

TIGGE data from Met Office, UK

Summary

From Tuesday 15th July, the 15-day MOGREPS-15 EPS data will no longer be sent to TIGGE. It will be replaced by higher resolution MOGREPS-G data, with a 7-day range. There will be a gap in the data provision, but it is planned to back-fill the missing data within a few weeks. The number of TIGGE parameters available from the new MOGREPS-G feed will be significantly reduced.

Details

As of Tuesday 15th July, the Met Office medium-range ensemble system MOGREPS-15 will no longer be submitting data to the TIGGE archive. This is part of a continuing Met Office strategy to wind down its focus on 'week 2' and concentrate instead on 'week 1' and monthly/seasonal forecasting. The Met Office is committed to using ECMWF data and data from our UM partners and other data centres going forward for the medium-range as defined by the forecast period days 7-14.

MOGREPS-15 is now scheduled for retirement on the timescale of approximately 1 year from now (mid-2015) during which time the model will be 'frozen' with no further changes anticipated after the set of changes being made in July 2014. Firstly, MOGREPS-15 will be aligned with its parent system in Exeter in regard to its science schemes but at this point on 15 July many of its post-processing and other products (including MARS/TIGGE) will be discontinued. Approximately 2 weeks later, on or around 29 July, MOGREPS-15 will be moved to the Cray HPC in a like-for-like porting move. At that point, MOGREPS-15 will then be frozen. A project to move remaining downstream products to other models is already underway and will carry on for the rest of this financial year and the beginning of next. When all services have been successfully moved, MOGREPS-15 will then be switched off.

In the meantime, we anticipate that Met Office output from the global MOGREPS-G system will be available for ingestion into TIGGE. Also from 15 July, MOGREPS-G is being extended from 3 to 7 days. MOGREPS-G is a 33km L70 global ensemble being run 4 times a day with 12 members on each cycle run to T+174. The majority of our products from this system then use 6-hour lagging to create updated 24 member ensembles. Hence in terms of TIGGE ingestion, 12x4 member forecasts run to T+168 will be available. Work is underway to adapt our MOGREPS-G system to produce data for the TIGGE archive in Grib2 format and to TIGGE specifications. However, 2 points need to be borne in mind.

- The first is that the TIGGE submission will unfortunately not be immediately continuous. Work will be undertaken to 'retro-fill' the archive back to the 12z forecast cycle on the 15 July as soon as we can. Data for TIGGE will not be ready to be sent immediately on the 15th.
- Secondly, the number of parameters available from MOGREPS-G will be a very much reduced subset of the parameters we currently produce from MOGREPS-15. The latter was set up in a very specialised way with TIGGE as one of its primary purposes, however MOGREPS-G does not include customisations that allows for many of the diagnostics. In brief, the following parameters will be dropped: soil moisture, CAPE, CIN, Total column water, U/V on PV surface and specific humidity on pressure levels. Work continues to post-process other diagnostics so that units are correct etc...

The timescale for TIGGE diagnostic production from MOGREPS-G is of the order of 2-3 weeks. A further update will be posted when the MOGREPS-G data become available.