### 2016 Highlights

**Summer ’16: Lightning Pseudo GLM**
- HWT; Aviation (CWSU Houston); Emergency Managers
- Continued use of the SPoRT pseudo-GLM flash density
- Demonstrating capabilities of GLM with ground-based LMA
- Positive reviews from multiple users with varying purposes
- Opportunity to compare with super-rapid scan GOES
- Traditional use of lightning jumps for severe weather decision support
- CWSU demonstrated utility to monitor initiation and trends of convection to aid briefings on TRACON gate closures
- Emergency managers use for lightning safety of events

**Fall ’16: Low Clouds and Fog: Multispectral Imagery**
- AFG (Scotty Berg); AFC (Michael Lawson); AJK (Ed Liske)
- Daytime Microphysics multispectral (i.e., RGB) imagery useful for public and aviation forecasts
- Optimal for use in Alaska summer when Nighttime Microphysics RGB has limited use
- The Daytime Microphysics RGB shows thick mid-level stratus in bright greenish tones with some tan coloring while the blues/pinks represent low-level stratus of varying thickness.
- Forecasters frequently commented that the efficient depiction of cloud features aided TAF forecasts
- Forecasters found Daytime Microphysics RGB has similar utility of Nighttime Microphysics for anticipating aviation hazards.

**Winter ’17 Cold Air Aloft: Gridded NUCAPS**
- Anchorage CWSU (Kristen Nelson, Gail Weaver, Carrie Haisley, Chris Waterhouse, Raymond McLeod)
- Joint effort between SPoRT, CIMSS, CIRA, GINA, and STC to provide plan view display of NUCAPS temperature to identify the cold temperatures hazardous to aviation
- Product captures Cold Air Aloft events (≤ 65°F) under which airliner fuel can freeze
- Use of satellite observations over the vast, data sparse arctic domain allows forecasters to observe the 3D extent of the cold air and increase confidence in issuing Meteorological Impact Statements

### All 2016 Activities

#### Spring ’16: Multispectral Imagery
- OPC/WPC; OPG
- OPC regularly uses the Air Mass RGB imagery to analyze and monitor cyclone development and anticipate high winds
- First formal evaluation of GOES-R ABI RGB capabilities performed at OPG in March/April 2016

#### Summer ’16: Convection: Gridded NUCAPS
- HWT - Experimental Warning Program
- Extension of Cold Air Aloft work funded by JPSS PG/RR
- Gridded NUCAPS Temperature and Mixing Ratio were available on plan view and cross section fields to diagnose the pre-convective environment.

#### Fall ’16: Hurricanes: CrIS/ATMS NUCAPS
- National Hurricane Center
- JPSS funded project to explore the utility of NUCAPS Soundings and Ozone products to diagnose extratropical transition
- Forecasters participated in post analysis review of Hurricane Matthew

#### Fall ’16 Rainfall Rates: GPM and IMERG
- Alaska WFOs and APRFC, ABO WFO
- Funded by NASA to test applications of research PMW rain rate algorithm derived from GMI, ATMS, SSMIS, etc. in operational forecasting
- Follow-up of 2015 assessment to evaluate new algorithm updates

### 2017 All Activities

**Fall ’17: Training: Applications Library and AWIPS Integrated Reference (AIR)**
- SPoRT RGB Quick Guides are operationally available in the AIR tool
- Allows region-specific application examples submitted by developers and/or forecasters to be organized and displayed
- SPoRT is developing 1-minute, regional application examples through collaborations with NWS forecasters for use in the AIR tool
- Visit the SPoRT Applications Library for more examples

#### Upcoming 2017 Activities
- HWT: Gridded NUCAPS
- Alaska CWSU: Gridded NUCAPS
- WFOs/CWSUs and Emergency Managers: GLM operational assessment
- GOES-16: Multispectral Imagery
- Alaska WFOs: VIIRS Multispectral Imagery and Cloud Property products
- Alaska WFOs and RFC: revisited merged IMERG/HQprecip product