

Description

The TIGGE dataset

The TIGGE dataset consists of ensemble forecast data from 13 global NWP centres, starting from October 2006, which has been made available for scientific research, via data archive portals at ECMWF and CMA. TIGGE has become a focal point for a range of research projects, including research on ensemble forecasting, predictability and the development of products to improve the prediction of severe weather.

TIGGE was established as a key component of THORPEX: a World Weather Research Programme to accelerate the improvements in the accuracy of 1-day to 2-week high-impact weather forecasts for the benefit of humanity. Although the decade-long THORPEX programme had finished at the end of 2014, TIGGE continued for a further 5 years. Currently another stage of TIGGE archive has already been confirmed for further 4 years until the end of 2023.

The name TIGGE originally stood for "THORPEX Interactive Grand Global Ensemble". With the completion of THORPEX, the name will become "The International Grand Global Ensemble", but it is recommended to simply refer to "TIGGE".

TIGGE leaflet

A leaflet with general information about TIGGE is available for download [here](#). Note that the leaflet was written in 2010, and some information is now out of date; this website contains more up to date information.

Accessing TIGGE data

TIGGE gridded data are available via the following portals, after a simple registration process:

- **ECMWF** portal: <http://apps.ecmwf.int/datasets/data/tigge>
- **CMA** (Chinese Meteorological Administration) portal: <http://wisportal.cma.gov.cn/wis>

Batch access should be used for retrieving large amounts of data, see the [tools page](#).

In addition, TIGGE Cyclone XML (CXML) data (see [the Cyclone Exchange page](#)) are available via the following portal, after a simple registration process:

- **NCAR** portal: [NCAR CXML TIGGE TC archive](#)

Content of TIGGE

Details of the ensemble prediction systems (or models) that contribute data to TIGGE are given in the links below. That includes information about the resolution of the model and the data, the forecast range and upgrades to each model that have been implemented during the TIGGE project.

The data comprise 6-hourly model output for a range of parameters, including surface and other single-level fields, and some multi-level fields. The definition of the parameters are shown via the link below.

TIGGE Archive

The TIGGE archive was established by the original three archive centres: ECMWF, NCAR and CMA, using global forecast data contributed by 10 data providers. An additional partner, NCDC, processes the NCEP forecast data for TIGGE. Currently in 2021 there are 12 participating centres including newly NCMRWF, IMD and DWD (CPTEC suspended their contribution in 2020 whereas BoM has restarted theirs suspended in 2010).

TIGGE TC track Archive

A pilot project has been established by the TIGGE Working Group to test the real-time exchange of ensemble TC track forecasts; the format for TC data exchange will be Cyclone XML (CXML). Exchange of real-time TC forecasts was done in the THORPEX Pacific-Asian Regional Campaign (T-PARC) (August 2008-March 2009), designed to study the life-cycle of tropical and extra-tropical cyclones over the northern Pacific. See more information about this activity including the technical requirements in [CAWCR](#) page.

TC tracks in CXML format have been still produced for TIGGE since 2008 and are stored in [NCAR CXML TIGGE TC archive](#).

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 - Surface air temperature
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 - Time-integrated surface net thermal radiation
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