

# News

## 2023

### 27-06-2023 ECMWF forecast system change

New version of ECMWF IFS model (cycle 48r1) has been introduced at ECMWF since 6Z run on 2023-06-27.

With IFS Cycle 48r1, the horizontal resolution of the *medium-range ensemble* (ENS) will increase from 18 to 9 km. This will bring the ENS to the same horizontal resolution as the high resolution forecast (HRES). The vertical resolution for both ENS and HRES will remain at 137 model levels and the ENS will continue to have 51 members. **For TIGGE, the IFS data is interpolated to the same resolution O640 as up to now.**

More details can be found in [TIGGE model upgrades#ECMWF](#)

### 20-01-2022 Fixed issues in KMA data

After the KMA model update on 1<sup>th</sup> of July 2022, the values of Surface net solar radiation were wrong. Also there were some occasional unwanted zero values for some other parameters (2t, 2d, tcc, 10m u/v etc). The affected data has been fixed now.

Find more information in [Issues with data](#).

## 2022

### 01-07-2022 KMA forecast system change

The KMA has changed their model used for TIGGE contribution from Unified Model to Korean Integrated Model ensemble (KIM), version 3.7, since the 1<sup>st</sup> of July 2022. Find more information in [TIGGE Models](#).

### 30-06-2022 Meteo-France forecast system change

The last step in 18Z runs in Meteo-France contribution to TIGGE has been changed from +108 to +102 hours since 20 Jun 2022

### 04-05-2022 UKMO forecast system change

The Met Office Global model was upgraded to OS45 with effect from the 12Z cycle on 2022-05-04. Find more information in the [Model upgrades page](#).

### 10-03-2022 TIGGE portal at CMA

The TIGGE portal at CMA should be available now again after a while in <http://tigge.cma.cn/>. It should contain in principle the same data as the TIGGE archive at ECMWF. Currently after some technical issues in the past, the data is still available only for more recent period which should be extended soon to contain more historical data too.

## 2021

### 13-10-2021 ECMWF forecast system change

New version of ECMWF IFS model (cycle 47r3) has been introduced at ECMWF since 6Z run on 2021-10-12.

Cycle upgrade 47r3 will bring improvements to the assimilation and observations usage and a significantly improved physical basis for moist processes, necessary to facilitate further development of the Integrated Forecasting System (IFS) and future application at convection-permitting resolutions.

More details can be found in [TIGGE model upgrades#ECMWF](#)

### 24-06-2021 Yearly stats added

Yearly statistics have been added to [TIGGE usage statistics](#).

#### 14-06-2021 ECCC high resolution forecasts

The ECCC high resolution forecasts interpolated to the ensemble resolution have been added to TIGGE archive starting since the 11<sup>th</sup> June 2021 as per the details in the page [Models](#).

#### 14-05-2021 DWD forecasts back-archiving

The additional period of 9 months of DWD forecasts was back-archived in TIGGE so that it starts now on 1 March 2020.

#### 12-05-2021 ECMWF forecast system change

New version of ECMWF IFS model (cycle 47r2) has been introduced at ECMWF since 2021-05-11. In the IFS Cycle 47r2 single-precision for ENS (forecast up to day 46 and hindcast) and HRES (forecast) has been introduced. Moreover, the ENS vertical levels has been increased to 137 to bring it in line with HRES.

This change will not affect the format of TIGGE products from IFS.

More details can be found in [TIGGE model upgrades#ECMWF](#)

#### 27-04-2021 JMA forecast system change

JMA global EPS has been upgraded to the version GEPS\_2103 since 30 Mar 2021

The major changes are:

- Increase of the number of vertical layers from 100 to 128
- Increase of the number of ensemble members from 27 to 51
- Revision of the global snow analysis
- Introduction of the global soil moisture analysis

Further details can be found in the page [Models](#).

#### 15-04-2021 ECCC data resolution change

The horizontal resolution of the ECCC contribution to TIGGE has been increased from 1.0 to 0.25 degree since 12Z 14 Apr 2021. Also the GRIB 2 packing has been changed to simple instead of complex one (that will generally increase file sizes but also significantly reduce time needed to process such data). All TIGGE data from all participating models should be encoded now using simple GRIB 2 packing.

Further details can be found in the page [Models](#).

#### 06-04-2021 Meteo-France forecast system change

Meteo-France global prediction system has been upgraded to the version PEARP5 since 08 Jan 2021. The main technical changes related to TIGGE are:

- 4 runs from 0/6/12/18Z instead of 2 from 6/18Z
  - there are different final steps for different runs:
    - 0/12Z: +48H
    - 6Z: +90H
    - 18Z: +108H
- resolution increase to 0.5 degree
- GRIB 2 simple packing instead of JPEG
- tmin/tmax fix

Further details can be found in the page [Models](#).

## 2020

#### 17-12-2020 New model ICON from DWD added to TIGGE archive

The outputs from the global model ICON produced by Deutscher Wetterdienst (DWD) have been added to TIGGE archive starting from 12Z, 7 December 2020. In contrary to other ensemble systems, in ICON the control forecast is not produced (the ensemble consists of 40 perturbed members only). The high resolution forecast interpolated to the same resolution as the ensemble is also available for users. Click [here](#) for more details.

#### 26-11-2020 NCEP forecast system change

The NCEP global prediction system was upgraded to GEFS v12 since 12Z, 23 Sep 2020. The main technical changes related to TIGGE are:

- increased ensemble size from 21 to 31
- increased horizontal resolution from 1 to 0.5 degree

Find more information in the page [Models](#).

#### 10-11-2020 KMA high resolution forecasts

The KMA high resolution forecasts interpolated to the ensemble resolution have been added to TIGGE archive starting since the 5<sup>th</sup> November 2020 as per the details in the page [Models](#).

#### 22-10-2020 KMA forecast length extension

The forecast length of KMA outputs has been extended from 10 to 12 days starting since 21 October 2020 as per [model details page](#).

#### 13-07-2020 New model IMD GEFS added to TIGGE archive

New model outputs from the Global Ensemble Forecast System (GEFS) produced by India Meteorological Department (IMD) were added to TIGGE archive starting from 1 July 2020. Users can access the data on 0.12° x 0.12° grid (~12 km). Click [here](#) for more details.

#### 30-06-2020 ECMWF forecast system change

The ECMWF global prediction system was upgraded to the version 47r1 since 30 June 2020. Find more information in the [Model upgrades page](#).

#### 11-06-2020 NCMRWF forecast system change

The NCMRWF global ensemble prediction system NEPS-G (origin dems in the TIGGE archive) was upgraded to the version 3 since 11 June 2020. Find more information in the [Model upgrades page](#).

#### 01-06-2020 CMA forecast system change

The CMA global ensemble prediction system (origin babj in the TIGGE archive) was upgraded to the version GRAPES\_GFS since 1 June 2020. Find more information in the [Model upgrades page](#).

#### 04-05-2020 TIGGE ensemble forecast database for research continues to grow

[TIGGE ensemble forecast database for research continues to grow](#) - an article about TIGGE project update and also celebrating BoM resuming their contribution to the archive has been published.

#### 14-04-2020 BoM resuming their contribution to the archive

Bureau of Australia (BoM, TIGGE origin ammc) has resumed their contribution to the archive after many years. Four runs per day are now available since the 1<sup>st</sup> of January 2020. The data availability can be seen in [TIGGE history page](#). Welcome back BoM!

2019

#### 13-12-2019 HW issue affecting some TIGGE data availability

We have experienced a hardware incident with a damaged tape volume (J0144200). Users trying to access data described below will get an error message until the problem is resolved.

Affected data:

- type = pf
- levtype = sfc
- ranges: many dates across the whole TIGGE period

The expected data recovery is in 2-4 weeks in case of success. We apologise for any inconvenience.

#### 04-12-2019 UKMO forecast system change

The UKMO global ensemble prediction system (origin egrr in the TIGGE archive) was upgraded to version PS43 for the 12UTC cycle on 4 December 2019. Find more information in the [Model upgrades page](#).

#### 01-04-2019 TIGGE user survey

[The results of the 1<sup>st</sup> TIGGE user survey have been published](#). The total number of 383 users answered various questions about their experience with TIGGE products.

## 2018

#### 30-11-2018 ECMWF Tropical cyclone track data

The tropical cyclone track data from ECMWF model has been moved to [a new location](#). Find more information in the page [Tools](#). The new location is accessible also via a quick link in the top right section of [the main ECMWF TIGGE page](#).

#### 10-10-2018 TIGGE related workshop at ECMWF

There will be a major event related to TIGGE archive at ECMWF, 2-5 April 2019: Workshop on Predictability, dynamics and applications research using the TIGGE and S2S ensembles. It is open now for registration and abstract submission.

Click [here](#) for more details.

#### 18-9-2018 CMC forecast system change

The CMC global ensemble prediction system (origin cwao in the TIGGE archive) was upgraded to version 5.0.0 on 18 September 2018.

The main changes in this upgrade are:

- The 800x400 global Gaussian grid at 50 km resolution is updated to a Yin-Yang grid at 39 km resolution
- The model top is raised from 2 hPa to 0.1 hPa.
- In the ensemble Kalman filter assimilation component, the digital filter initialization is replaced by an incremental analysis update (IAU) procedure.

Click [here](#) for more details.

#### 13-09-2018 HW issue affecting some TIGGE data availability

We have recently experienced a hardware incident with a tape volume becoming damaged. Users trying to access data described below will get an error message until the problem is resolved.

Affected data:

- type = cf
- levtype = pl
- ranges: 2017/06/09 to 2017/06/10, 2017/08/03 to 2017/10/23 and 2018/01/24 to 2018/08/26

The expected data recovery is in 2-4 weeks in case of success. We apologise for any inconvenience.

**As of 24 Sep 2018 the access to all previously unavailable data has been restored successfully.**

#### 24-07-2018 NCMRWF forecast system change

Update of NCMRWF forecast system. A new version of NCMRWF model was introduced. The first archived updated model runs are from the 1<sup>st</sup> of July. The main changes are:

- reduced number of the ensemble size from 45 to 12
- two model runs 00 and 12 UTC at very high resolution (0.12x0.18 degree)

Click [here](#) for more details.

#### 18-06-2018 Usage statistics

A new page with [TIGGE data usage statistics](#) was added.

## 2017

#### 20-12-2017 New model NCMRWF added to TIGGE archive

New model outputs from National Centre for Medium Range Weather Forecasting (NCMRWF, India) were added to TIGGE archive. The first starting date available thanks to the back-archiving is the 1st of August 2017. Click [here](#) for more details.

#### 11-07-2017 ECMWF forecast system change

Update of ECMWF forecast system. A new version of ECMWF model (IFS cycle 43r3) was introduced. Click [here](#) for more details.

#### 11-07-2017 Met Office Tropical Cyclone CXML data

From the 12UTC forecast on 11<sup>th</sup> July 2017 the Met Office tropical cyclone CXML data come from the upgraded MOGREPS-G (UM PS39) forecasts. Note that each CXML dataset includes tracks from a lagged ensemble of 36 members, i.e. the current forecast and the forecast from 6 hours earlier. The CXML data are available via the NCAR archive at <http://rda.ucar.edu/datasets/ds330.3/> or see the TIGGE cyclone exchange page at <http://www.cawcr.gov.au/research/cyclone-exchange/> for further information.

#### 11-07-2017 Met Office forecast system change

Update of MetOffice forecast system. A new version of MetOffice model (UM PS39) was introduced. Click [here](#) for more details.

#### 19-01-2017 JMA forecast system change

Update of JMA forecast system. A new version of JMA model was introduced. Click [here](#) for more details.

## 2016

#### 22-11-2016 ECMWF forecast system change

Update of ECMWF forecast system. A new version of ECMWF model (IFS cycle 43r1) was introduced. Click [here](#) for more details.

#### 08-11-2016 MetOffice forecast system change

Update of MetOffice forecast system. A new version of MetOffice model (UM PS38) was introduced. Click [here](#) for more details.

#### 29-06-2016 KMA ensemble system upgrade

Update of KMA forecast system. A new version of the KMA model (UM version 8.5) was introduced. The most noticeable change is the increase by 1 ensemble member, from 24 (23+control) to 25 (24+control).

#### 08-03-2016 ECMWF forecast system change

Update of ECMWF forecast system. A new version of ECMWF model (IFS cycle 41r2) was introduced. Click [here](#) for more details.

## 2015

#### 15-12-2015 Issues with NCEP feed

Some problems occurred with the feed for NCEP data, which prevented their ingestion in the TIGGE database from December 2015. The problems are under investigation and it will be notified once resumed.

#### 21-10-2015 Met Office CXML data

From the 06UTC forecast on 21st October 2015, the Met Office tropical cyclone prediction (CXML) data is now based on the higher-resolution MOGREPS-G forecasts. MOGREPS-G is run four times a day (00, 06, 12 and 18Z) using a 12-member ensemble with a grid length of approx 33km. Until now, the CXML data was based on the lower resolution MOGREPS-15 ensemble, even though MOGREPS-G data has been supplied to the TIGGE archive since July 2014. Note that each CXML dataset includes tracks from a lagged ensemble of 24 members, i.e., the current forecast and the forecast from 6 hours earlier. The CXML data are available via the NCAR archive at <http://rda.ucar.edu/datasets/ds330.3/> or see the TIGGE cyclone exchange page at <http://www.cawcr.gov.au/research/cyclone-exchange/> for further information.

## 2014

#### 02-12-2014 TIGGE Website migration

Please note that information from the TIGGE website is being migrated. This website is no longer being updated. The main TIGGE project page is now at <http://www.ecmwf.int/en/research/projects/tigge> and further details about TIGGE are available via <https://software.ecmwf.int/wiki/display/TIGGE/Home>

#### 06-11-2014 Met Office TIGGE data - November 2014 update

The Met Office TIGGE data now includes data from the higher resolution, 7-day MOGREPS-G global ensemble (rather than MOGREPS-15, as used up to 00Z 15th July). The new data are being provided in near-real time from 00Z 6th November, and it is planned to back-fill the gap in due course. The new ensemble data includes 12 members run four times a day, with a reduced number of parameters. Click [here](#) for more details.

#### 15-07-2014 TIGGE data from UK Met Office

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. Click [here](#) for more details.

#### 28-04-2014 Correction of NCEP energy flux data

A recent review of the NCEP TIGGE data has shown that there were errors in the five time-integrated energy flux fields: outgoing long wave radiation, surface latent heat flux, surface net thermal radiation, top net solar radiation and surface sensible heat flux. The data have been corrected from 9th April 2014, but unfortunately it is not feasible to correct past data. Thanks to NCDC, who post-process twelve of the NCEP TIGGE parameters, for identifying and correcting the problem. Click [here](#) for more details.

## 2012

#### 19-06-2012 Update of ECMWF ensemble forecast system

A new version of ECMWF model was introduced at ECMWF. Parameter convective inhibition (CIN) has been added to the TIGGE database.

## 2011

#### **15-02-2011 Error in JMA land-sea mask**

JMA have reported that the current 'Land-sea mask' values in the JMA TIGGE data are incorrect. Although the land-sea mask has not changed, an error in output processing resulted in incorrect land-sea mask data starting from 16 December 2010. Data before that date is correct.

JMA are working to both fix the problem and improve their EPS within a few months, and will make further announcement when the changes have been made.

## 2010

#### **18-12-2010 Update of JMA ensemble forecast system**

A representation of model uncertainty was introduced into the medium-range EPS from the Japan Meteorological Agency (JMA) on 17 December 2010. The method uses a stochastic perturbation of the physical tendencies.

#### **20-07-2010 TIGGE data from the Australian Bureau of Meteorology**

The ensemble forecasts from the Australian Bureau of Meteorology's GASP EPS have been terminated from 20th July 2010, and so are no longer being input to the TIGGE data base. A new system, AGREPS (an Australian implementation of the Met Office MOGREPS system) is under development. In due course AGREPS data will be included in TIGGE, but it is anticipated that there could be a gap of a year or more before AGREPS is operational.

#### **23-04-2010 TIGGE website update**

We are currently updating this website. We have added more information about TIGGE research and the GIFS-TIGGE working group, and links to several other TIGGE-related websites. Further changes will follow soon - specifically changes to the dynamic web pages (the ones with "/d/" in their URL) to make them consistent with the rest of the website. Richard Swinbank.

#### **23-03-2010 8th meeting of the THORPEX GIFS-TIGGE Working Group**

The 8th meeting of the THORPEX GIFS-TIGGE Working Group was held at WMO Headquarters, Geneva, 22-24 February 2010

## 2008

#### **01-02-2008 All Data Providers in production mode**

After being processed in test mode, data from Brazilian Centro de Previsao Tempo e Estudos Climaticos (CPTEC) is ingested in the TIGGE database in production mode from 1st February 2008.

## 2007

#### **28-12-2007 Data from Korea Meteorological Administration in production mode**

After being processed in test mode, data from KMA is ingested in the TIGGE database in production mode from 28th December 2007.

#### **26-10-2007 Data from Meteo France in production mode**

After being processed in test mode, data from Meteo France is ingested in the TIGGE database in production mode from 25th October 2007.

#### **03-10-2007 Data from the Canadian Meteorological Centre in production mode**

After being processed in test mode, CMC data is ingested in the TIGGE database in production mode from cycle 00Z of 3rd October 2007.

#### **03-09-2007 Data from Bureau of Meteorology (BoM) in production mode**

After being processed in test mode, BoM data is ingested in the TIGGE database in production mode from cycle 00Z of 3rd September 2007.

**15-05-2007 Data from CMA in production mode**

After being processed in test mode, CMA data is ingested in the TIGGE database in production mode from cycle 00Z of 15th May 2007.

**17-04-2007 Documents from the GIFS-TIGGE 4th meeting were added**

A couple of talks from the GIFS-TIGGE 4th meeting were added to our new Working group, conference and workshop database in pdf format. A link to the complete list can be found in the side menu and at the TIGGE front page.

**06-03-2007 New fields from JMA and update of the distribution scheme**

JMA will update the distribution scheme of JMAs EPS data for TIGGE data base on 20 March 2007 from ftp-put by JMA to http-get by ECMWF from our new data distribution server.

Japan Meteorological Agency will add on 20 March 2007 to the TIGGE database:

- surface air maximum and minimum temperature,
- snow depth water equivalent,
- total column water,
- all radiation and flux parameters,
- skin temperature,
- soil moisture.

Furthermore the forecast-step interval of all pressure level parameters and surface pressure was changed from 12 hours to 6 hours. The land-sea mask and orography for control forecast at forecast-step 0 were also added.

**05-03-2007 Data from NCEP archived at ECMWF**

After being processed in test mode the NCEP data will be archived at ECMWF in production mode from cycle 00Z of 5th March 2007.

**29-01-2007 New fields added by the UK MetOffice**

UK MetOffice added total column water, soil moisture (with wilting point & field capacity in control run output) and soil temperature to the TIGGE database. Furthermore wind (u and v) was added on potential vorticity level 2 PVU. The Land Sea Mask for control forecast at all timesteps is now also available from the UK MetOffice.

## 2006

**28-11-2006 ECMWF Ensemble Prediction System is extended up to day 15**

ECMWF implements Variable Resolution Ensemble Prediction System and extends the forecast range from 10 days to 15 days. The forecast consists of two legs: leg 1 goes from day 0 to day 10 and is followed by leg 2 going up to day 15. The Atmospheric Model runs at resolution T399 (62 vertical levels) or N200 for leg 1. Leg 2 runs at resolution T255 (62 vertical levels) or N128. This change is carried over to the TIGGE Database.

**01-10-2006 TIGGE database went into production**

Started production version of the TIGGE database. It contains output from the European Centre for Medium-Range Weather Forecasts, the Japan Meteorological Agency and the UK MetOffice.