

Comparison of ECMWF and Met Office Observation Feedback

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ECMWF (and 5% Met Office)

Observation Feedback discussion, 11 November 2014

Observation processing and obstat

- EC ODB2 based on datum, MO on report
- EC more oriented to satellite data MO to in situ data
- EC uses generic variables, MO uses named variables (-)
 - Need (u,v), (T,hum) processed together at times
- EC obstat used for both satellite and in situ data (+)
 - Lat-long boxes (also need station statistics for in situ data)
- EC has too many types (code-, sub-, report-), too tied to format
- MO has 'logical' model obstype (separates moored/drifting buoys)
- EC odbsql – good for quick look at the data

O-B and bias correction

- MO stores O and B values
- EC stores O and fg_depar (O-B) values
- MO stores O and O_corr (unambiguous)
- EC obsvalue includes biascorr for in situ data but not for satellite
 - Biascorr: add to or subtract from reported value?

Issues

- **Encoded ship callsigns cause complications**
- **Pressure biases often come from wrong station heights**
- **Use of T2m, RH2m and UV10 over land**
 - **EC T2m only used in surface analysis, UV10 not used**
 - **Are users aware?**
- **New BUFR formats – a headache**
- **BUFR surface – some radiation data, more snow depths**
- **Radiosondes: standard, significant, averaged (MO) or HiRes?**

Routine monitoring

- **Real time warning system (M Dahoui)**
 - Checks number, mean, rms, biascorr against limits – emails
 - Balance between false alarms and useful events
 - Recently moved to WMO block (for BUFR transition)
- **Monthly monitoring (E Kuscu)**
 - By identifier
 - Semi-automatic update of blacklist

Blacklists (or station list)

- EC uses pseudocode, recompiled each day (-), MO namelists
- EC can only reject data; MO station list can reject/accept (depends on order), set biascorr and σ_0
- EC blacklist includes dates that rejection applies to (+)

Any questions?