**JPSS/GOES-R PROVING GROUND SEMINAR**

|  |  |
| --- | --- |
| TITLE | Utilization of GOES-R and JPSS for Quantifying the Horizontal Extent of Hazardous Low Clouds |
| SPEAKERS | Mike Pavolonis  NOAA-NESDIS Center for Satellite Applications and Research |
| DATE & TIME | Monday, November 24, 2014  12 – 1 PM Eastern Time (10 am MDT) |
| LOCATION | Aerospace Building  8th Floor Conference Room  10210 Greenbelt Rd  Lanham, MD 20706 and Via Webinar (See below) |
| ABSTRACT | Low ceiling and visibility is a weather hazard that nearly every forecaster, in nearly every National Weather Service (NWS) Weather Forecast Office (WFO), must regularly address. In addition, national forecast centers such as the Aviation Weather Center (AWC) Alaska Aviation Weather Unit (AAWU), and the Ocean Prediction Center (OPC) are responsible for issuing low ceiling and visibility related products. As such, reliable methods for detecting and characterizing hazardous low clouds are needed. Traditionally, hazardous areas of Fog/Low Stratus (FLS) are identified using a simple stand-alone satellite product that is constructed by subtracting the 3.9 and 11 μm brightness temperatures. The 3.9-11 μm brightness temperature difference (BTD) has several major limitations. In an effort to address the limitations of the BTD product, the GOES-R Algorithm Working Group (AWG) developed an approach that fuses satellite, Numerical Weather Prediction (NWP) model, Sea Surface Temperature (SST) analyses, and other data sets (e.g. digital surface elevation maps, surface emissivity maps, and surface type maps) to determine the probability that Instrument Flight Rules (IFR) conditions are present. IFR conditions are characterized by a cloud ceiling below 1000 ft and/or a surface visibility less than 3 miles. Satellite and non-satellite predictors are used in a naïve Bayes model to determine the probability of IFR at the resolution of the satellite data. The GOES-R fog/low cloud algorithm is an enterprise system in that it can use satellite data from a variety of current data sensors (VIIRS, GOES, MTSAT, MODIS, AVHRR and SEVIRI) and future operational sensors (ABI and AHI) and NWP data from a variety of models (GFS, RUC, and RAP). In addition, recent research aimed at blending GOES with VIIRS to create a very high-resolution depiction of fog boundaries within valleys has shown great promise. The FLS products are available in AWIPS and have been evaluated within NWS operations during the last three years as part of the Satellite Proving Ground. Forecaster feedback collected so far has been predominantly positive and product improvements have been made as a result of the feedback. References to these products within Area Forecast Discussions (AFD’s) indicate that the products are influencing operational forecasts. An overview of the FLS algorithm, with an emphasis on the efforts to blend GOES with VIIRS, will be given. In addition, the relevance of the FLS products to NWS operations will be discussed. |
| REMOTE ACCESS | 866-802-3950  pc:7288352  NOAA JPSS,OFFICE invites you to attend this online meeting.  Topic: JPSS Science Seminar  Date: Monday, November 24, 2014  Time: 12:00 pm, Eastern Standard Time (New York, GMT-05:00)  Meeting Number: 743 558 193  Meeting Password: jpss2014  -------------------------------------------------------  To join the online meeting (Now from mobile devices!)  -------------------------------------------------------  1. Go to https://mmancusa.webex.com/mmancusa/j.php?MTID=m65c124f4e6fc1104e41f95dbf69d32b8  2. If requested, enter your name and email address.  3. If a password is required, enter the meeting password: jpss2014  4. Click "Join". |
| CONTACT | Dr. Mitch Goldberg, [mitch.goldberg@noaa.gov](mailto:mitch.goldberg@noaa.gov) |
| FILES | Available upon request |