Imagery-Cloud Applications Outbrief
Basic questions

• Describe how SNPP/JPSS products provide continuity from legacy POES, METOP, DMSP, EOS?
  – Or is SNPP/JPSS a new capability for our application?
• What benefits or improvements do you expect from SNPP/JPSS?
  • Expected impact (low, medium, high) and why?
• Provide Details on:
  – when do you plan to use the SNPP/JPSS Product?
    • Is there an actionable plan?
    • Is it funded?
    • What is the priority?
    • Have you thought about how you will get the data and have you identified the issues with your operational use of SNPP/JPSS?
  – Are the current legacy products well utilized?
  – Is the SNPP/JPSS product part of a blended product?
  – What additional work needs to be done to ensure that the SNPP/JPSS product is/will be well utilized?
Are enhancements needed for:

• Accessibility (data flow, latency, format)
• Product performance (accuracy, precision)
• User applications (modifications to modeling, decision tools, visualization to use the new products)
Imagery and Clouds

• Current Uses
  – Cloud products are being distributed primarily thru LDM
  – DNB for AK is in SBN (see footnote below)*
  – Future imagery and cloud SBN plans controlled through Suomi NPP Data Exploitation (NDE)
  – DNB
    • Is being worked as a L1RD KPP
  – DNB has been shown to be critical in
    • NCEP Centers
    • NWS PAC found value with TC Flossie
    • AK
    • WFOs
  – Evaluating single channel and RGB Products continuity with Geo
  – Value of hybrid Leo-Geo imagery products (OPC, WPC, NWS Pac and AK is already doing this from DB)
    • AWC, SPC looking for this in the future
Imagery and Clouds Concerns

• Latency
• Bandwidth constraints
  – Raw data for generating products
  – Products to users
• Education of who is doing what
• Accessibility to data
  – Data Formats
  – NWS users have a mix of AWIPS 1 and AWIPS II
  – Lack of tools to manipulate the datasets
• Not far along with validating products with model data
• Moving products from the demonstration efforts to operations in NCEP Centers, regions, and WFOs
• Need to continually prioritize to guide future decisions
Imagery and Clouds - Initiatives

• NWS is going towards a RTMA and URMA (Mesoscale Analysis) – forecasters need to know what the actual analysis is in 3D (see footnote below)¹
  – Provides a snapshot of the atmos in as NRT as possible
  – VIIRS needs to get into this process – would go into the existing database
  – Plugs into aviation
  – Is there a plan and is it sufficiently resourced?
  – NESDIS provides the cloud product for the RTMA and URMA

• Synthetic model imagery has proven very valuable for GOES how can JPSS evaluate this capability (see footnote below)²
  – Sounders on Polar can help push Peterson model work
Imagery and Clouds - Initiatives

• Need verification of physical consistency from cloud products and solar insolation
  – Clouds drive what happens at the surface which in turn drives models
Cloud and Imagery Priorities

• Cloud levels and type for aviation support
• Polar wind data assimilated into models
• RTMA and URMA
• More access to DB – TAFB/OPC for Pacific
• Education and Training – basic, application-based,
• Better communication of who is doing what
BACKGROUND
Imagery and Clouds

• Ward
  – Cloud layers for aviation (IDPS has a cloud layer product h/m/l and cloud type)
    • Cloud altitudes (ft) just arrived at AWC (thru LDM) this is global Geo. Could be a good hybrid product
    • Adding VIIRS to the NOAA AK Cloud composites ....evaluate its value for Pacific

• Andrew Collard
  – Polar winds from VIIRS into global models. Wind products produced 9 May need to be assimilated
    • Earliest assimilation is Spring 2015