GOES-R Proving Ground
CIRA / RAMMB Progress Report

PG All-Hands Meeting
06 January 2014

Outline

- **Systems Report – Deb Molenar**
- **VLab Virtual Training & new VISIT session – Bernie Connell**
- **Selected User Interactions and Examples**
  - **Snow/Cloud discriminator imagery - based on VIIRS**
  - **Wave cloud along the Front Range with DNB (18 Dec)**
  - **Giant iceberg in Antarctica – Nov to Dec 2013**
  - **GeoColor loop of U.S. Arctic Air Outbreak replacing huge area of fog - Dec 3-9**
- **Conferences and Meetings**

Systems Report

AWIPS II

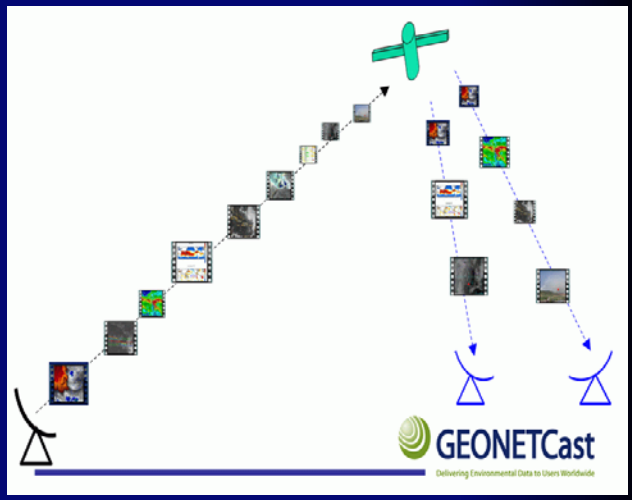
- CIRA Orographic Rain Index (ORI) products for US west coast, Hawaii and Puerto Rico are now available for AWIPS II. Product for Alaska Region is in the works.
- AWIPS II software updates
  - 2 AWIPS II systems have been upgraded to OB13.5.2.
  - 1 system will remain at 13.5.1 until OB14.x/64 bit release.
  - 1 system has been configured w/ 64 bit RH 6.4 in preparation for OB14.x.
- AWIPS II defect DR 16841 "McIDAS and satellite plugins need an overwrite capability" was created on Nov. 25 and assigned High priority. A Raytheon-ASM developer has been assigned. Approved Release: **14.2.1**. This release is scheduled to be available for sites in May 2014.
  - This fix will allow the database overwrite of forecast simulated WRF & NAM imagery.

- Participation in the SPoRT led Experimental Products Development Team (EPDT) bi-weekly telecons is ongoing.
- Participation in the Raytheon AWIPS II Developers Forum is ongoing.
- Participation in the monthly NDE-AWIPS telecons is ongoing.
  - Efforts are underway with NASA/IDPS to determine feasibility of limited near real-time access to global GRAVITE VIIRS SDR data until NDE is ready to supply the products.
  - Could provide a resource for OCONUS AWIPS II products.

WMO VLab Virtual Training
GEONETCast- Americas

December 3, 4, and 5, 2013

English and Spanish versions



Hosted by:

CIRA, NOAA, WMO Centers of Excellence in Costa Rica, Barbados, Brazil, and Argentina

* Follow-up to NOAA Satellite conference in April 2013

Collaborations and presentations from:

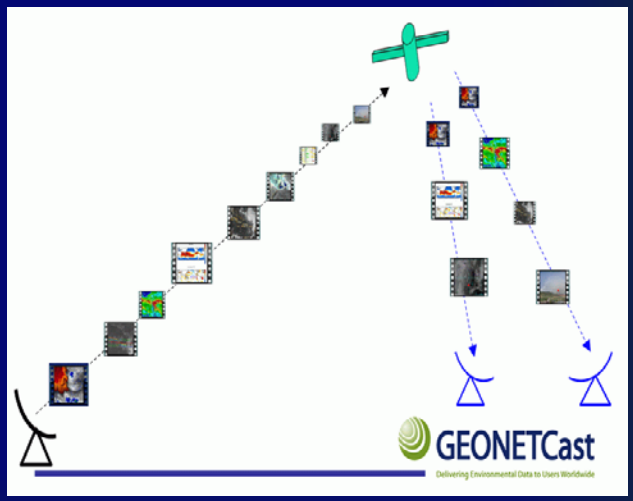
CIRA, WMO Space Program, CPTEC/INPE and LAPIS in Brazil, NOAA, UCR and IMN in Costa Rica, CIMH in Barbados, CIMSS, NMS in Belize, MARN in El Salvador

Session recordings and ppt presentations:

http://rammb.cira.colostate.edu/training/rmtc/geonetcast_event_en.asp

Topics:

A. Introduction, operations, and capabilities of GEONETCast (GNC)
B. Disaster mitigation products and the importance of GNC as a risk-reducing global data access system
C. Software for visualization (Sigma and McIDAS-V); Introduction to GOES-R



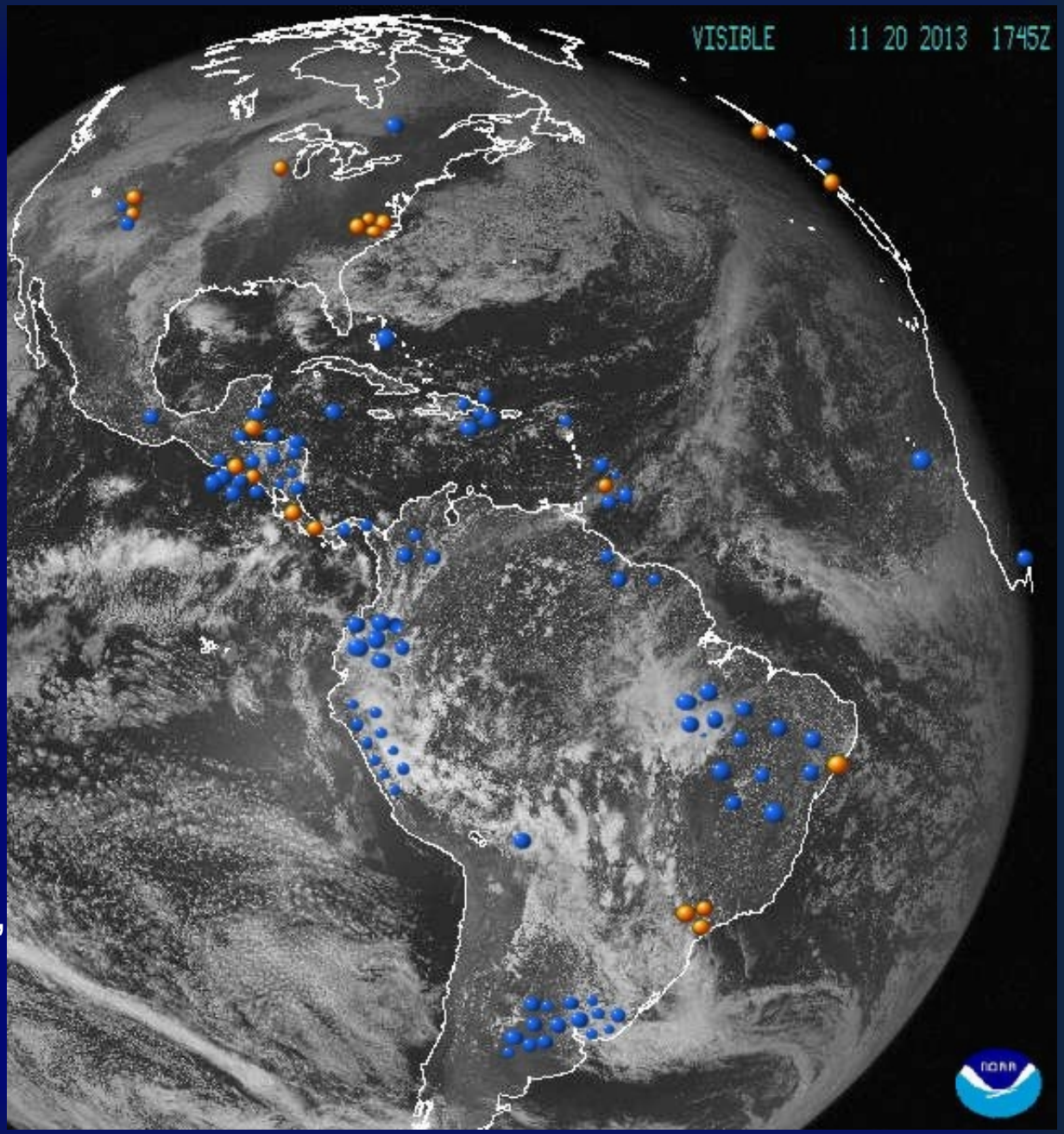
Participation from
29 countries
111 reg. individuals

Argentina, Bahamas, Barbados, Belize,

Bolivia, Brazil, Canada, Cape Verde, Cayman, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Germany, Ghana,

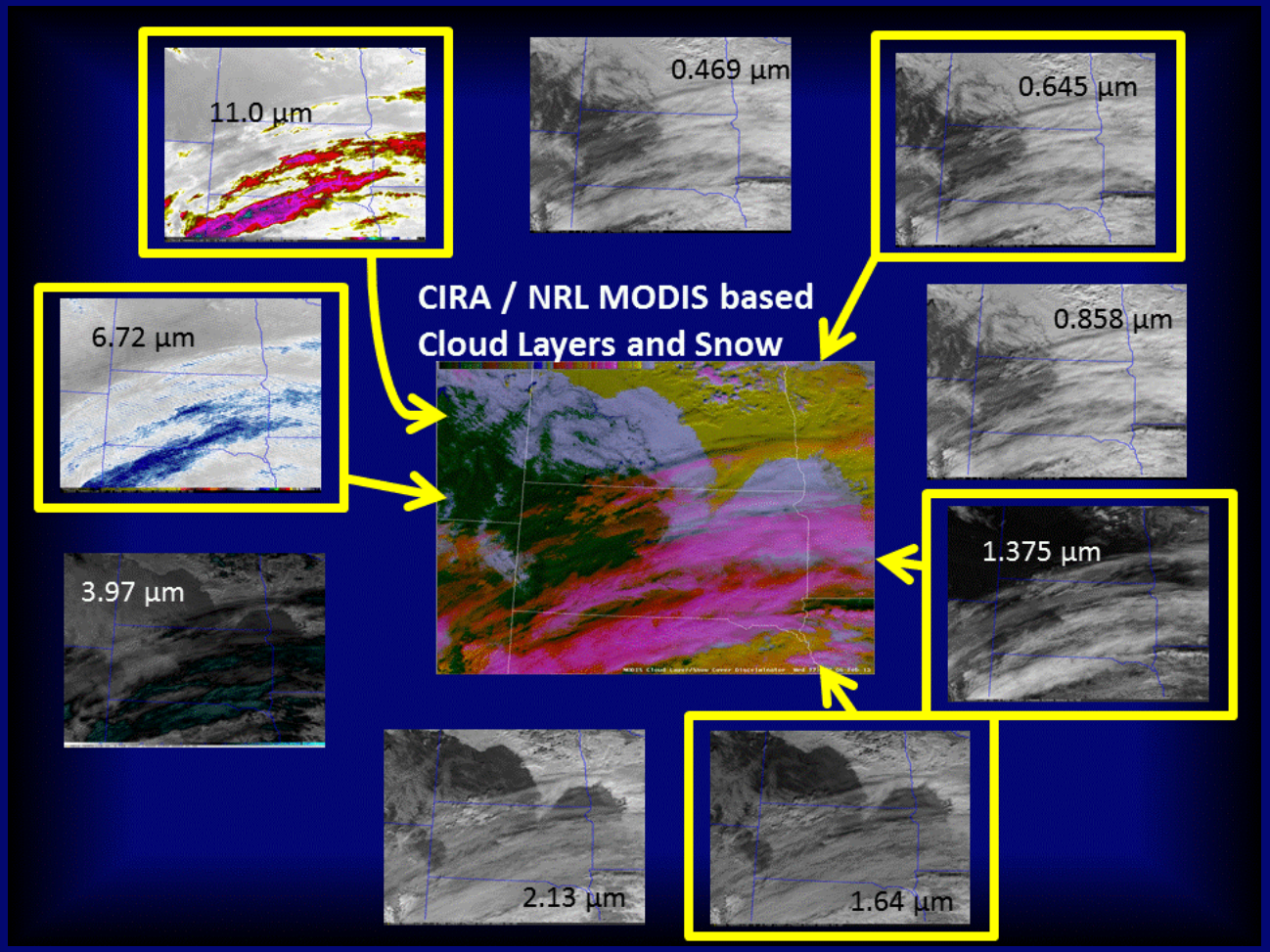
Great Britain,

Guatemala, Guyana, Honduras, Mexico, Nicaragua, Panamá, Peru, St. Kitts and Nevis, Suriname, Switzerland, the USA, and Uruguay



New Session!

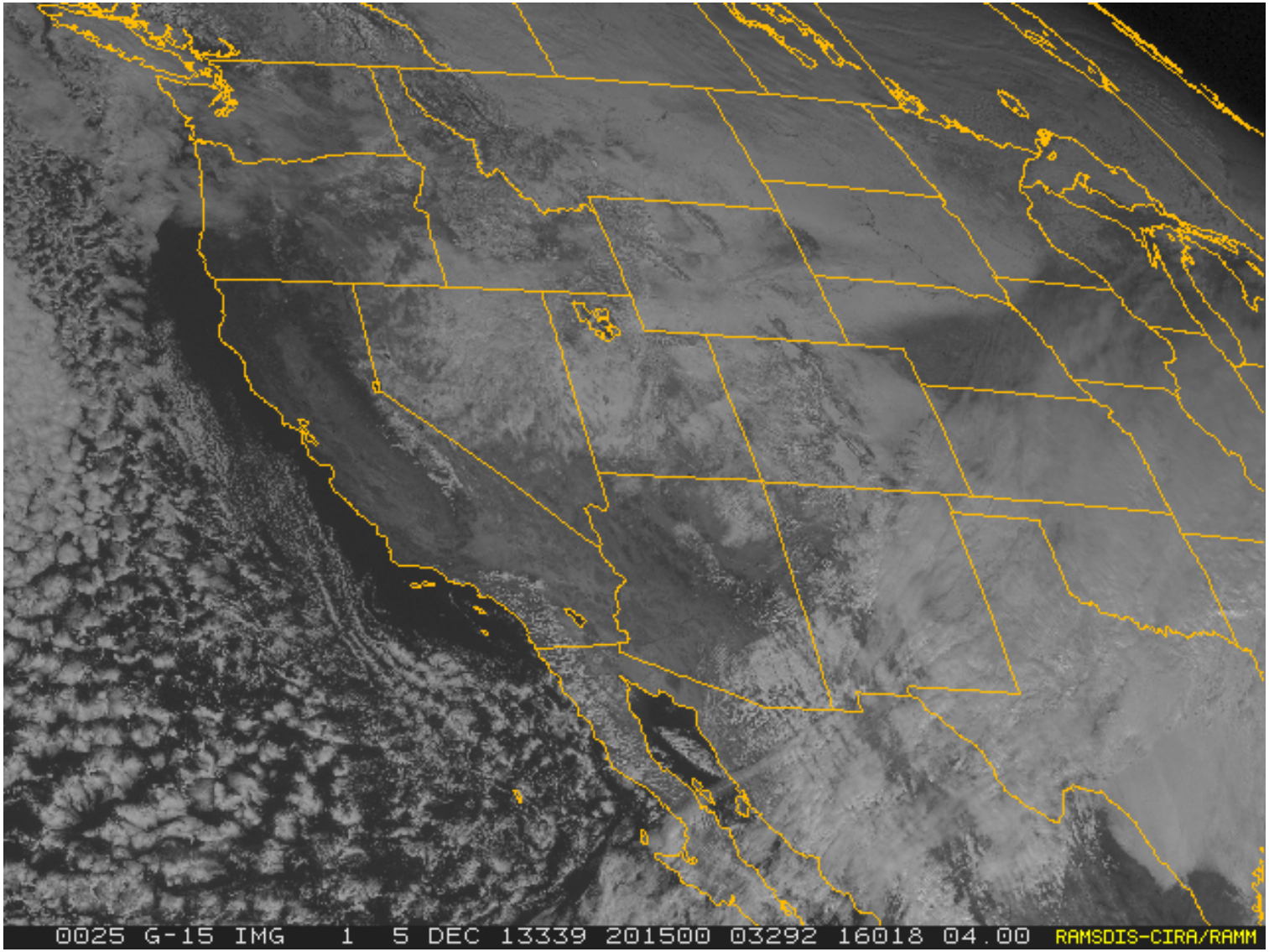
Identifying Snow with Daytime RGB Satellite Products



Premiering
January 2014
30 minutes

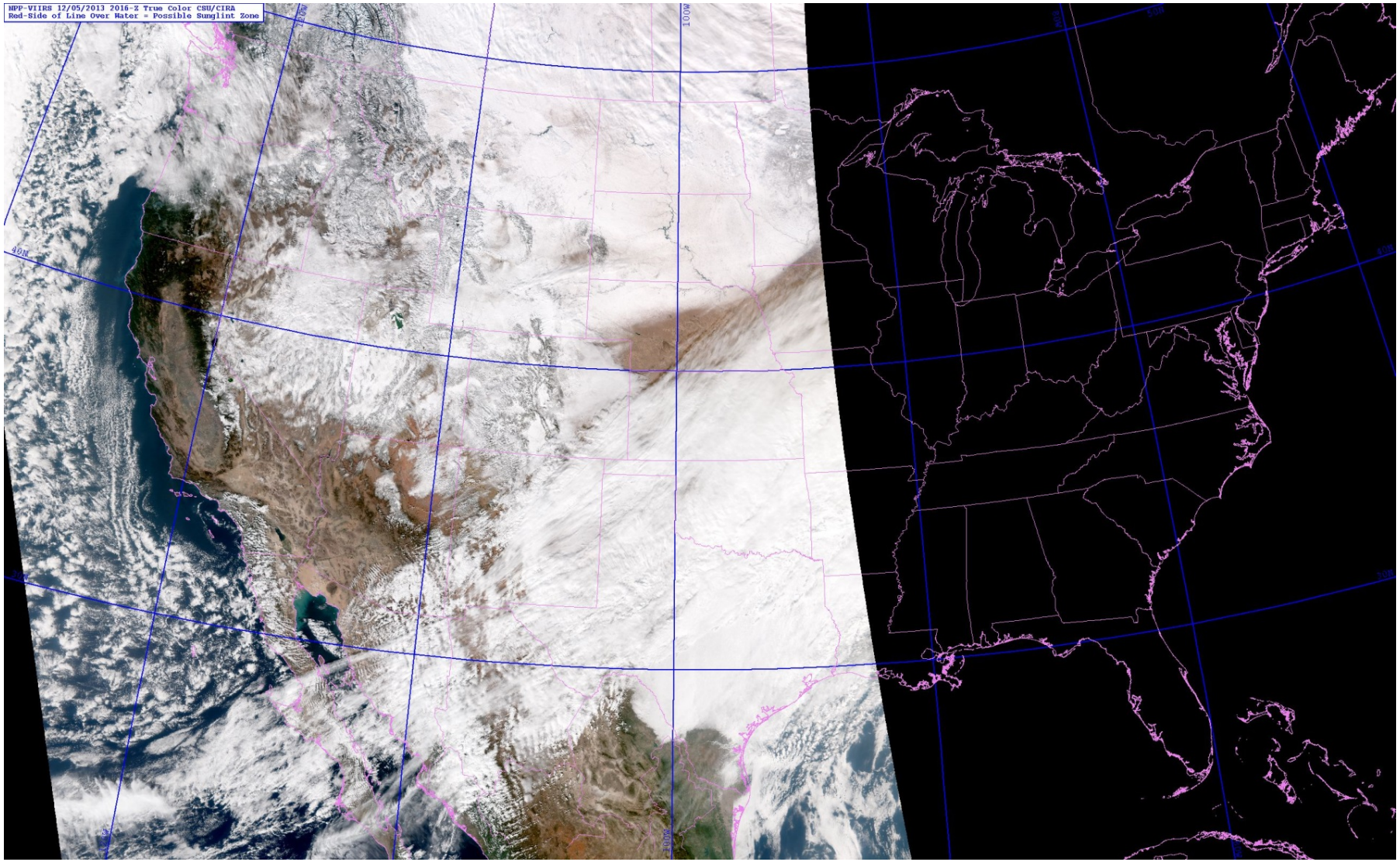
Check the VISIT calendar for dates and times
http://rammb.cira.colostate.edu/training/visit/calendar.asp

Discriminating clouds from snow – 5 Dec example



05 December 2013/2015 UTC GOES-West VIS

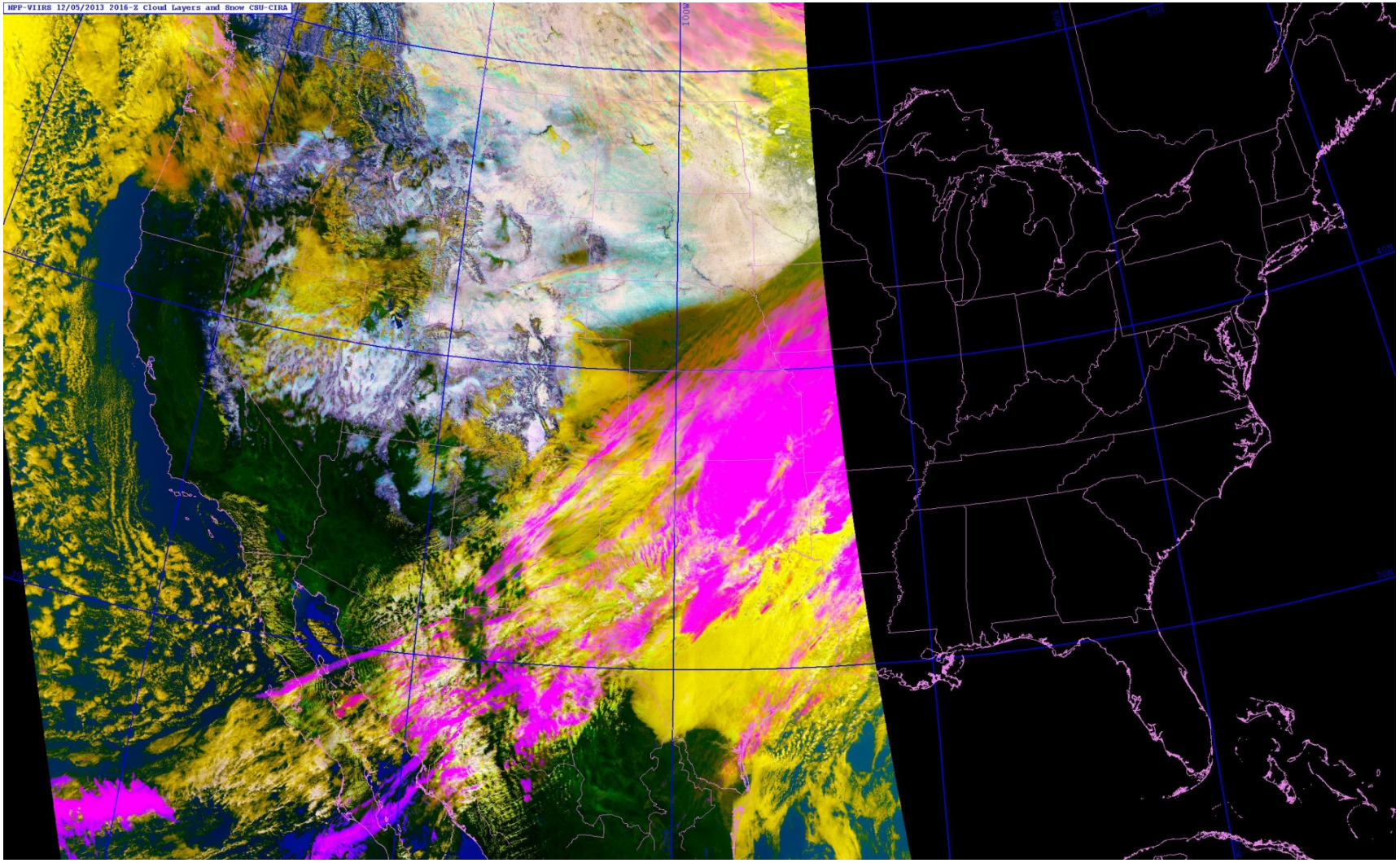
VIIRS True Color Image



05 December 2013/2016 UTC VIIRS true color image

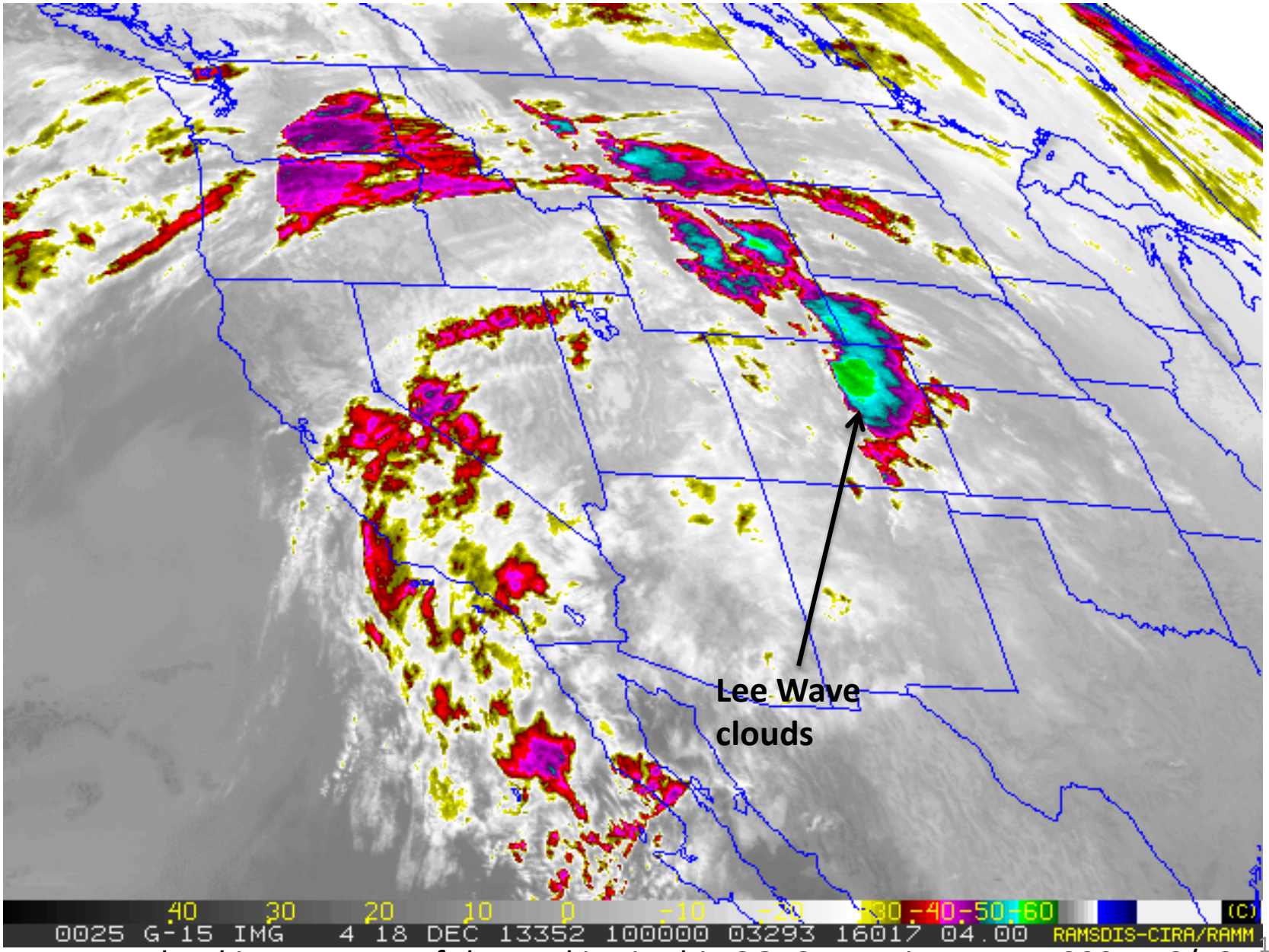
VIIRS Snow-Cloud-Discrimination Product

3-color-technique 05 December 2013/2016 UTC



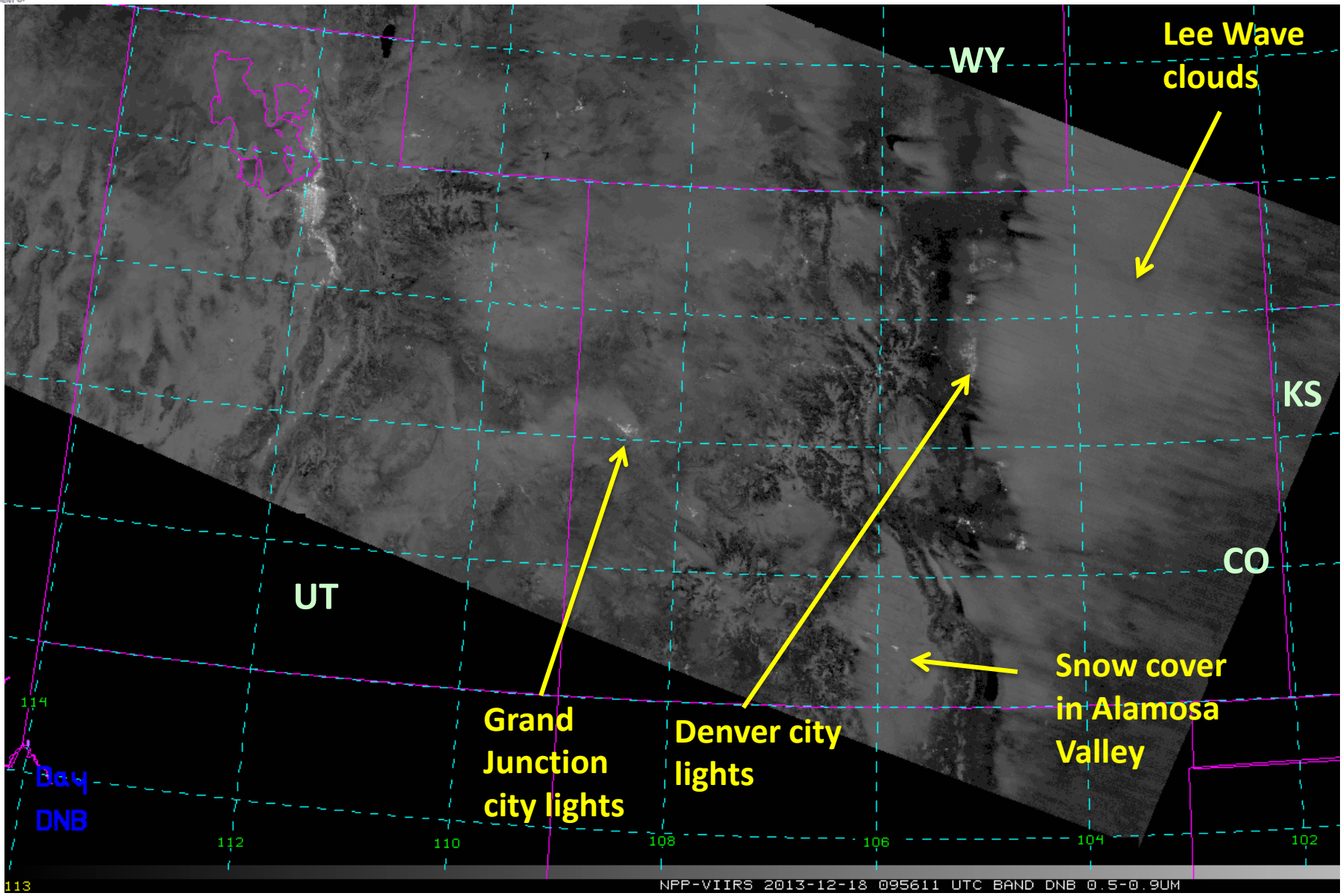
- First time based on VIIRS bands (previously only MODIS-based)
- Demonstrating future capabilities of ABI
- White/blue areas denote snow cover, yellow areas denote low cloud cover (liquid), magenta areas denote high cloud cover (mixed/ice), and green areas denote clear sky surface.

Lee wave cloudiness on 18 Dec – IR vs. VIIRS DNB



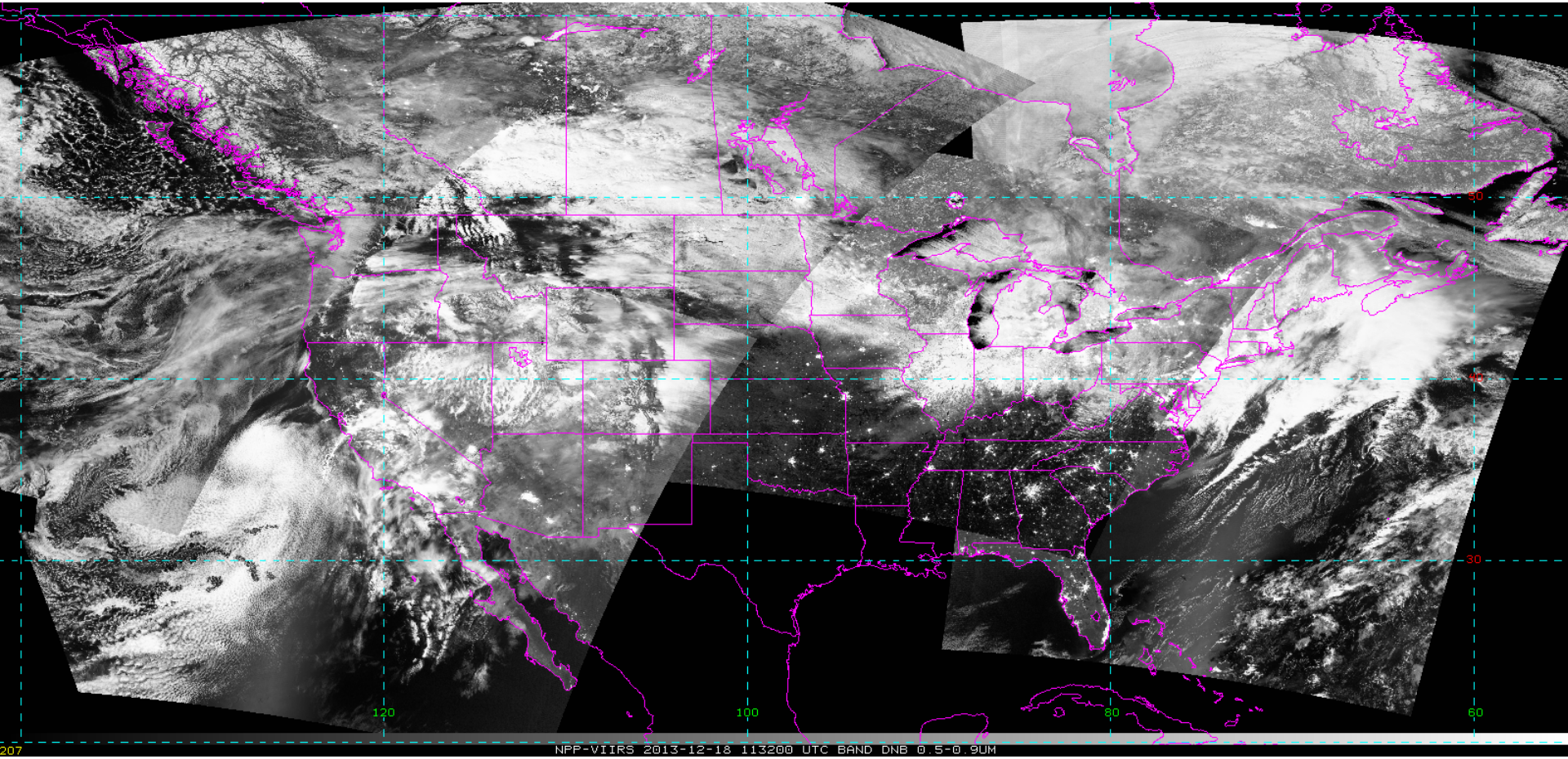
A large wave cloud is seen east of the Rockies in this GOES-15 IR image at 1000 UTC/18 Dec

Lee wave cloudiness on 18 Dec – VIIRS DNB image

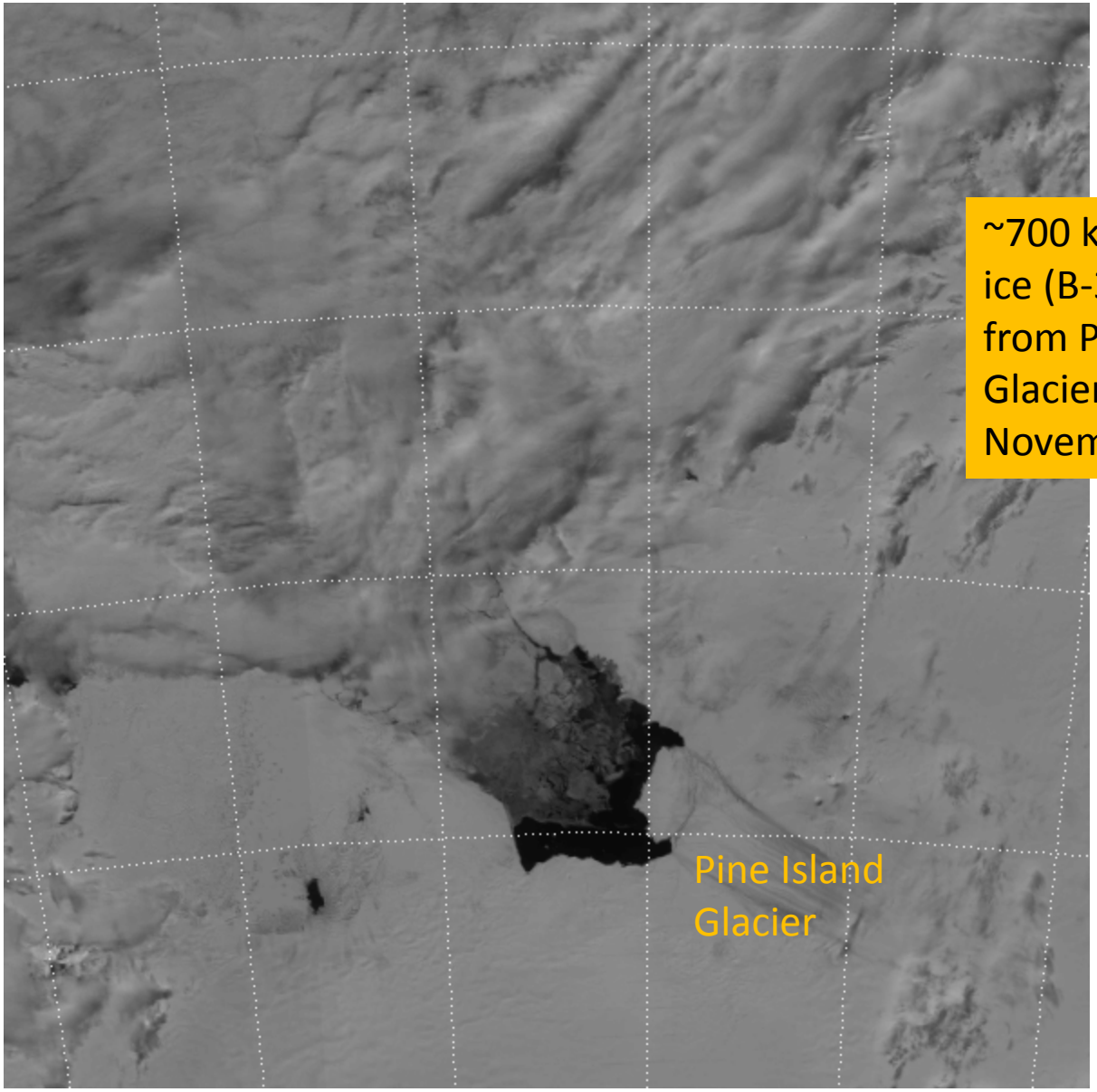


This DNB image swath is at 0956 UTC/18 Dec

CONUS-wide mosaic of the VIIRS DNB on 18 Dec

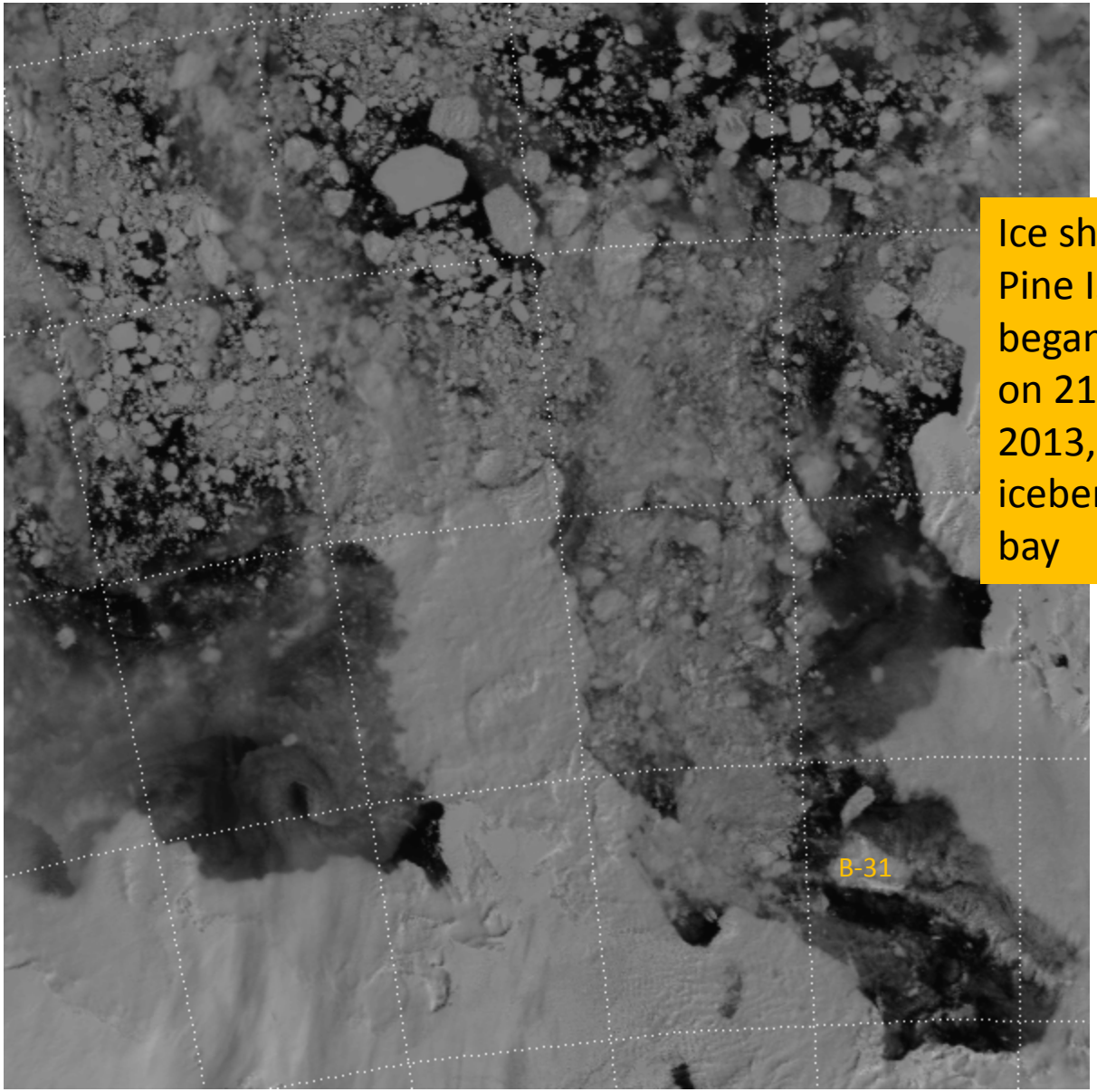


Calving of B-31 iceberg from Pine Island Glacier, Antarctica



Loop of VIIRS Near Constant Contrast imagery from 7-18 November 2013

Ice Sheet breakup near Pine Island Bay, Antarctica



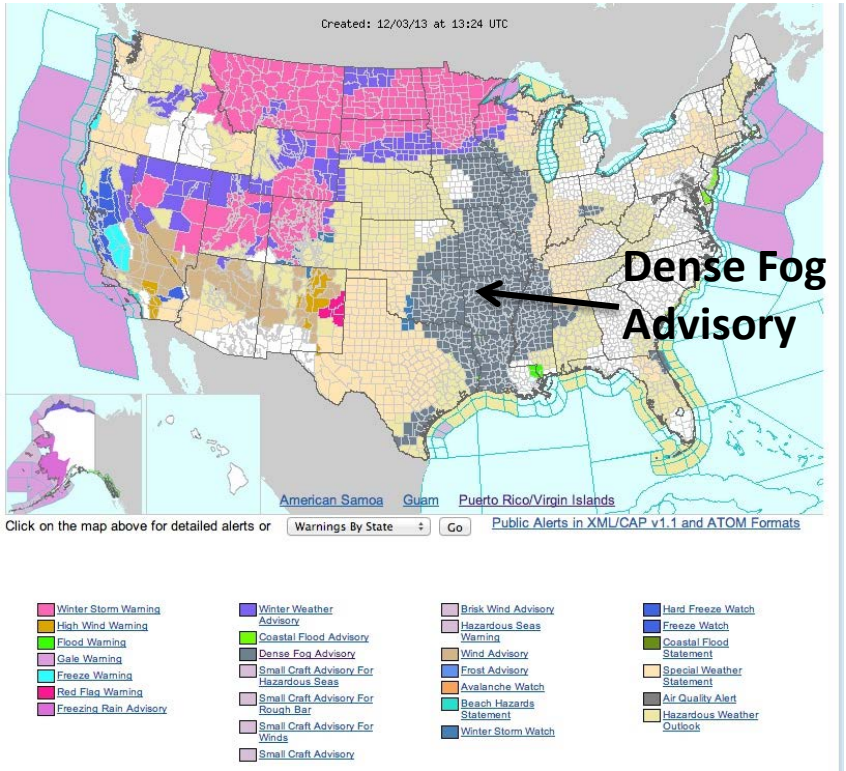
Ice sheet west of Pine Island Bay began to break up on 21 December 2013, with B-31 iceberg still in the bay

Loop of VIIRS Near Constant Contrast imagery from 20-26 December 2013

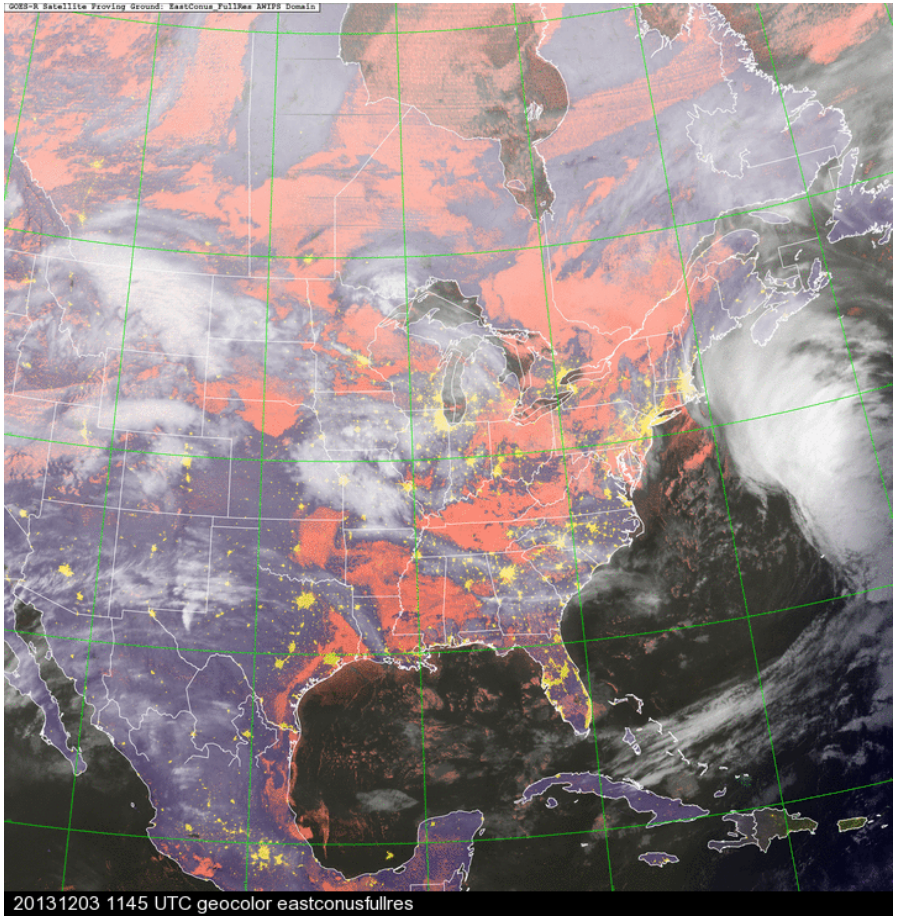
For more: http://rammb.cira.colostate.edu/projects/npp/blog/

Artic invasion in early December 2013

Widespread fog and low cloudiness on 3 December preceded the invasion of Arctic cold air into the nation. The next slide gives an overview of this change using a 7-day loop of GeoColor imagery (from .

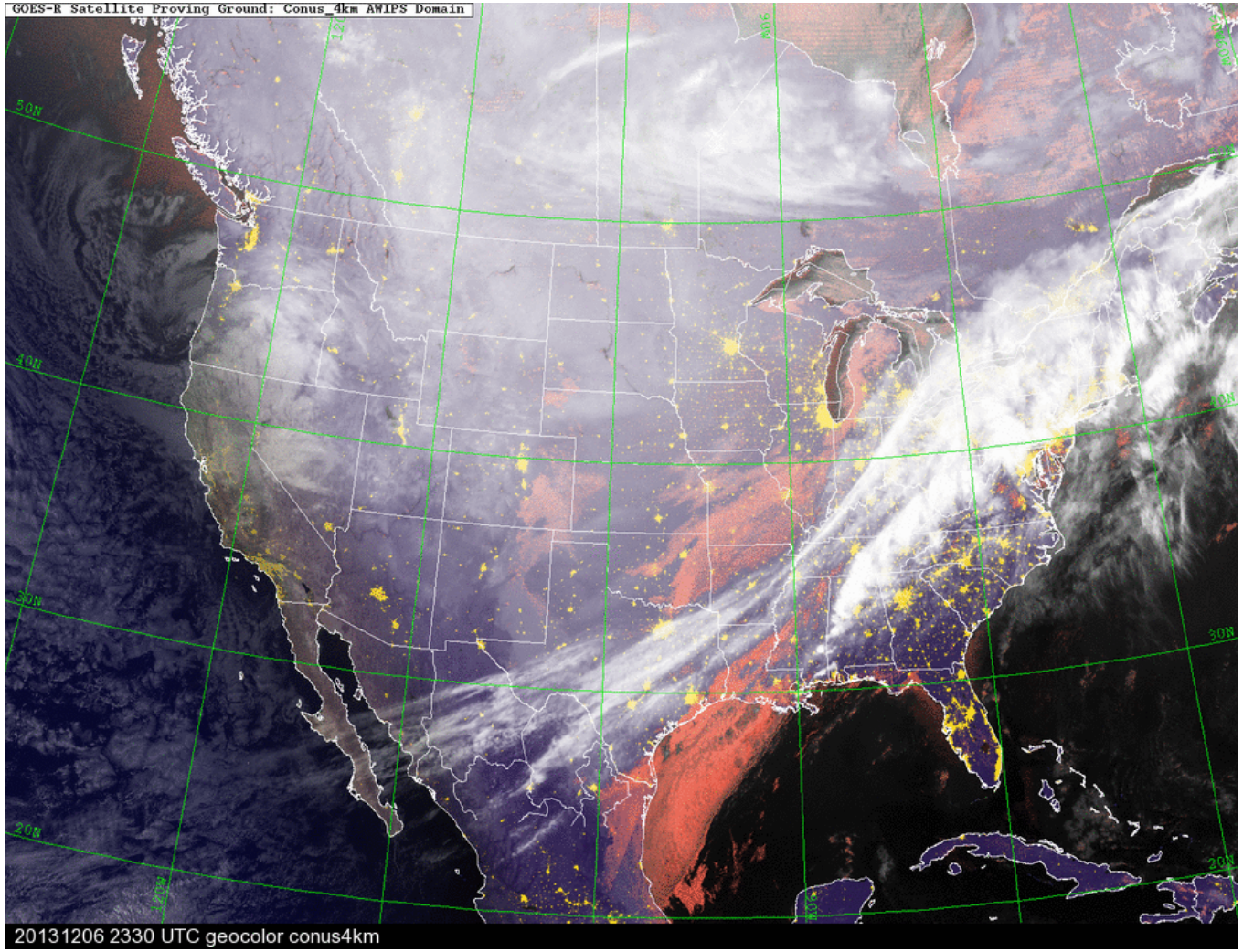


NWS Watches, Warnings and Advisories as of 1324 UTC on 3 Dec 2013



GeoColor imagery on 1145 UTC 3 Dec:
Fog/low clouds = magenta, higher clouds = white, true color background with city lights

Arctic Air Outbreak 3-9 December 2013
GeoColor 7 day hourly loop



http://rammb.cira.colostate.edu/templates/loop_directory.asp?data_folder=dev/micke/loops/arctic_front_geocolor_conus4km_201312091447_hourly&image_width=960&image_height=737

Conferences / Meetings

Recent:

- **Nov 6 - 7** **GOES-R/JPSS COMET Working Group Meeting**
  Bernie Connell, Dan Bikos

***Upcoming*:**

- **Feb 3 - 6** **AMS Annual Meeting – Atlanta**
  (Dan Lindsey, Ed Szoke, Steve Miller, Don Hillger)

- **March 10 - 14** **NOAA Satellite Science Week (virtual) - Madison**

- **March 31 - April 4: AMS Conference on Hurricanes and Tropical Meteorology**
  Mark DeMaria, John Knaff, Andrea Schumacher, Kate Musgrave, Jack Dostalek, Galina Chirokova

Any Questions ?