

Radiance assimilation in AEMET Harmonie-AROME model operational run



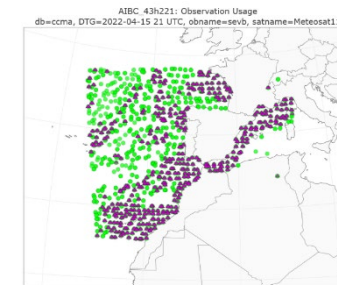
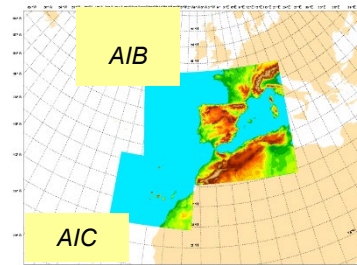
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OPERATIONAL SUITE

Operational suite based on HARMONIE-AROME cycle 43h2.1.1

2.5 km runs 4 times per day with a forecast length of 72 hours for 2 geographical domains (AIB and AIC and another one AIBC in test mode).

3DVar analysis with **3hr** cycle incl.: conventional observations, radar, ATOVS(AMSUA and AMSUB/MHS instruments), GNSS ZTD, ASCAT wind, IASI and SEVIRI obs.



IASI DA

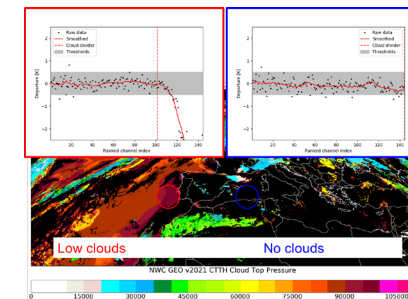
Improved cloud detection for IASI-METO-B & METOP-C by the use of the IR cloud detection monitoring tool

Assimilation of clear-sky IASI radiances operational since 15th December 2020.

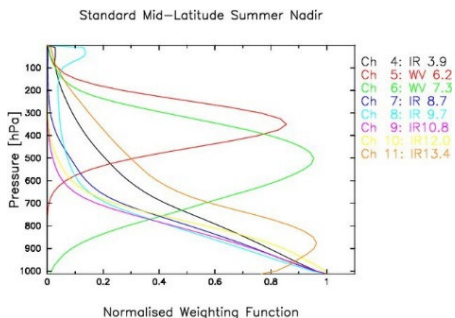
Current setup: Only Metop-B, IASI: 55 channels (30 in Band=1 CO2 and 25 in Band=3 H2O), Active assimilation all except 85, 333, 352, 432.

New Goal: use the Cloud Detection Monitoring Tool (R. Eresmaa, FMI) to diagnose the performance of the cloud detection scheme for IASI radiances

New Experiments: 138 channels and the addition of Metop-C.



SEVIRI DA



Assimilation of clear sky SEVIRI radiances in Harmonie-AROME

Assimilation of clear-sky SEVIRI radiances operational since 15th December 2022.

Current setup: MSG (meteosat-11), 8 IR and 4 VIS channels (IR 3.9, WV6.2, IR8.7, IR9.7, IR10.8, IR12.0, IR13.4), Spatial resolution 3 km

New experiments removing SEVIRI from land and testing different options of VarBC predictors and the inclusion of IR13.4.

All the results and conclusions are in the poster!