

TIGGE status report

Fourth meeting PDEF Working Group
9-12 October 2018, Tokyo

Manuel Fuentes - ECMWF
(Chair - TIGGE Panel)

With thanks to
Richard Mladek (ECMWF), Yang Feifei (CMA), Doug Schuster (NCAR)
and all TIGGE Data Providers

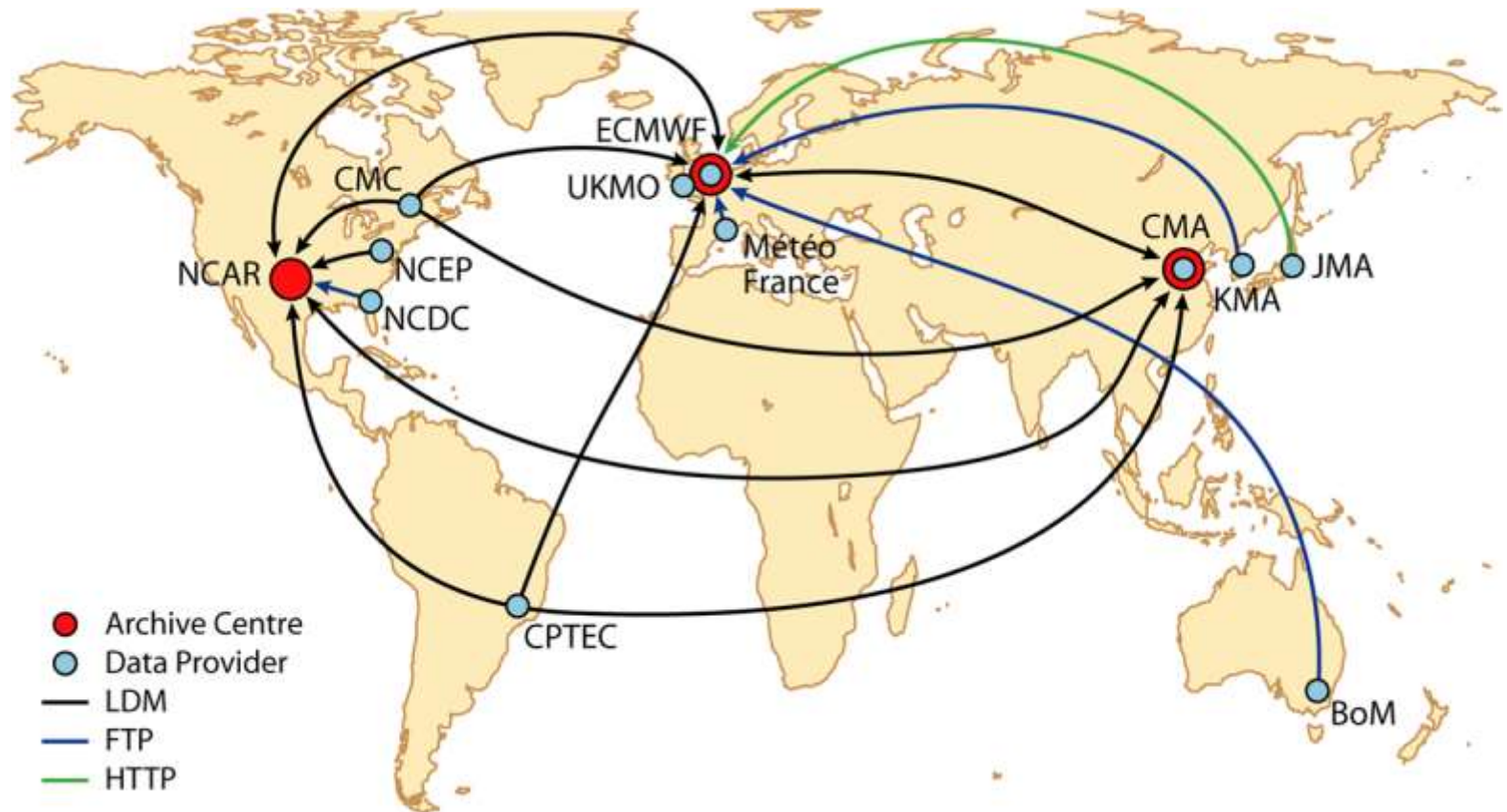
Outline

- TIGGE Global
 - Model output
 - Tropical cyclones
- TIGGE LAM
- What next ?

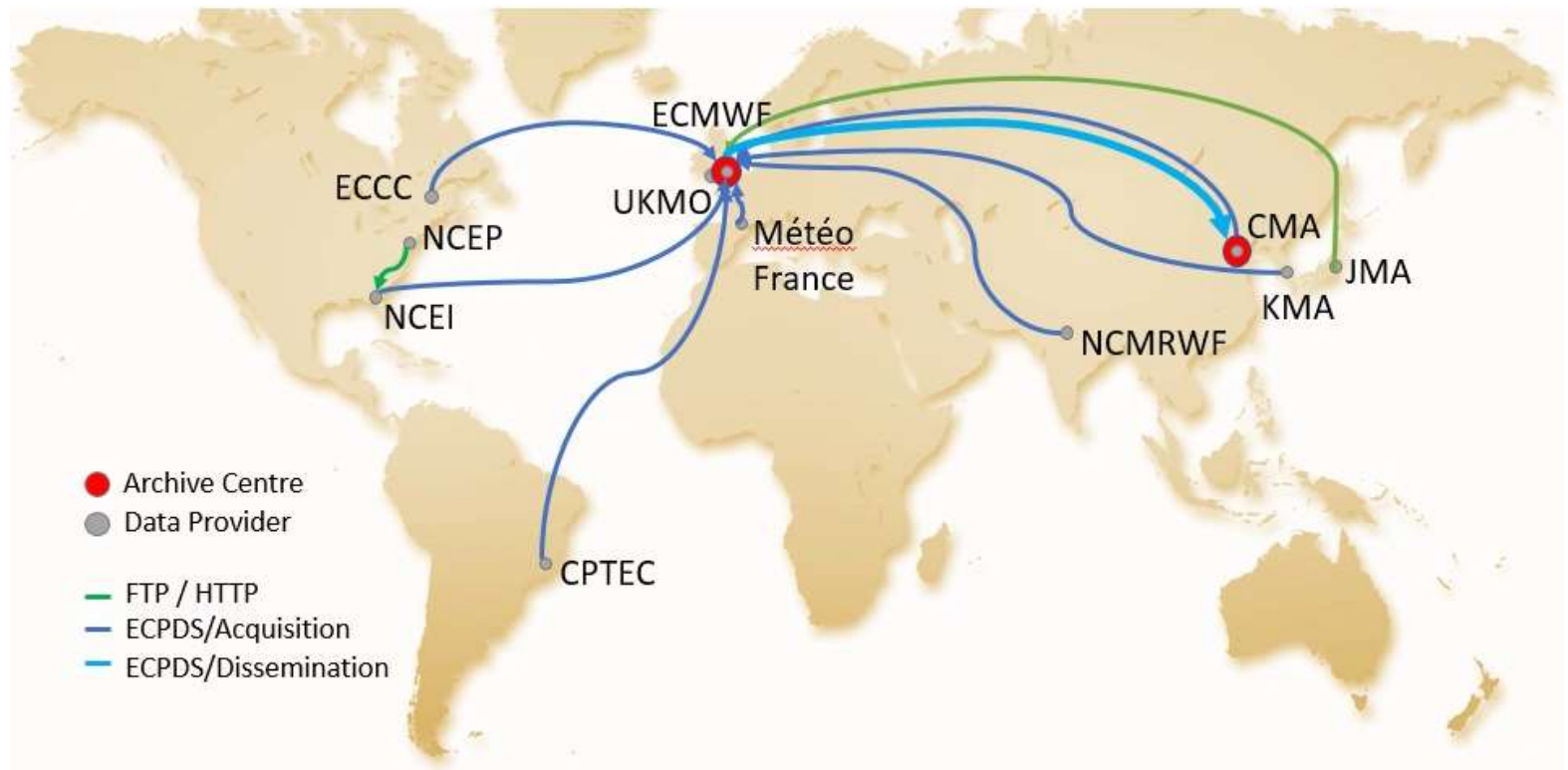
TIGGE: THORPEX Interactive Grand Global Ensemble

- Ensemble forecast data from ten global NWP centres, starting from October 2006, which has been made available for scientific research.
- 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.
- THORPEX programme finished at the end of 2014, TIGGE will continue for a further 5 years, when its future will be reviewed.

TIGGE: Data flow in 2006



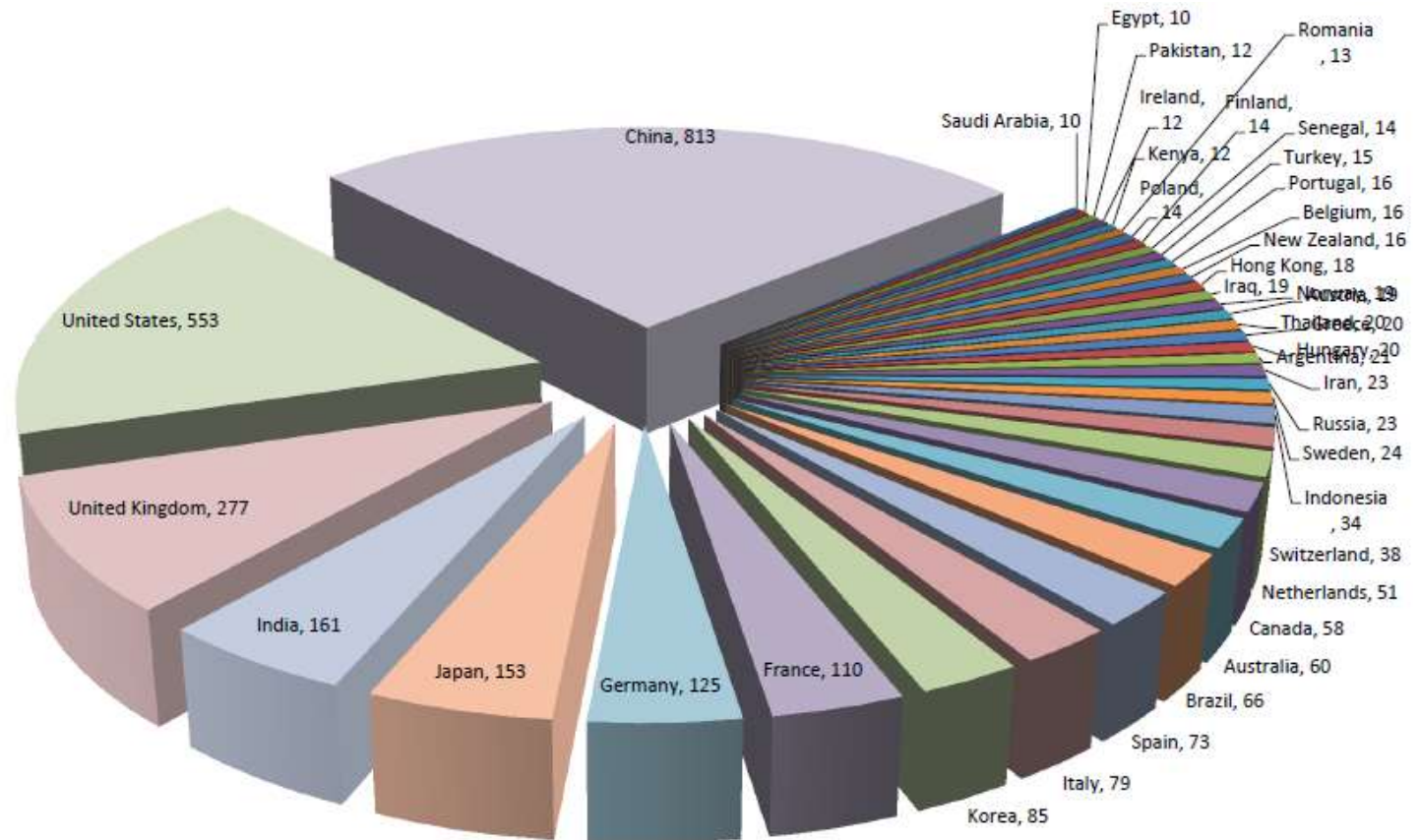
TIGGE: Data flow in 2018



TIGGE current status @ ECMWF

- Data since 1st Oct 2006
- 3 PB, 6.7 billion fields
 - growing by ~ 4 TB/day
 - 2 million fields/day

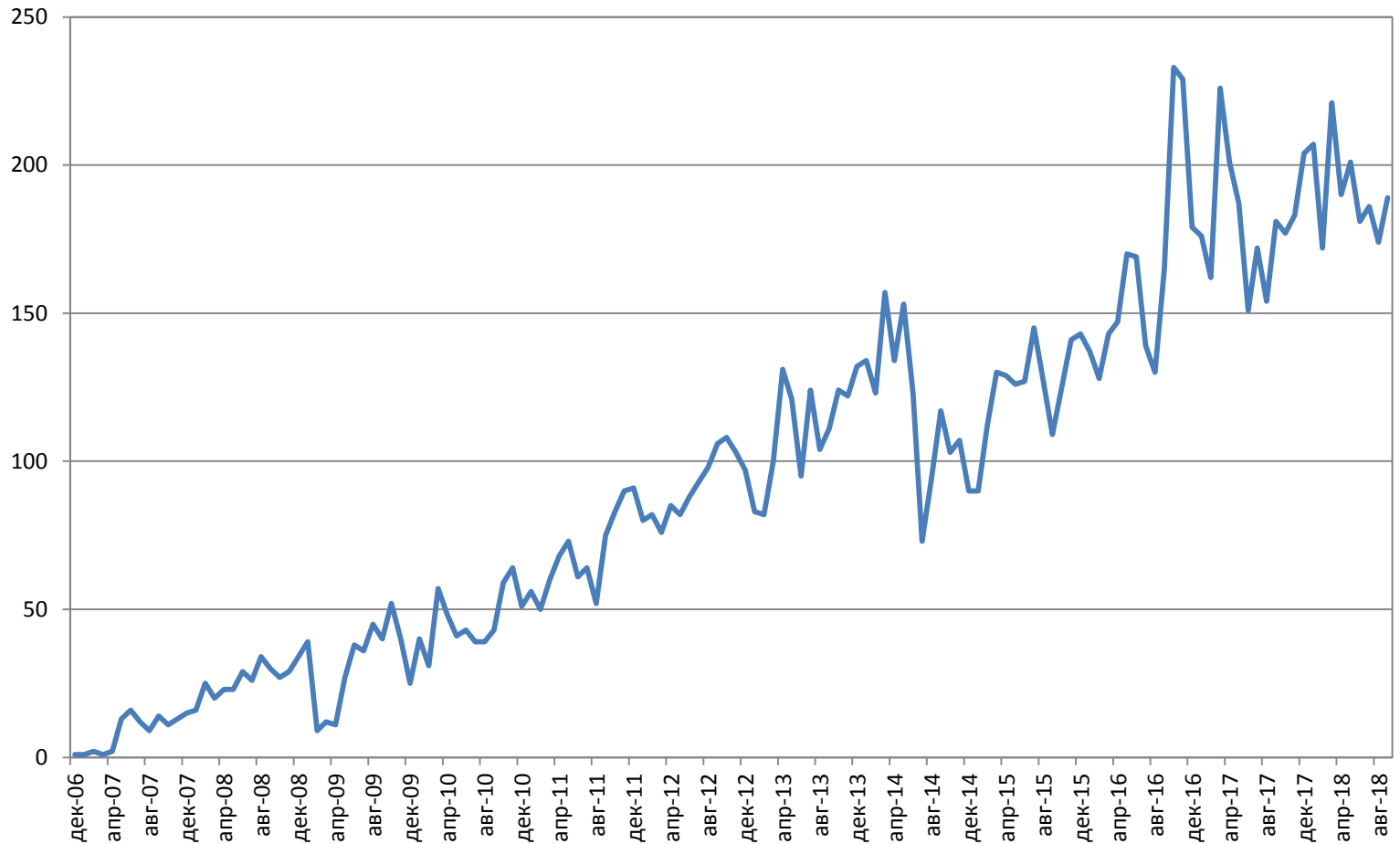
Users of ECMWF TIGGE Data Portal (old) up to September 2014: **3393**



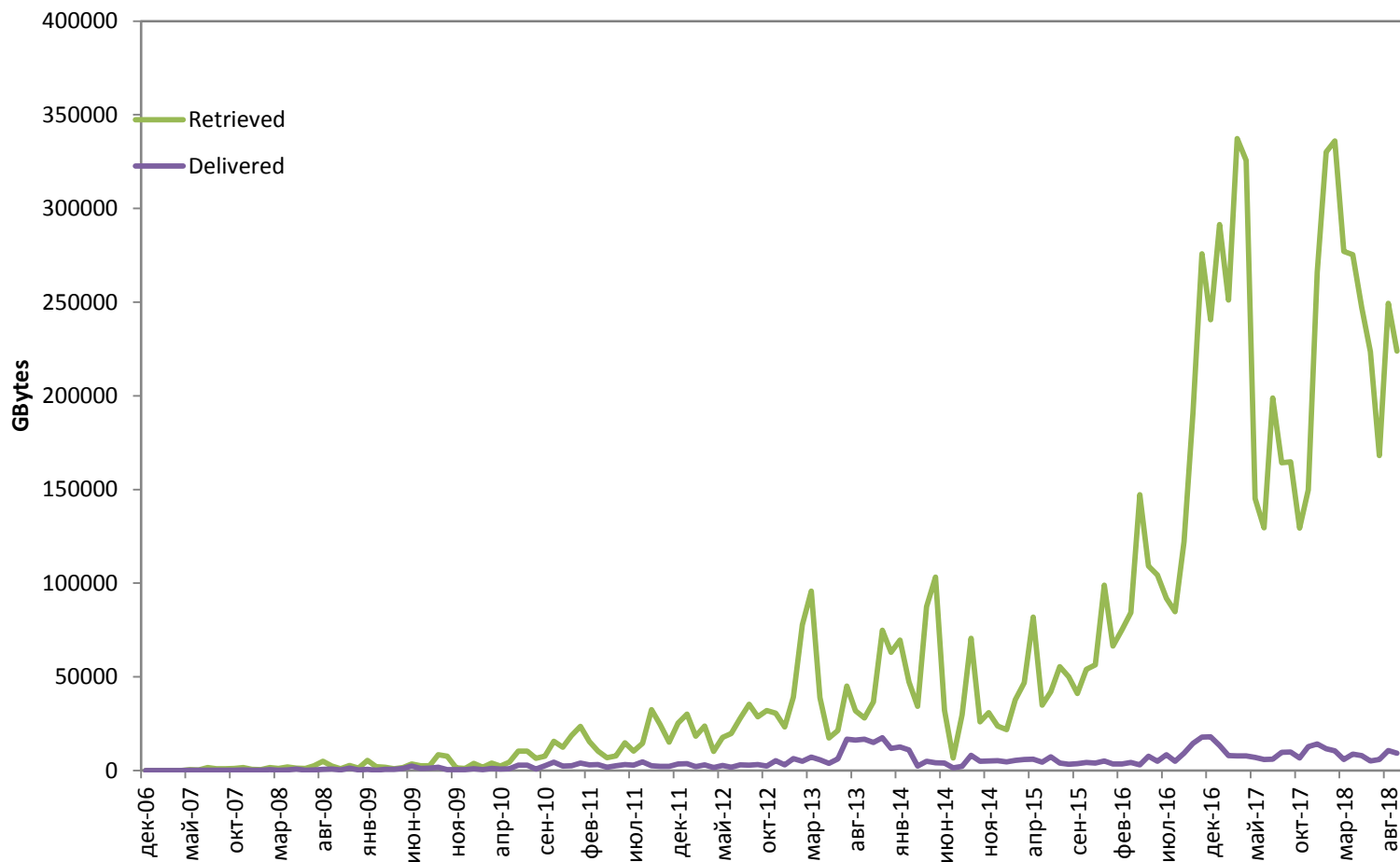
Users of ECMWF TIGGE Data Portal (new) up to Sep 2018: **2680**



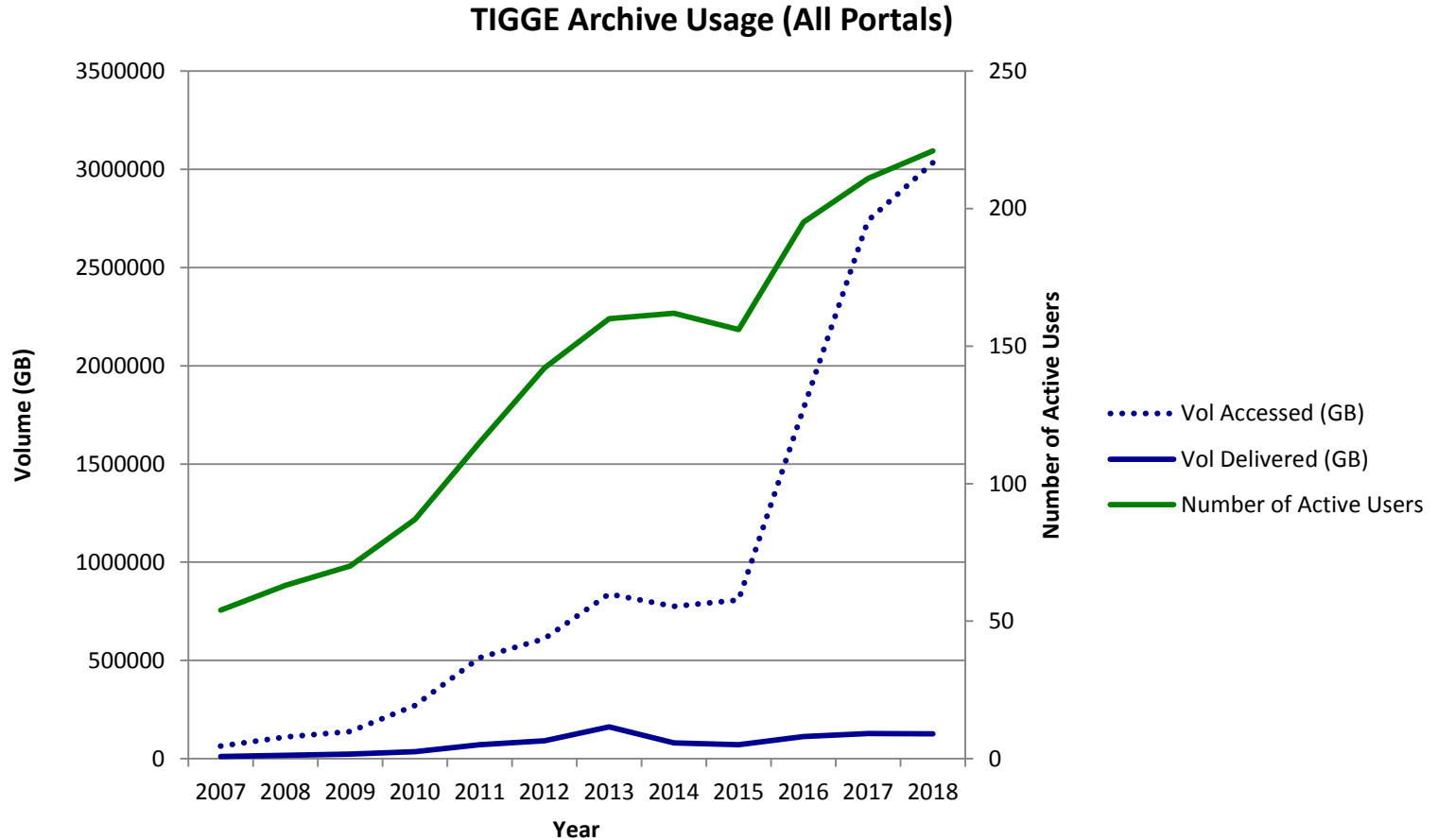
ECMWF TIGGE Global Archive Number of active users per month



ECMWF TIGGE Global Archive Data volumes (Gbytes) per month



TIGGE usage: aggregate of all Archive Centres



Enhanced web infrastructure

Corporate Website: <http://tigge.ecmwf.int/>

Technical Website: <https://confluence.ecmwf.int//display/TIGGE>

Data Portal: <http://apps.ecmwf.int/datasets/data/tigge/>

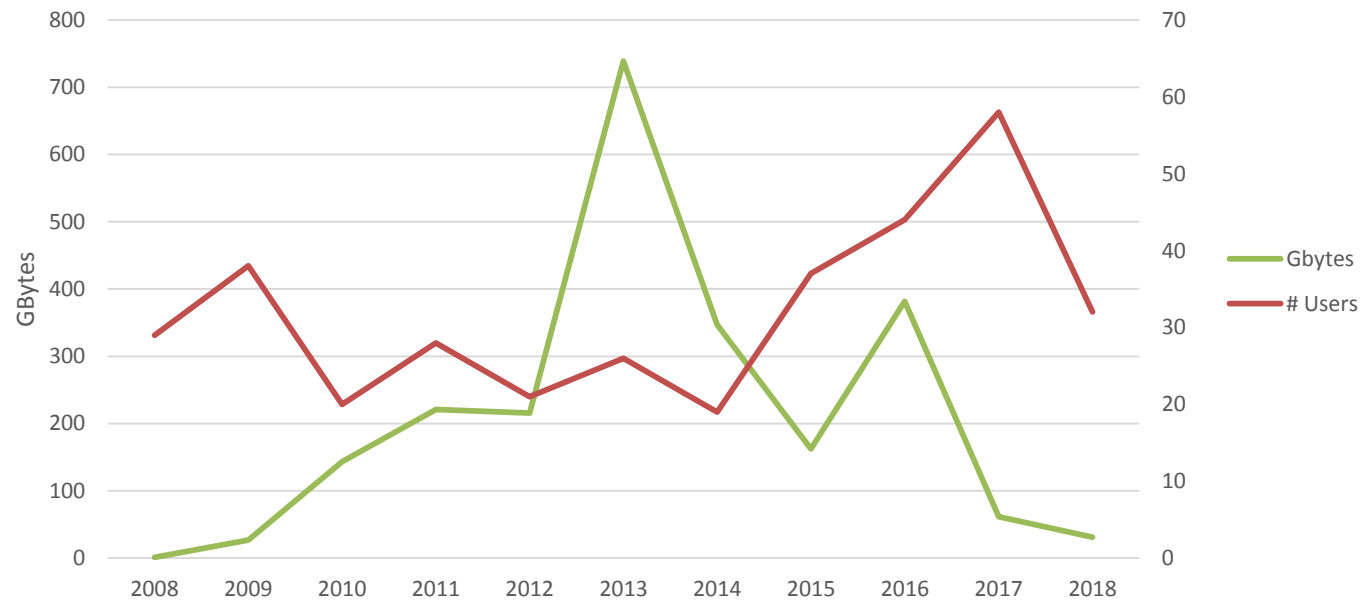
History: <http://apps.ecmwf.int/datasets/history/tigge-prod/>

Usage statistics:

<https://confluence.ecmwf.int/display/TIGGE/Usage+statistics>

Usage of Tropical Cyclone Tracks from NCAR Archive

<https://rda.ucar.edu/datasets/ds330.3/>



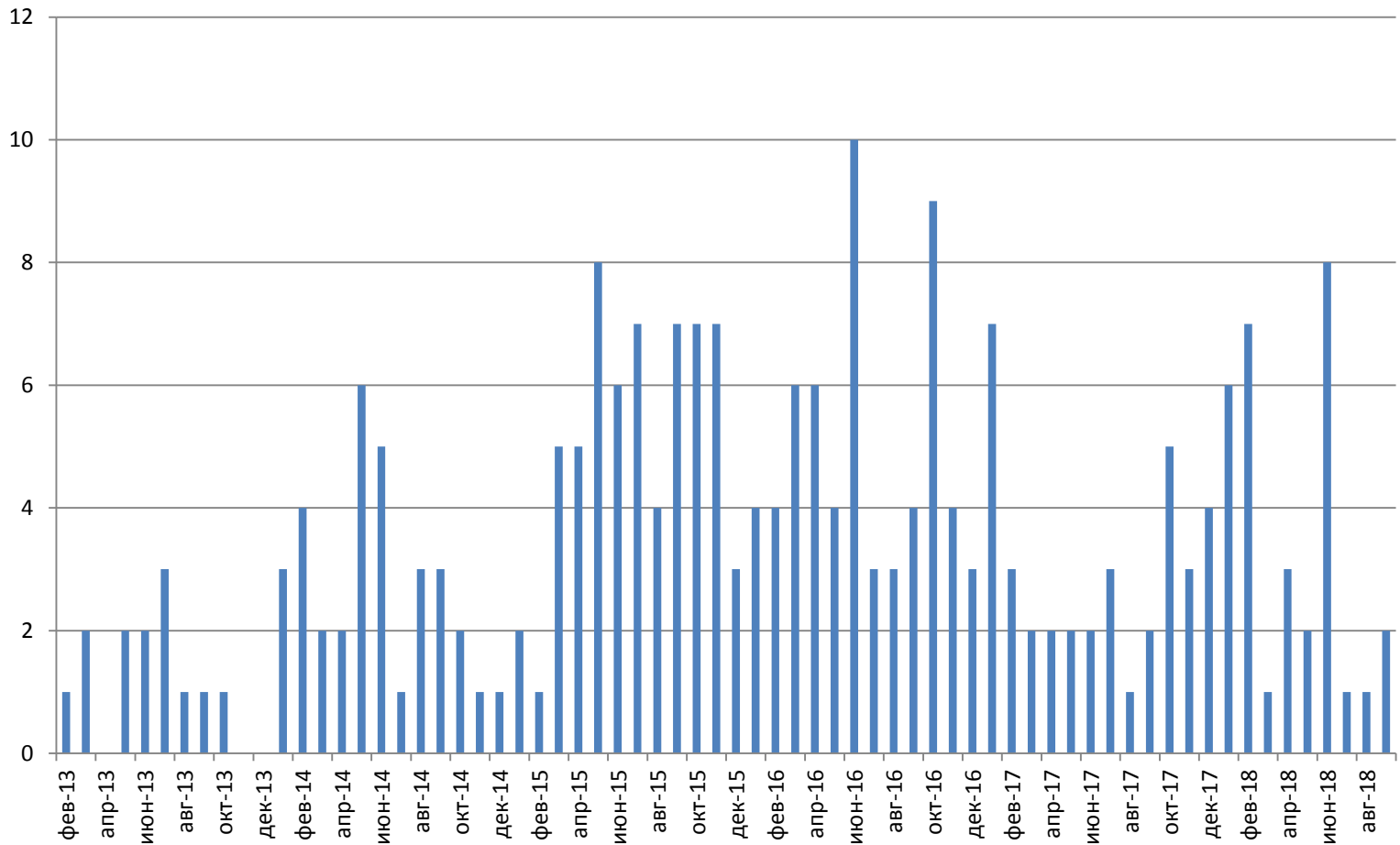
Thanks to Doug Schuster

TIGGE-LAM status

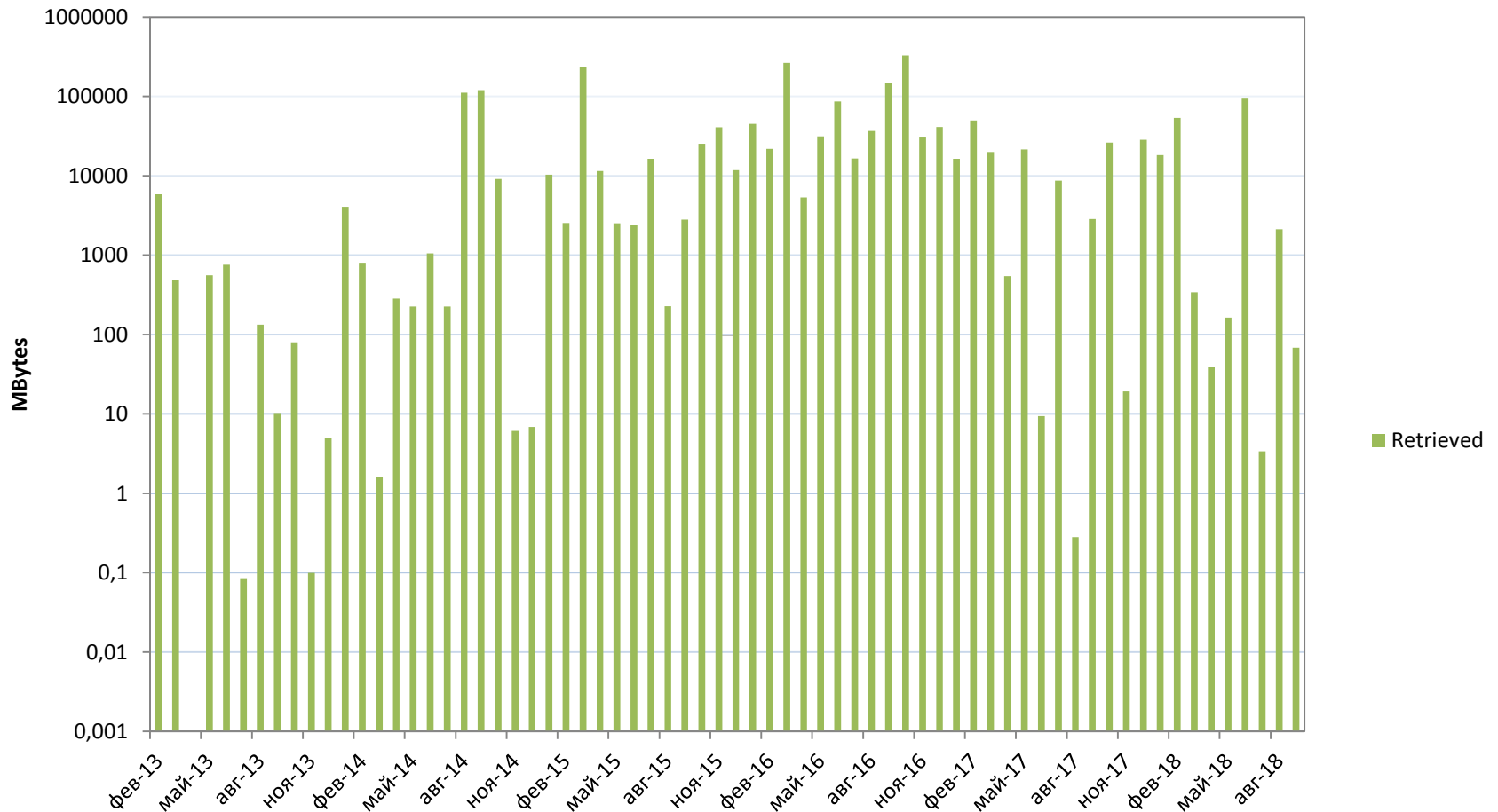
- Data since 1st Jan 2013
- 30 TB, 110 million fields
- Rotated output, no interpolation

- Total number of users: 143
- <https://confluence.ecmwf.int/display/TIGL/Usage+statistics>

TIGGE-LAM usage: number of active users per month



TIGGE-LAM usage: Data volumes per month (log scale!)



Since last PDEF meeting July 2017

- The situation was critical for a while ☹
 - Not secured human resources in my team
- Many actions delayed (eg, user survey) as time was spent on re-establishing contacts with Data Providers, filling gaps and migrating from unsupported hardware
- NCMRWF fully supported
- Many data gaps filled (NCEP, ECCO, CMA)
- All contacts with Data Providers re-established 😊

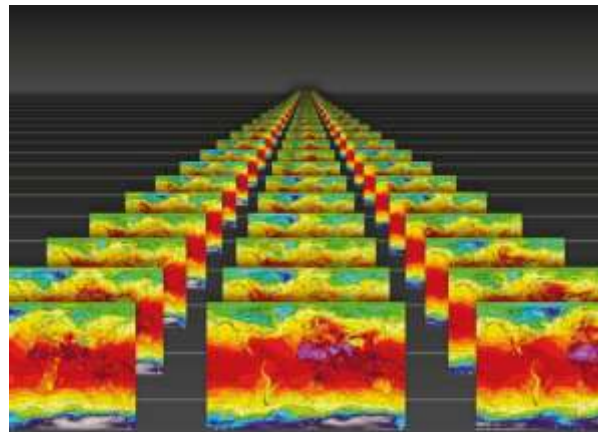
TIGGE: continue ?

- More additions:
 - DWD Icon-EPS
 - re-instate BoM ?
 - High resolution (deterministic) forecasts ?
- ECMWF, NCAR and CMA happy to continue with TIGGE activities

Suggested next steps

- Get strong motivation to continue with TIGGE
 - From PDEF and other WGs
 - Issue a user survey

<https://confluence.ecmwf.int/display/TIGGE/TIGGE+survey>
- Write to TIGGE Data Providers (by WMO)
 - obtain their commitment to continue with TIGGE for another 5 years (2019-2023), aligned with 2nd phase of S2S and WWRP Implementation plan (2016-2023)
- TIGGE-S2S workshop April 2019



WORKSHOP ON 2-5 APRIL 2019

Predictability, dynamics
and applications research
using the TIGGE and S2S
ensembles

Workshop on Predictability, dynamics and applications research using the TIGGE and S2S ensembles

ECMWF, Reading, 2-5 April 2019

To bring together the users and data providers of the
TIGGE and S2S databases around the following themes:

- *Database technical development*
- *Predictability and Dynamics*
- *Prediction and Verification*
- *Multi-Model approaches to prediction*
- *Application Studies*

Registration and abstract submission close on 30 Nov.

Thank you for your attention

TIGGE: User Survey

- Overall, how satisfied are you with the TIGGE dataset?
- Please explain briefly (in 1 - 2 sentences) your current research topic using the TIGGE dataset:
- What would be the most important improvement to the dataset? Please provide details on the desired variable, resolution, frequency etc. and specify how important this improvement is to you.
- Have you found any obstacles to use the TIGGE dataset for scientific investigation?
- Please include a list of your journal papers (or DOI), book chapters or any other relevant productivity involving the use of the TIGGE archive data.

The TIGGE-LAM Database: European configurations

	ensemble size	control forecast	forecast length [h]	model runs ⁽¹⁾ [UTC]
ALADIN-LAEF	16	yes	72	00,12
COSMO-DE-EPS	20	no	27	00,06,12,18
COSMO-LEPS	16	no	132	00,12
DMI-HIRLAM	25	yes	64	00,06,12,18
GLAMEPS	54	no	60	06,18
HUNEPS	11	yes	60	18
MOGREPS	12	no	36	03,09,15,21
PEARP	35	yes	54	06,18

(1) only model runs which are archived in TIGGE-LAM archive