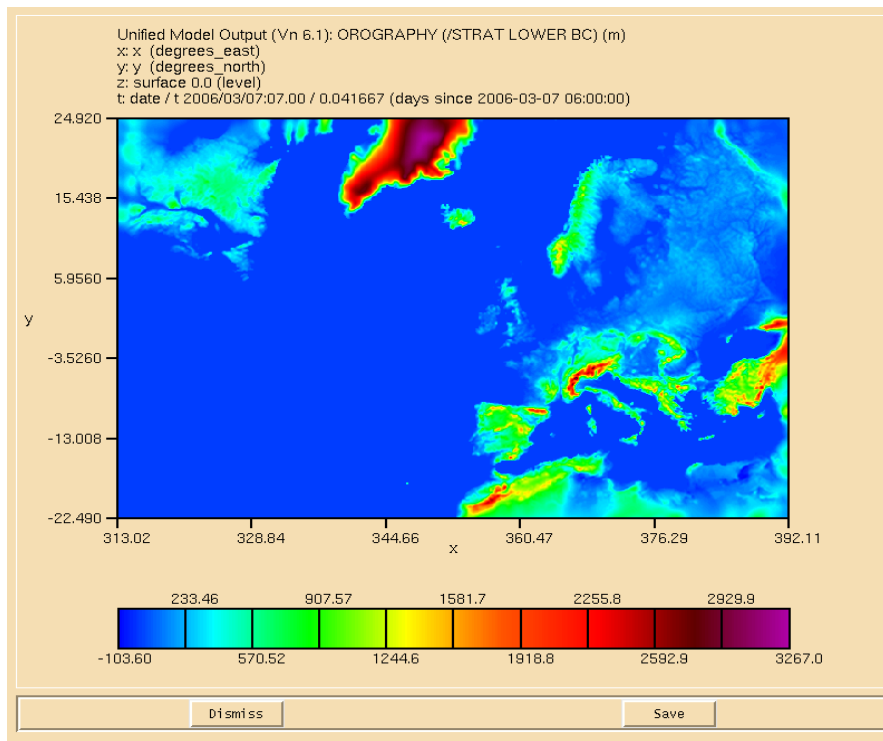




Status of Ground- based GPS Assimilation in the UK

Ground GPS assimilation operational in 12km NAE model



12km resolution, currently 38 vertical levels to 42km, soon increasing to 50, then 68 levels.

4D- var assimilation

Synop, radiosonde, aircraft, scatterometer, ATOVS, satwinds data also assimilated.

Continuous O-B monitoring in place since 2002

GFZ, GOP, METO assimilated

Bias correction based on 28 day O-B statistics for each station/processing centre combination. If less than 2 weeks worth of data for station, station is rejected

Obs where orography and GPS station height differ by $>300\text{m}$ rejected. All LPT stations avoided at present.

QC based on O-B check, 55mm threshold

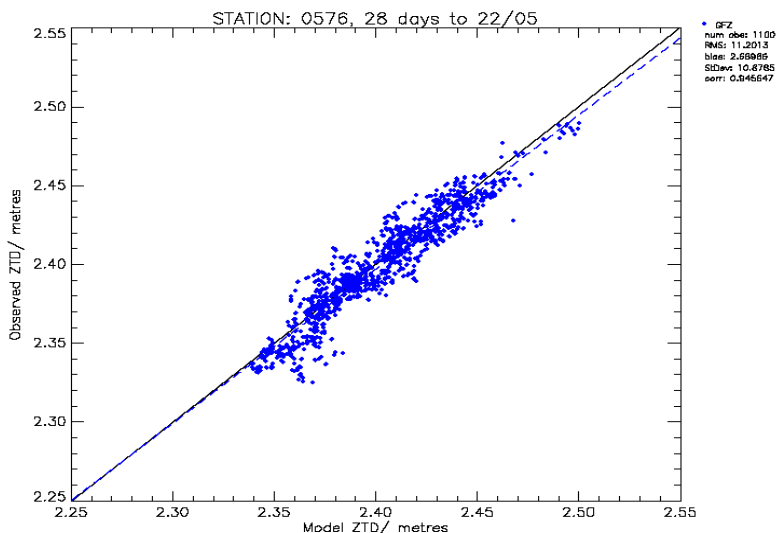
Fixed observation error is used- 8mm at present

Currently only 1 ob per assim window used, closest to analysis time.

For duplicates, first arrival is used.

Optimal temporal thinning methods being tested

More processing centres added



High resolution UK models- 4km and 1km models

Global model trials- global model resolution is increasing to ~20km