NASA MSFC SPoRT

SPoRT paradigm, use of LANCE Data, Data capabilities

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SPoRT History

Mission:

Transition unique NASA and NOAA observations and research capabilities to the operational weather community to improve short-term weather forecasts on a regional and local scale.

- Established in 2002 through an unsolicited proposal from then-MSFC scientists Bill Lapenta, Steve Goodman, and Gary Jedlovec

- Supported by NASA's Research and Analysis Program and the Weather Focus Area (Tsengdar Lee) and supplemented by NASA, NOAA, and other proposal areas to build upon core capabilities and partnerships.

- Significant support from NOAA received through Satellite Proving Grounds (GOES-R 2009+ / JPSS 2011+) and Risk Reduction activities, and NOAA's Modeling, Analysis, Predictions, and Projections starting 2017

NASA SPoRT R2O/O2R Paradigm

- **Bridge the "Valley of Death" through interactive partnership with end users**

  o Maintain interactive partnerships with help of specific advocates

  o Integrate into user decision support tools

  o Create product training

  o Perform targeted product assessments

- Concept has been used to successfully transition more than 40 satellite datasets to operational users for nearly 15 years

- Other groups in the community have adopted this paradigm
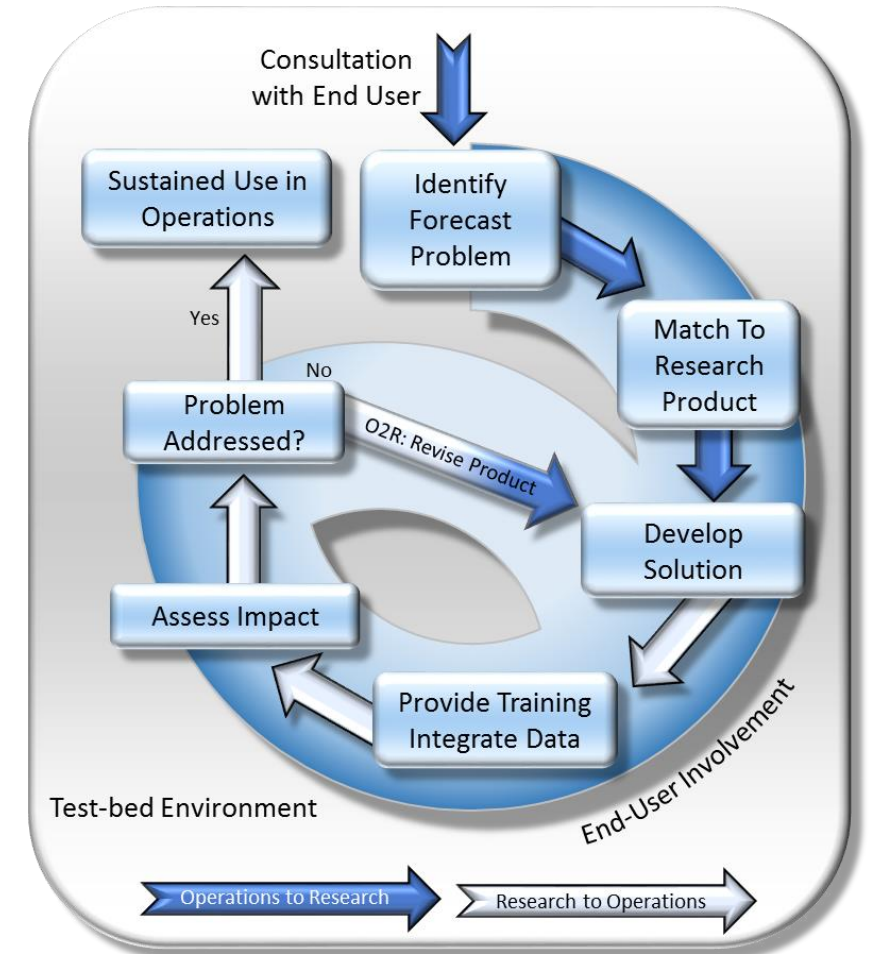
Current SPoRT Partnerships

SPoRT use of LANCE Data

- SPoRT Obtains MODIS and VIIRS data from LANCE
  - Principally interested in Alaska and North Atlantic regions
  - Data are limb- and bias-corrected by SPoRT and provided to NWS National Centers via LDM for use in NAWIPS and AWIPS
  - Single channel and RGB products are generated
  - Limb and bias corrections allow us to intercompare data among the various sensors, critical to RGB products
  - GOES data products are not very useful in these regions
  - LANCE has additional latency than obtaining data directly from GINA, but provides complete overpasses
  - SPoRT has found the MODAPS query tool extremely useful
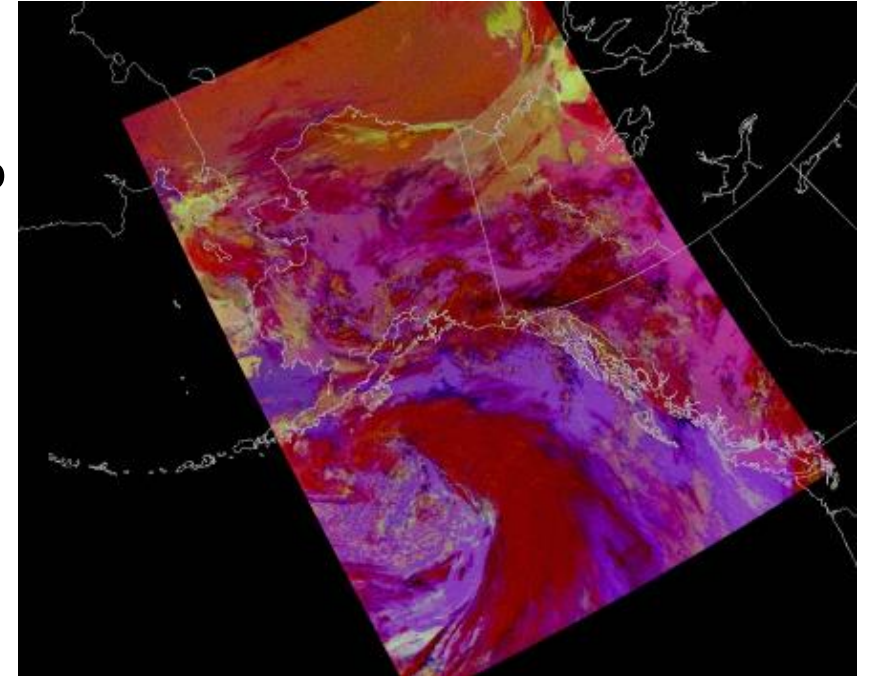
MODIS Alaska Nighttime microphysics

MSFC GOES-R Series Receiving Stations

- NASA MSFC Earth Science Branch has GOES-East and GOES-West GOES Rebroadcast (GRB) receivers and ingest data from ABI, GLM, EXIS, MAG, SEISS, SUVI

- SPoRT creates derived RGB data from GOES ABI that are used for internal research, provided to NASA GIBS, NOAA, NESDIS, NWS Forecast Offices

- Data are available at: https://geo.nsstc.nasa.gov/satellite

- We are able to make available via LDM services