

AAPP developments and experiences with processing MetOp data

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Version 6 of the ATOVS and AVHRR Preprocessing Package (AAPP) was released in October 2006, shortly before the launch of the MetOp-A satellite. The talk will describe the capabilities of the software and give examples of its use in an operational context. Data types now processed by AAPP include: - direct broadcast HRPT from NOAA satellites - Level 0 files from MetOp AHRPT (AMSU, MHS, HIRS, AVHRR, IASI) - global level 1b ATOVS data from NOAA - global ATOVS and IASI data from EUMETSAT (BUFR format) - global MetOp and NOAA-18 AVHRR data from EUMETSAT (EPS format) - regional ATOVS data (BUFR format - e.g. EARS and RARS) During the commissioning phase of MetOp-A the Level 0 processing capabilities of AAPP were fully tested, including the IASI local processor OPS-LRS. Unfortunately the MetOp-A AHRPT primary transmitter failed on 4th July 2007, so there has been no Level 0 data since then. At the Met Office, assimilation of IASI data became operational in November 2007. This is using an AAPP-based preprocessor in which AMSU is mapped to the IASI grid and the IASI data are thinned spatially and spectrally via a channel selection. Principal Components compression is also available, and to support this an updated set of eigenvectors has been made available to users, based on 6 months of IASI data. The talk will describe the properties of these eigenvectors. Another activity in which AAPP is a key component is the WMO initiative to develop Regional ATOVS Retransmission Services (RARS). Two networks have come on-line during 2007 - the Asia-Pacific RARS and the South American RARS. These complement the EARS network established by EUMETSAT in 2002. RARS data have been operationally assimilated at the Met Office since November 2007. Also the data quality is monitored routinely by the NWP SAF and a selection of results are made available on the NWP SAF web site. Finally, the next major release of AAPP is planned to coincide with the launch of NPP (late 2009). AAPP will not process the direct broadcast data directly but the intention is that it will be able to read the level 1 ATMS/CrIS/VIIRS products from IPOPP (being developed by NASA and the University of Wisconsin), as well as the global ATMS/CrIS radiances to be distributed by NOAA.

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