

ITSC-19

Some highlights relevant to ET-SUP

Data availability

- Strong acknowledgement of the value of CMA's approach to early access and characterisation of FY-3.
- Very impressive presentation on progress in Korea
- Strong recognition of the efforts by many agencies to get data from satellites, including research satellites, out to the community quickly. **However there are still exceptions** and it remains important to keep emphasising partnership between agencies and users.
- ITWG (involving NWP Group) to provide input to CGMS WG III for updating the CGMS Global Contingency Plan as regards LEO re-launch criteria.
- For future high volume datasets a two-stream data dissemination strategy may be a viable concept (ie one lossy compressed stream at high availability, good timeliness, but high cost; one lossless stream, but less reliable, worse timeliness, but cheaper).

User services - data dissemination

- There should be open access to new satellite data for all NWP centres to help with calibration and validation.
- Agree on standardized procedure for inclusion of NEdT estimates within BUFR for microwave data.
- New operational data dissemination infrastructure should be tested at an early stage (well before launch) with simulated data.
- When designing new or modified BUFR formats, please circulate drafts to the NWP community via the NWP Working Group for feedback, prior to submission to WMO.
- Recommendation to data providers: Include azimuthal angle included in BUFR for present and future sensors

User services - data services

- Space agencies to ensure user-preparedness for new satellites, including providing simulated data, early provision of instrument characteristics, data format documentation and/or software APIs, data access during cal-val (support to SATURN)
- ITWG and in discussion with the NWP WG, to provide list of most relevant events affecting the quality of data, e.g. calibration changes, sensor anomaly, change of operation mode, and indication of the magnitude of the event justifying a notification.
- All agencies to provide user notification services that people can sign up to receive: Instrument alerts including rough recovery schedules, and advance notification of changes to data supplies
- Sensor vendors to supply digitised channel system responses for microwave, infrared, and visible instruments, ie detailed actual responses.

Hyperspectral sounders

- If PC compression is used to disseminate hyperspectral IR observations, a conservative approach should be taken in order to mitigate information loss (e.g., by retaining as many principal components as possible).
- A mutually acceptable update strategy should be devised and documented for the dissemination of PC products, including the dissemination of a small subset of original channels to allow for any user to compare reconstructed radiances with this small subset of quality assessment.
- NWP Centres to evaluate feasibility of assimilating observations disseminated via a PC-compressed datastream, including the use of cloudy radiances and communicate experiences to relevant data providers.

Software packages

- There are now several SW packages available that utilize IASI/CrIS/AIRS for creating level 2 products, an effort should include intercomparisons studies of the different retrieval methods.
- NASA is preparing to design new algorithms, software, and data formats for Level 0 to Level 1B processing of VIIRS, CrIS, and ATMS. This has the potential to introduce confusion in the user community. Action: Re-emphasize that NOAA is the official source of Level 0 to Level 1B software for JPSS.
- Numerous actions and recommendations for improved RT model capability.

Other issues

Calibration

- Because absolute calibration with on-orbit SI traceability is critical for significantly reducing uncertainties in monitoring climate trends and also to intercalibrate other satellite sensors in a GSICS framework, the realization of absolute calibration missions (such as CLARREO) is further supported including flight opportunities on the ISS.

Direct broadcast

- Roshydromet to make available pre-processing software for L0/L1 Meteor-M data
- There is a need for reactivating the RARS Implementation Group within WMO with a broader scope to include NOAA Direct Broadcast Real Time Network (DBRTN) and to include CrIS, IASI, ATMS, and other sounder data on GTS.

Funding

- To funding bodies of NWP centres and space agencies: Consider, as part of the cost of satellite programs, providing computational and personnel resources targeted at operational NWP centres to optimise the public's return on investment from these expensive measurement systems.