

Data requirements for NWP

Workshop recommendations

9th Workshop on Meteorological Operational Systems
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Current problems

- All centres are under pressure from users to deliver forecast guidance earlier
- NWP centres operating global and regional data assimilation and forecasting systems currently require data within 60 minutes to 2-3 hours after observation time
- Some centres run long cut-off update cycles to make use of late data (6-9 hours)
- Conventional in-situ data are distributed within 60 to 120 minutes of observation time
- Satellite data, in particular the global ATOVS data, are received within 3 hours, but blind orbit data may be late by several hours
- Future operational NWP systems are likely to require data within 30 to 60 minutes



Addressing the problem

- *“LEO data timeliness - More timely data are needed. Improved communication and processing systems are required to meet the timeliness requirements in some applications areas (e.g. Regional NWP).”* (CBS ET on ODRRGOS, Oxford 2002)
- In response to requests from centres in Europe operating limited area models, also covering the Atlantic and polar regions, EUMETSAT implemented the EARS system, achieving a near-complete NH coverage for ATOVS within approx 30 minutes of data time; EUMETSAT is looking into the possibility of adding further data
- For NPOESS a global distribution of data within 30 minutes is planned
- The CBS ET on ODRRGOS at its recent meeting, Geneva 3-7 November 2003, decided to review the timeliness requirements for satellite data for use in regional and global NWP



Workshop conclusions and recommendations

- The workshop welcomes the initiative of the CBS ET on ODRRGOS to review and update the data requirements for global and regional NWP
- The workshop recommends that
 - the optimal data delivery time (delay) be set at 30 minutes
 - Satellite data providers be made aware of these timeliness requirements for their data
 - Collection and distribution of in-situ data be further improved to achieve an optimum data delivery time close to the 30 minute
 - The NWP data requirements and the Statement of Guidance be updated by the ET on ODRRGOS to reflect the changing requirements



Workshop conclusions and recommendations

- The Workshop further recommended that
 - Satellite data from future systems be made available in an agreed format, preferably using WMO standards such as BUFR
 - Operators of observing system be encouraged to provide high resolution observations, eg vertical soundings from radiosondes in BUFR as well as in the existing TEMP code, where such capability exists
 - To encourage EUCOS to provide more AMDAR data from data sparse regions, in particular over Africa
- The Workshop requested the Centre to bring these recommendations to the attention of the relevant WMO/CBS bodies to ensure that the appropriate actions be taken

