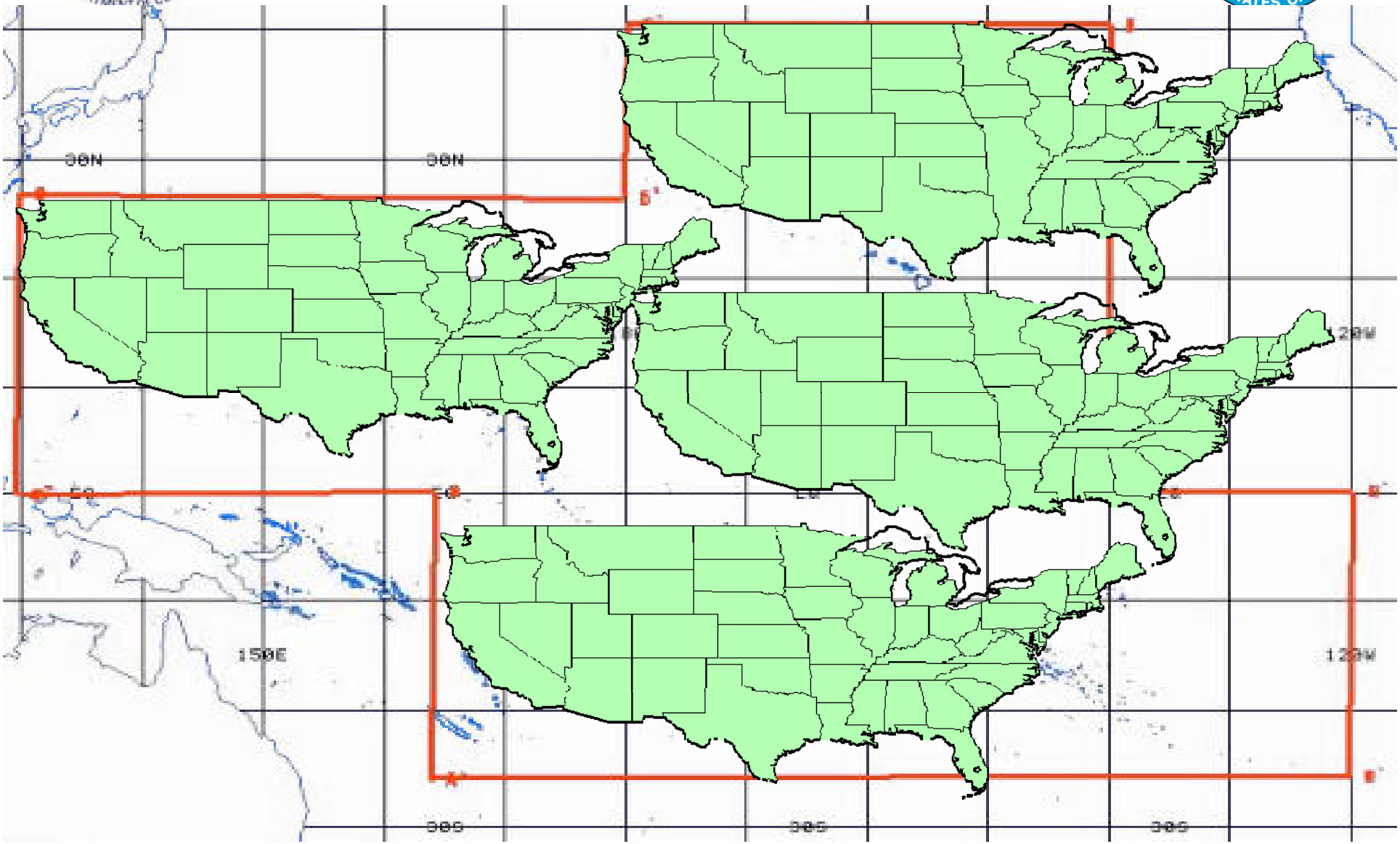
Pacific Region's Satellite Products, Programs and Requirements

Pacific Region Headquarters

Honolulu, Hawaii

April 2013

Area of Responsibility



Area of Responsibility

- Pacific Region
  - covering > 30 million square miles
    - 2 Weather Forecast Offices
    - 6 Weather Service Offices
    - 2 Data Collection Offices
    - Central Pacific Hurricane Center
    - Pacific Tsunami Warning Center
    - International Tsunami Information Center

PR Observing Program

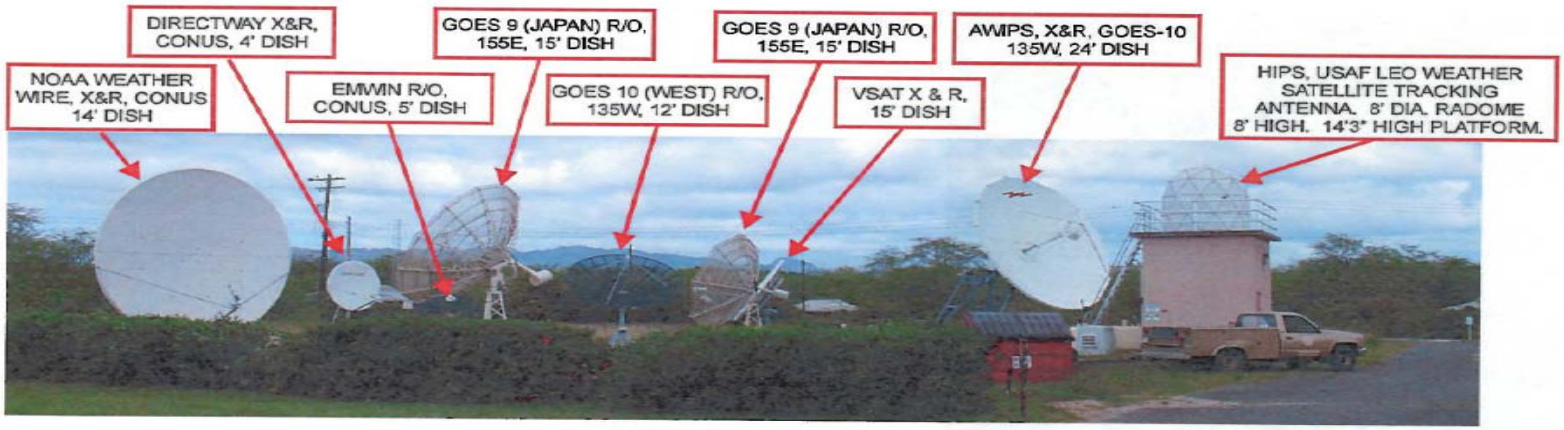
- NWS PR supports numerous islands, such as Hawaii, American Samoa, Guam, CNMI, and Micronesia
  - Satellite Ground Stations (including L/X-band antenna)
  - Surface and upper air in-situ observations
  - GPS Sensors
- These provide:
  - Invaluable assistance for our Watch, Warning and Advisory programs
  - Verification
  - Support for our daily forecast services

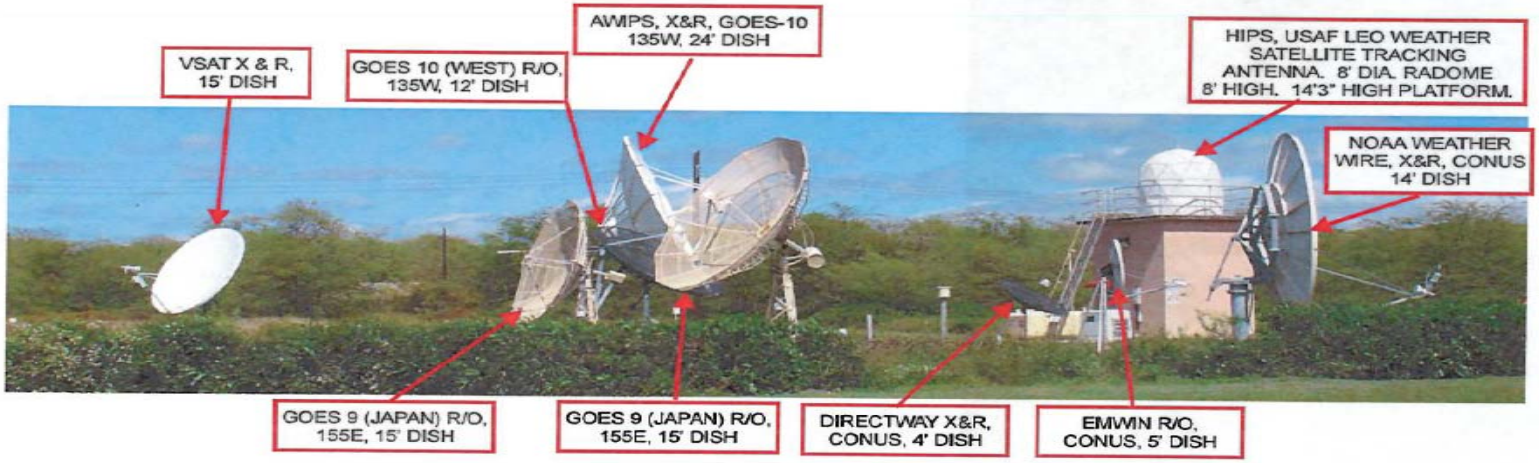
PR Observing Program

- Challenges
  - Communications and infrastructure
  - Limited resources for operations and maintenance
  - Highly corrosive environments
  - Time to travel to remote destinations (limited air and boat service)
  - High costs for equipment, contracts, travel and shipping
  - Limited personnel

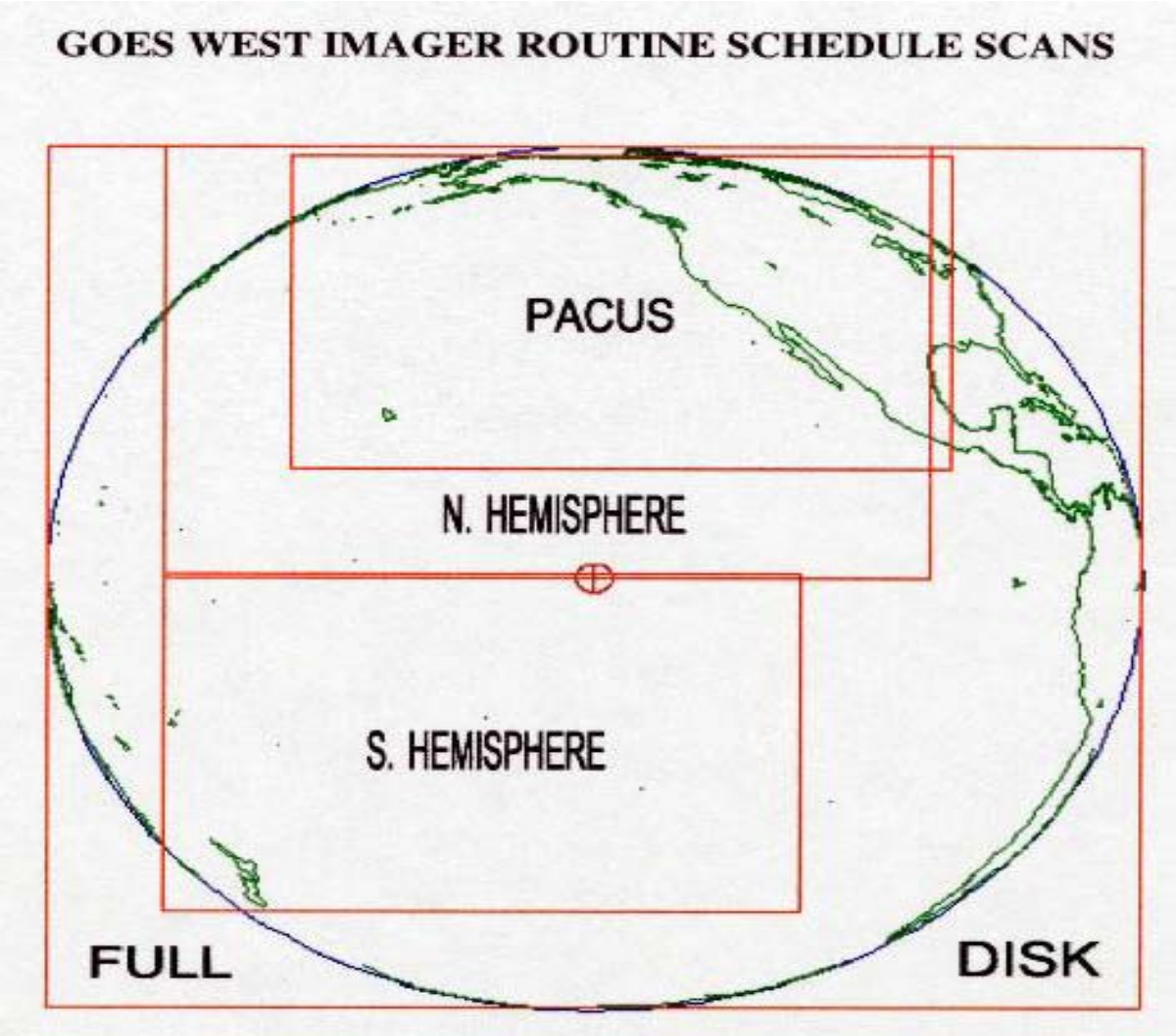
Satellite Ground Stations

PACIFIC TSUNAMI WARNING CENTER SATELLITE ANTENNAS

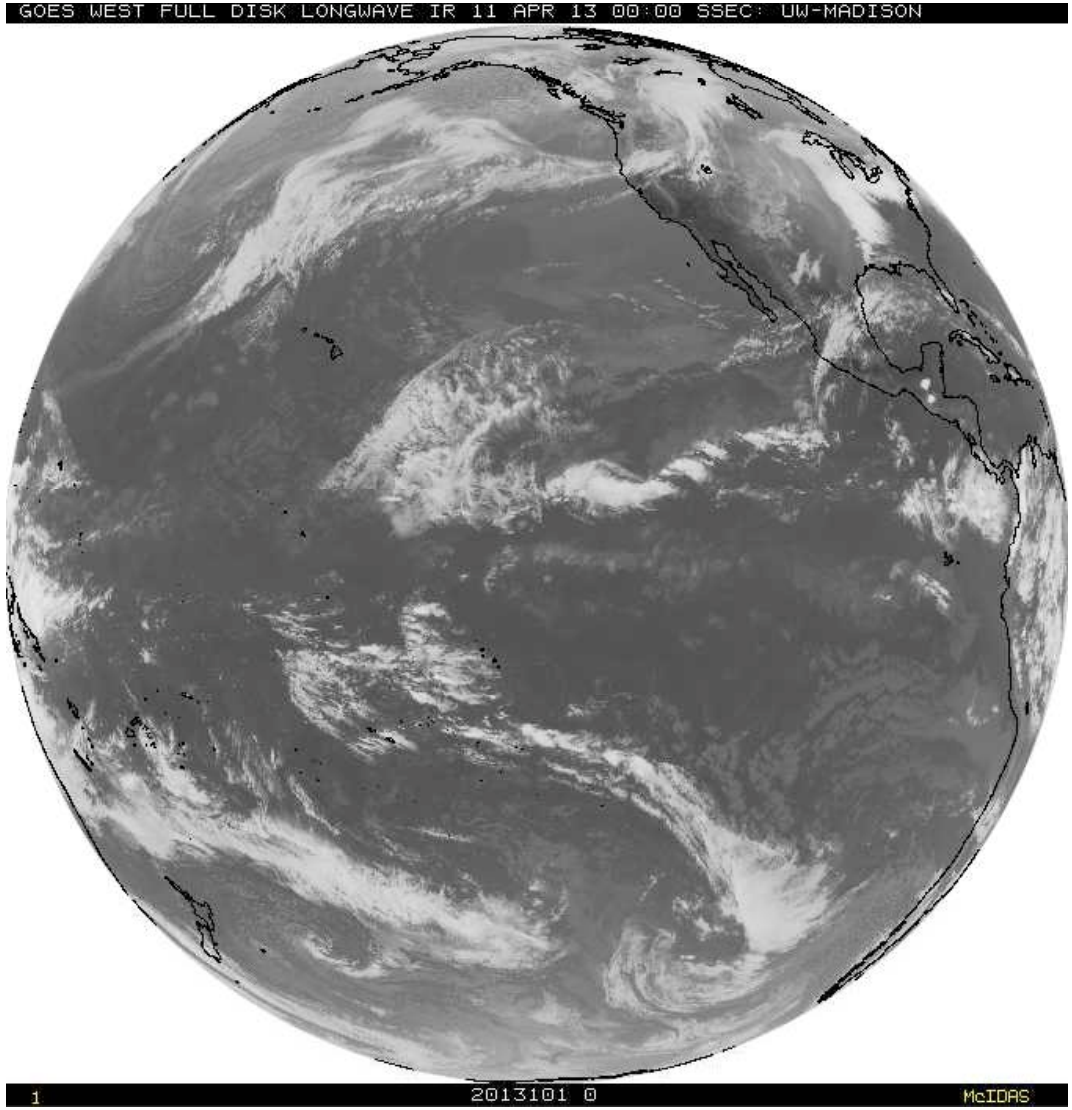




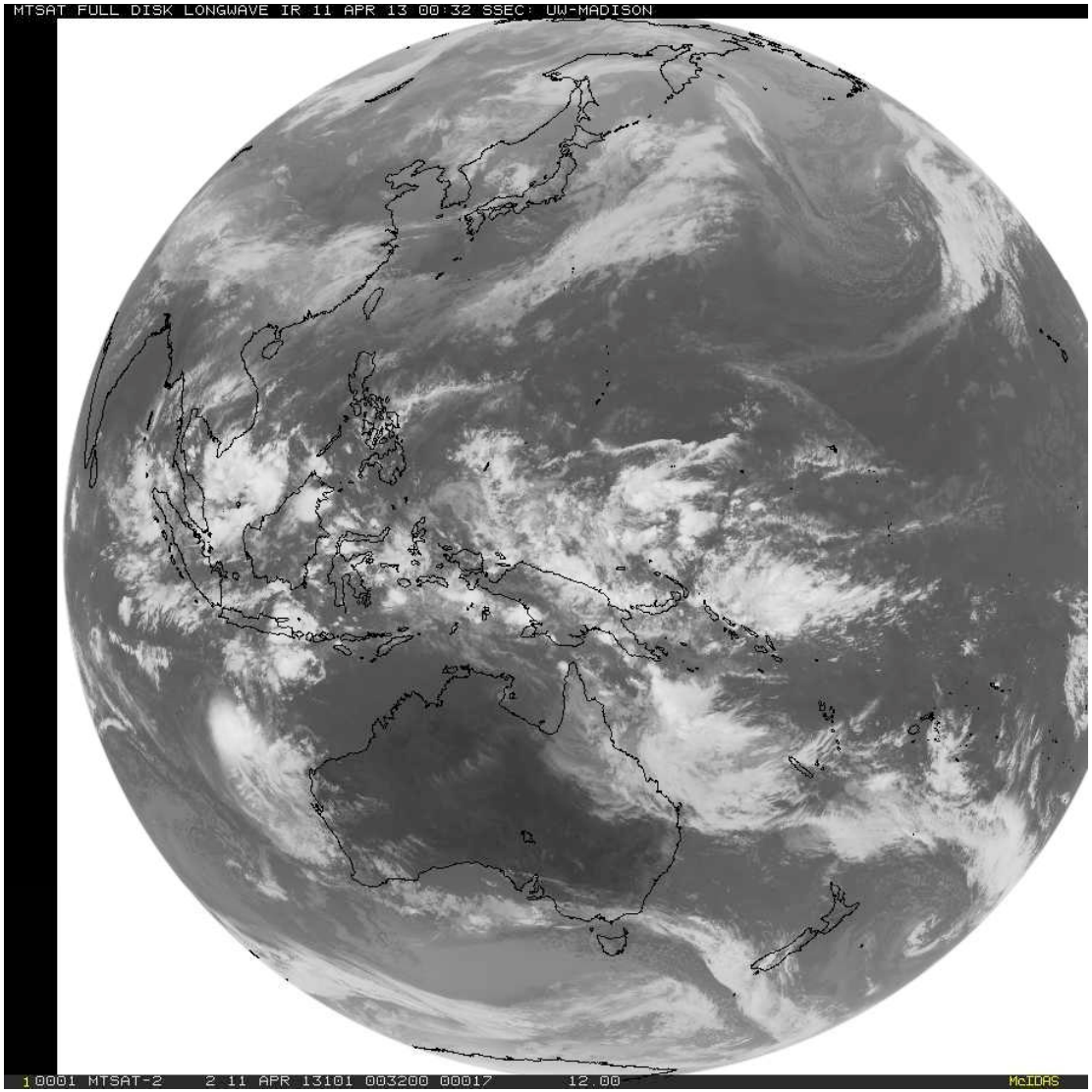
GOES-W Footprint



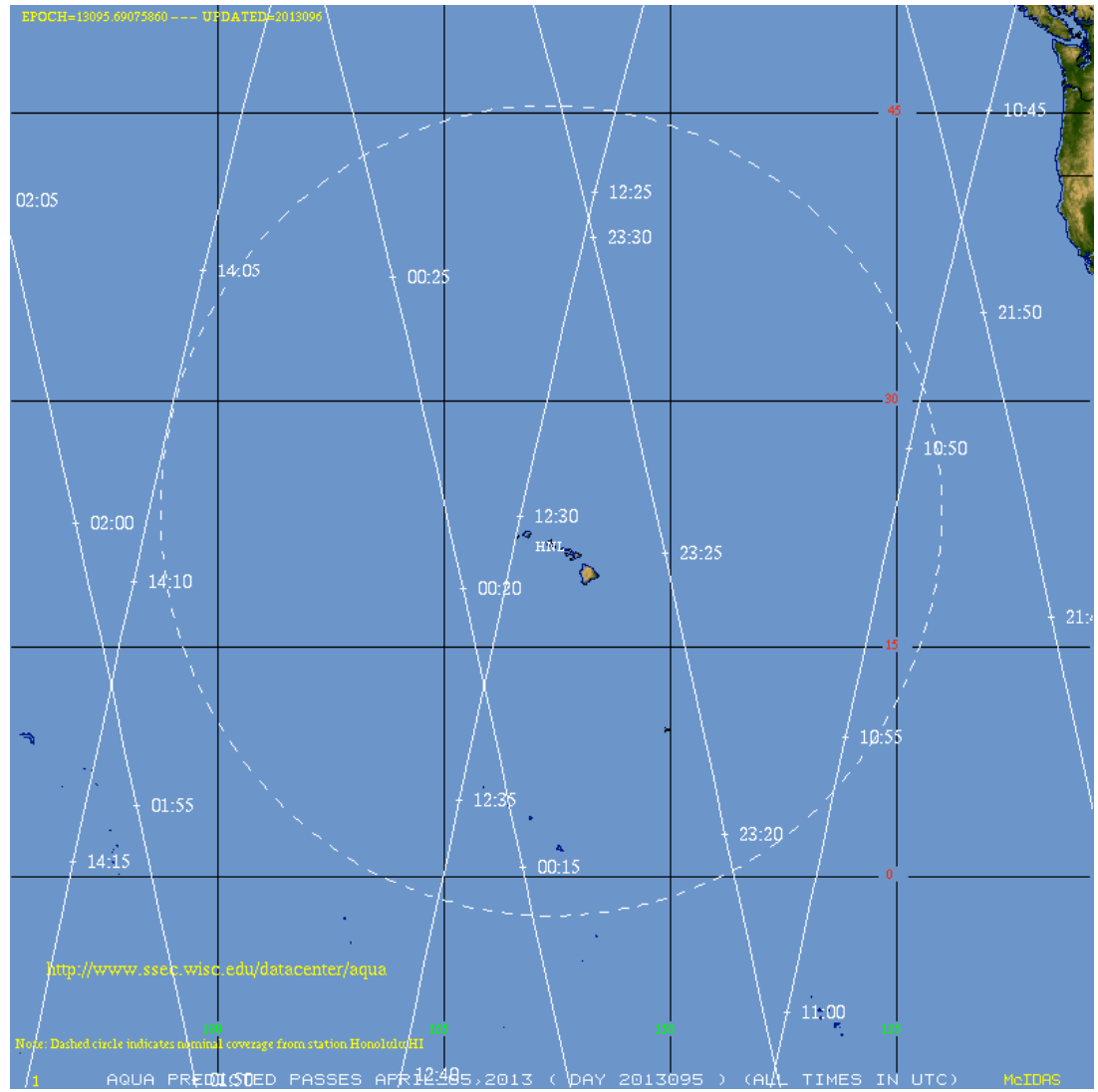
GOES-W Footprint

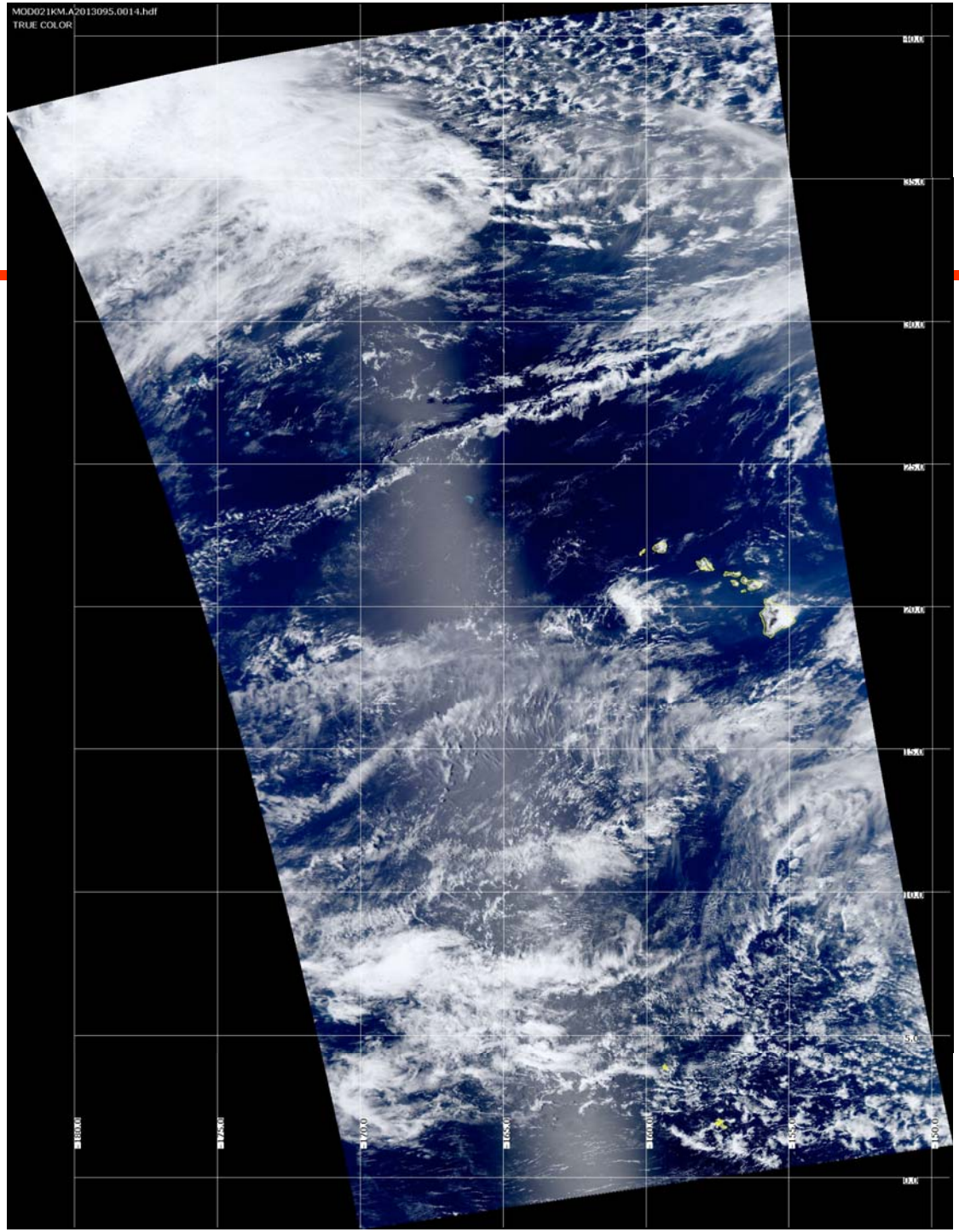


MTSAT Footprint



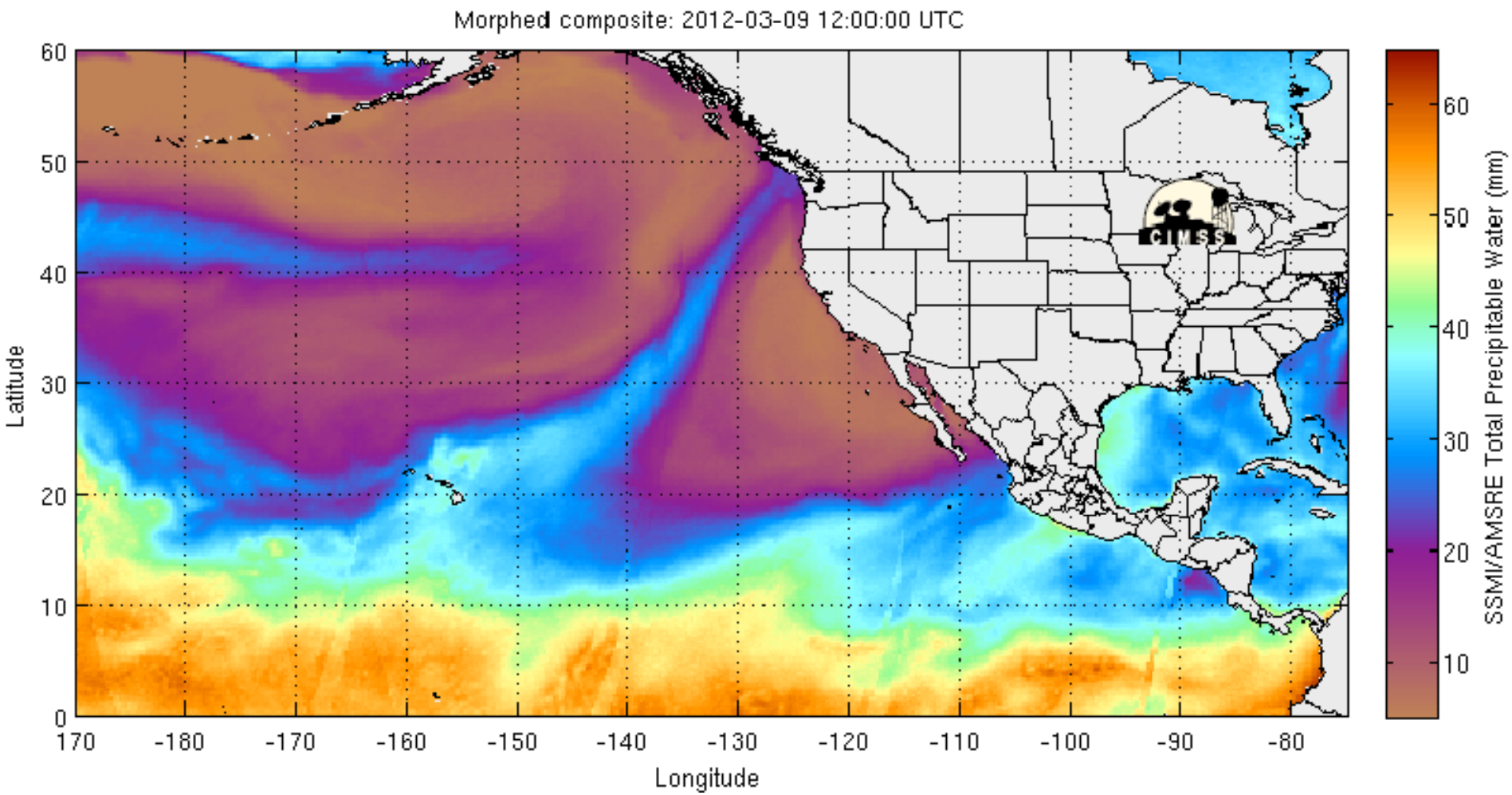
L/X Band Antenna, Range



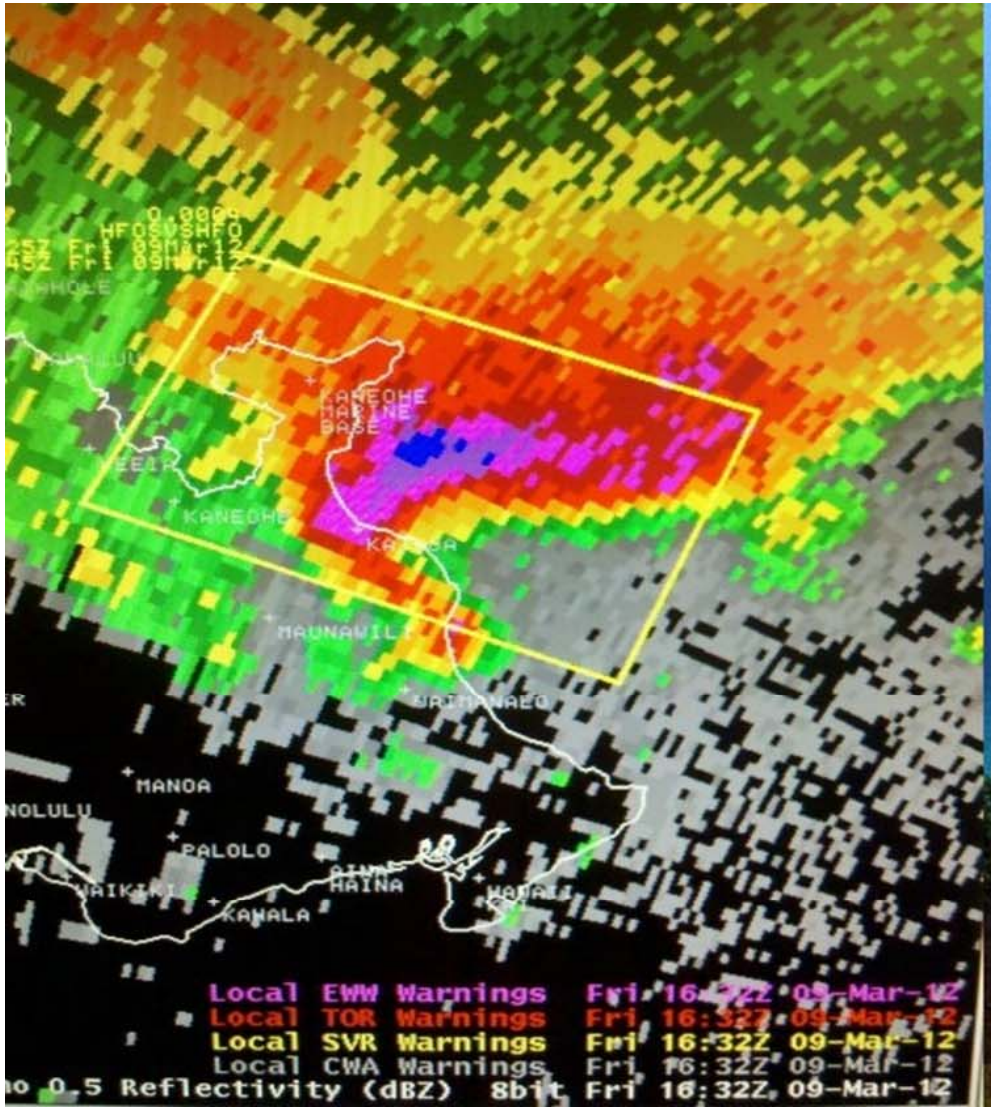


April 5, 2013
00:14 UTC
Aqua MODIS

Atmospheric Rivers



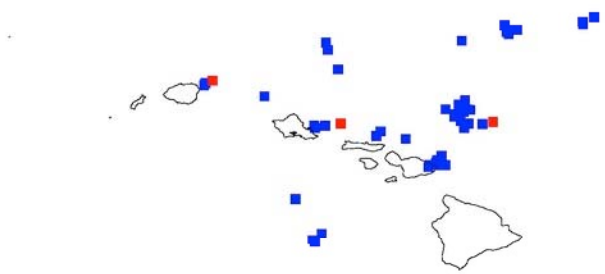
It’s not always paradise here



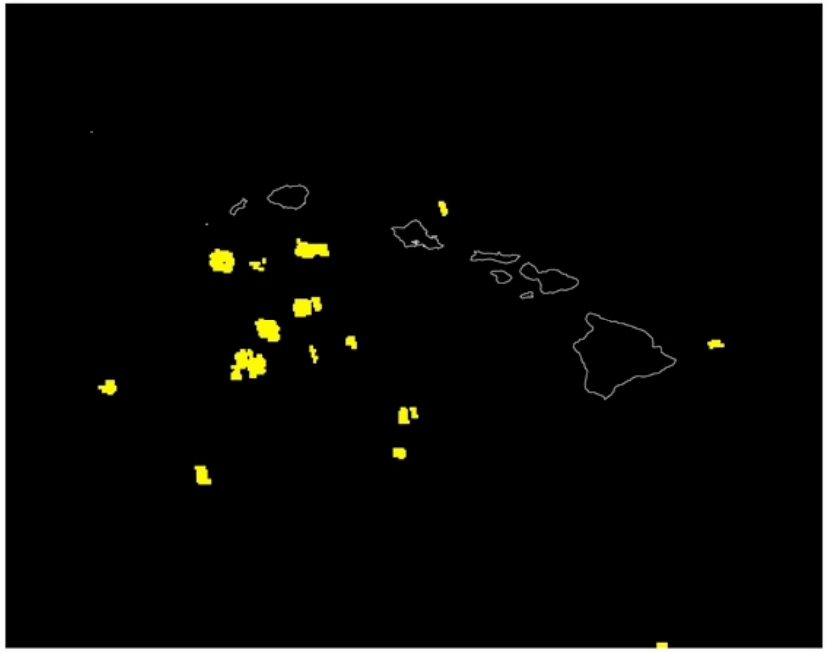
UW-CIMSS Cloud Top Cooling

Assesses vertical convective cloud growth using cloud top cooling rates based on boxed average 11 micron band brightness temperatures and GOES Imager data

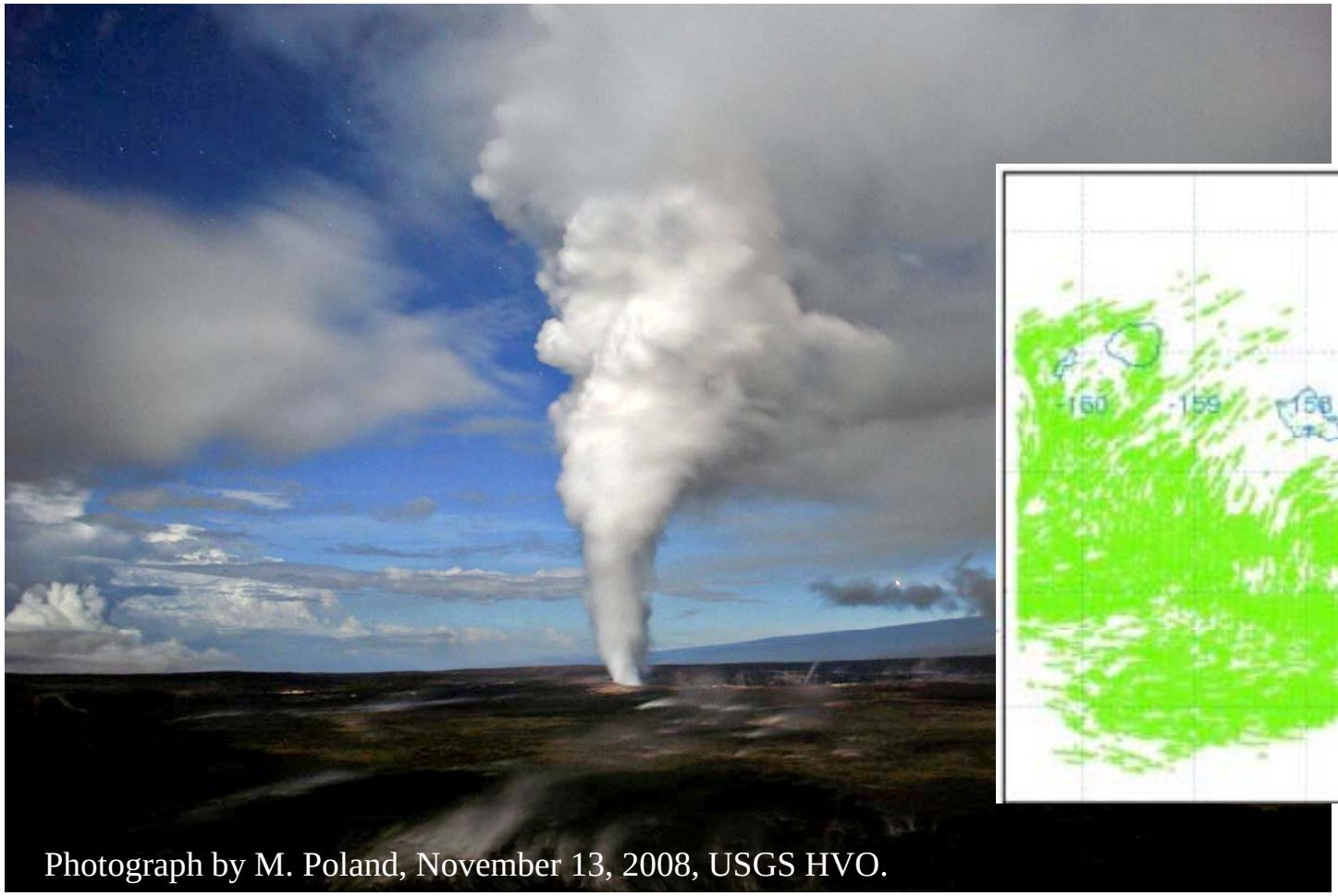
Daily Cumulative OT/TC Detects: 20120309 at 1645 UTC



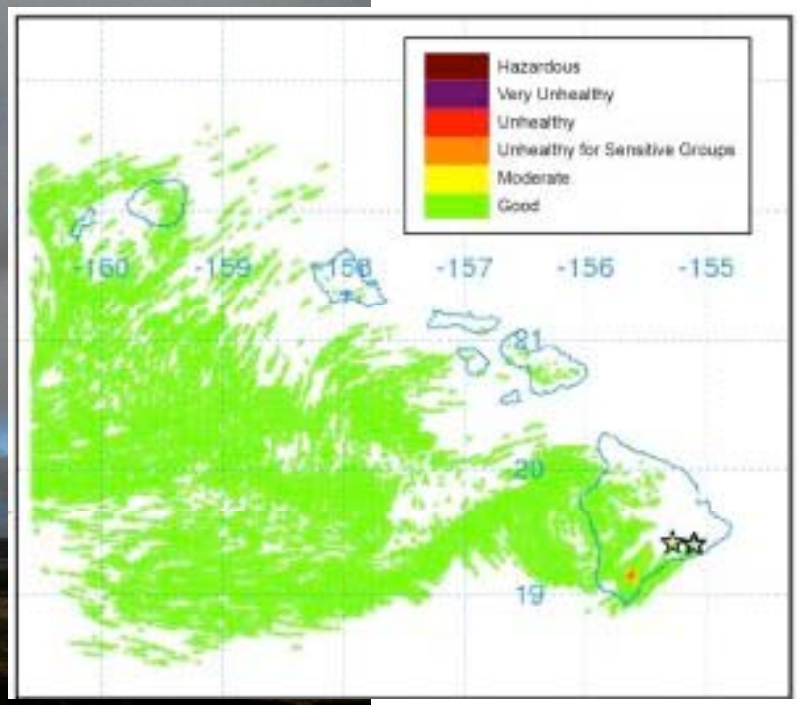
Daily Cumulative CI Hits: 20120309 at 1645 UTC



Hawaii Volcanoes
SO2 issues



Photograph by M. Poland, November 13, 2008, USGS HVO.



Summary

- Pacific Region covers a vast area void of observations
  - Satellite data is vital to our mission
    - Ground stations located in Hawaii and Guam
- Unique region in the NWS in diversity of comms and variety of offices/services
- Complex resources reflect a customized and innovative approach to meeting mission requirements

PR's Satellite Future

- GEO
  - Himawari 8/9 data reception uncertainties
    - Temporal and spatial availability
  - GOES-R (as GOES-West!)
    - Antenna costs
    - Data delivery to American Samoa forecasters
    - GOES-15 coverage of southern Pacific post GOES-R?
- LEO
  - Model and forecast supplements a very data sparse region
  - Additional valuable data
    - OSVW, Altimetry, tropical, etc…

Questions

Contact:

Bill Ward
NWS Pacific Region Headquarters
Environmental Scientific & Services Division Chief
Honolulu, Hawaii
Bill.Ward@noaa.gov
808.532.6415