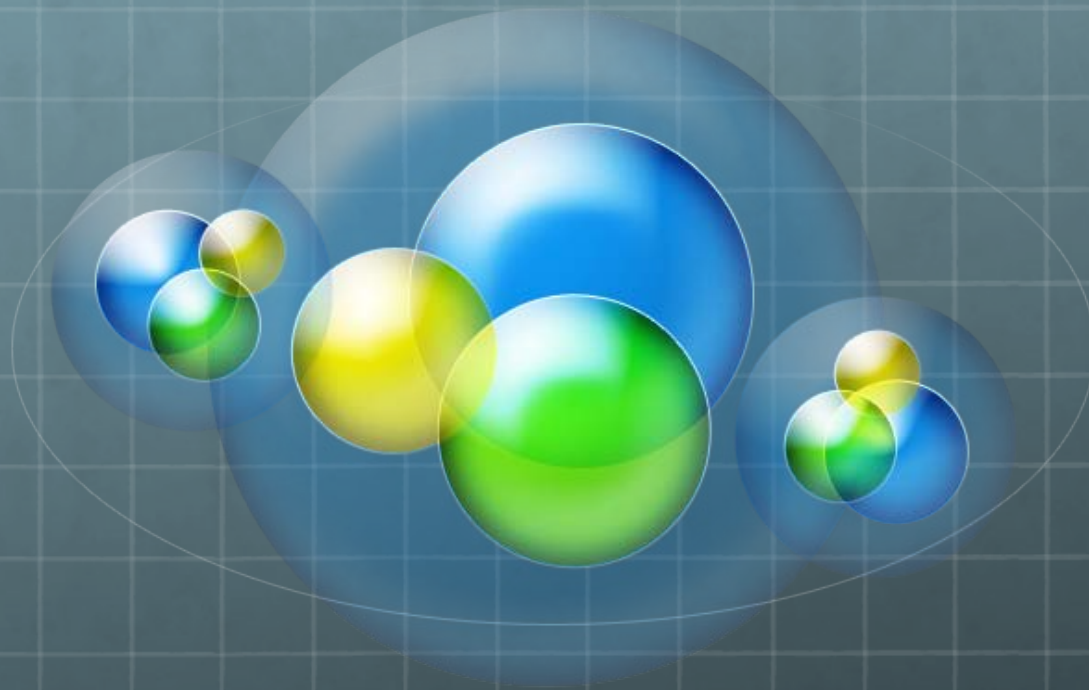




Global Geophysical Fluids: an IERS RS/PC Perspective

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IERS RS/PC

- 🌐 Produces weekly, daily, and 4x/day EOP combination solutions
- 🌐 Solutions produced every day of the year
- 🌐 Includes AAM, GPS, SLR, and VLBI data
- 🌐 Hundreds to thousands of users
 - 🌐 Most use the data for operational (non-research) purposes (~90%)
 - 🌐 i.e. most are non-scientists

IERS RS/PC Data Needs

- Reliable access to data
 - Outages create problems
 - Mirroring of data is preferred
- Well-announced, hopefully infrequent, changes to system or format
- Automation friendly format
 - Available by ftp

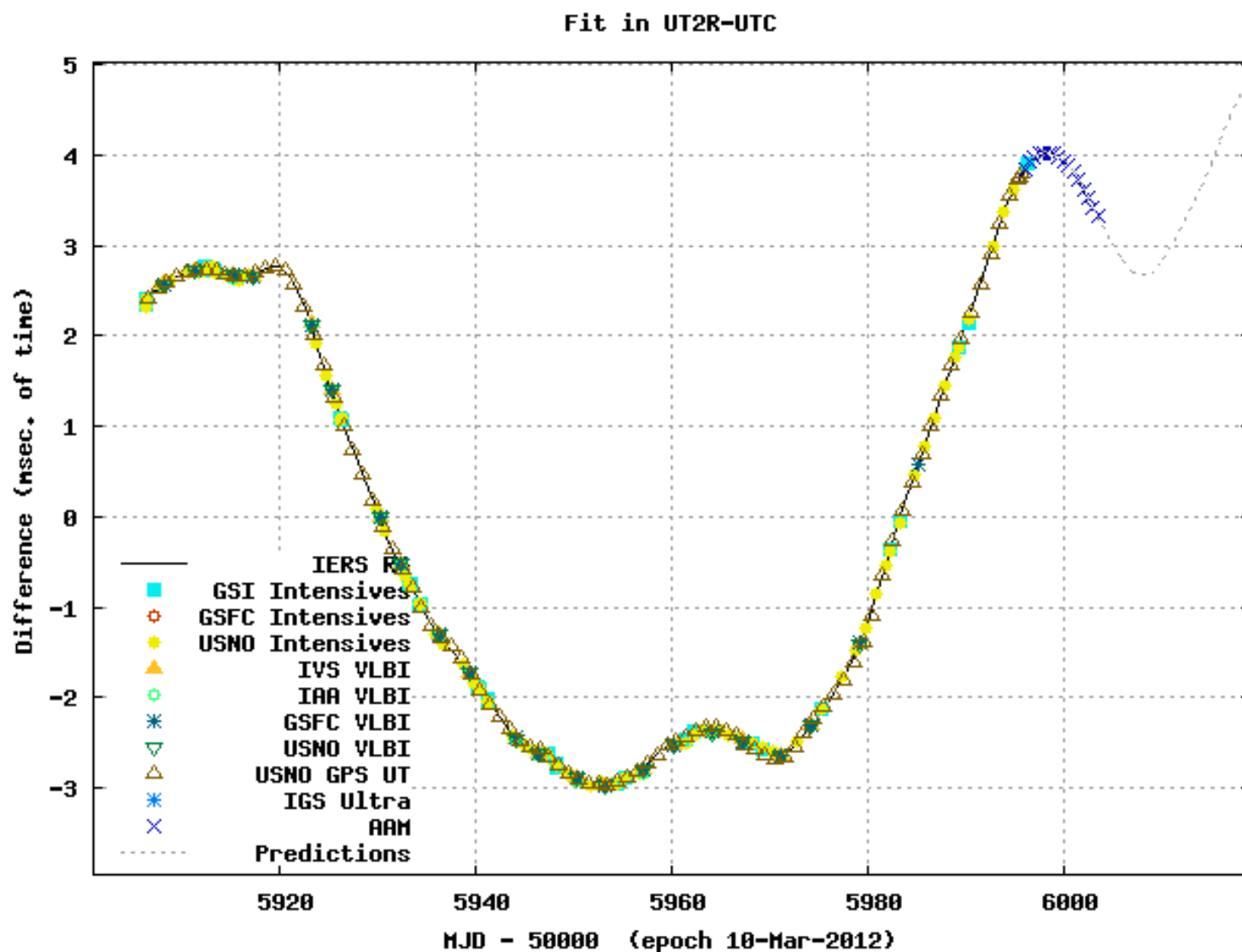
IERS RS/PC use of AAM

- Use a USNO combination of NCEP and NOGAPS AAM data
 - Analysis and forecasts
 - Combination is a weighted averaging of data
 - Under usual circumstances, the input data are simply averaged

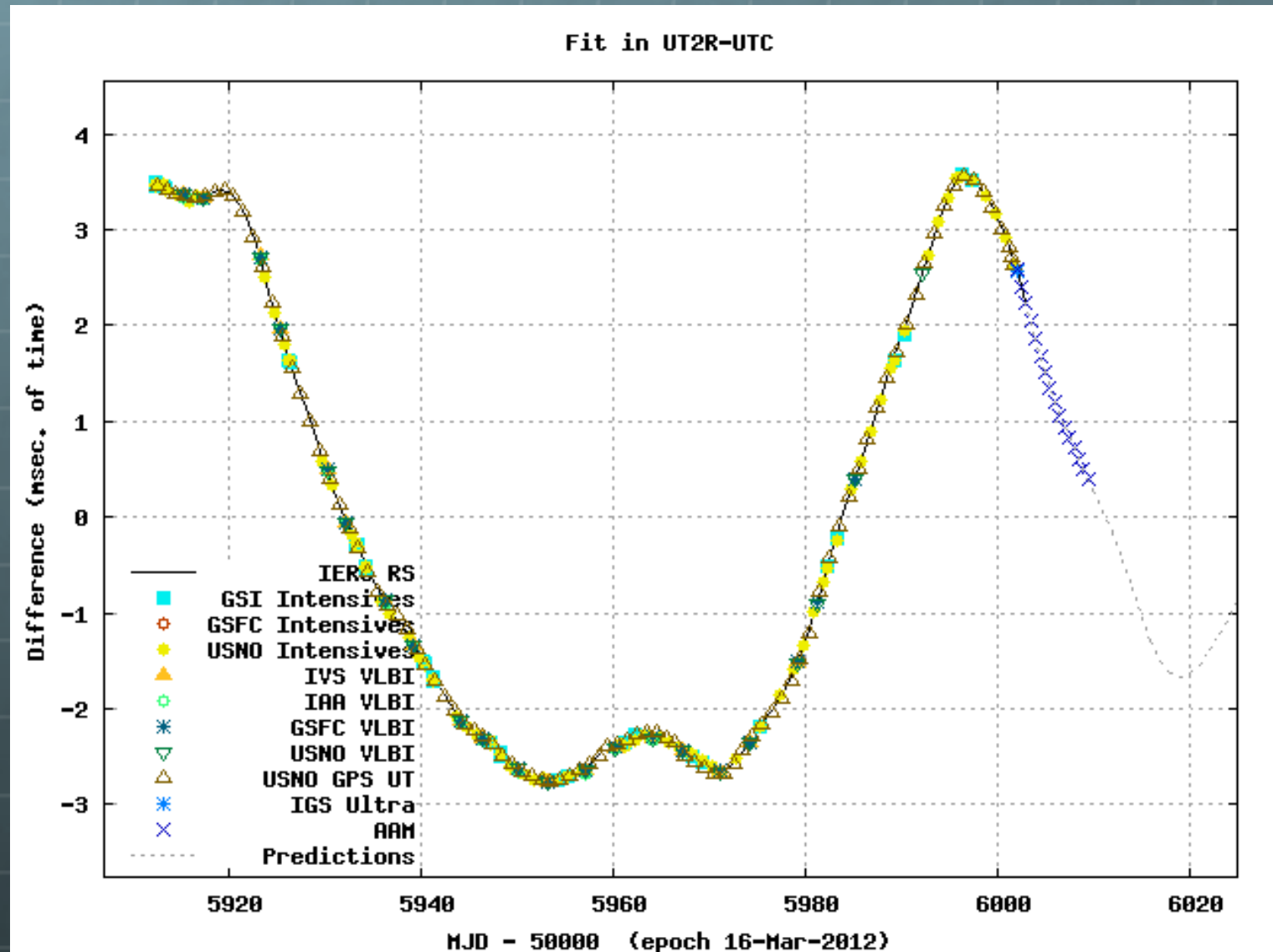
IERS RS/PC use of AAM

- AAM used in the prediction of UT₁-UTC data only
 - Not used in the combination
 - Determines the UT₁-UTC predictions out to 7.5 days

Effect of AAM on UT1 Prediction



Effect of AAM on UT1 Prediction



Areas under Investigation

-  Use of AAM/OAM in polar motion prediction
-  Use of ECMWF in EOP prediction

Wish List

- 🌐 Official IERS AAM combination analysis and forecast series
 - 🌐 More expertise in the combination
 - 🌐 Optimal solution
 - 🌐 More robust, better estimate
 - 🌐 More input series?
 - 🌐 Less concern with data outage
 - 🌐 Estimates of the errors of the input series and of the combination series
 - 🌐 Provides insight into potential problems

Wish List

- 🌐 Higher resolution
 - 🌐 For reduced latency, not just for scientific analysis
- 🌐 Near real-time availability
- 🌐 Extend forecast length

Wish List

- 🌐 Official OAM combination analysis and forecast series in near-real-time
 - 🌐 i.e. more than one operational source
- 🌐 Official HAM combination analysis and forecast series in near-real-time
- 🌐 AAM+OAM+HAM analysis and forecast series

Summary

- IERS RS/PC uses GGF (AAM) data in our operational products
 - Products used by scientists, but predominantly by operational personnel
- Anticipate future use of additional IERS GGFC products
 - Especially if the products are made operationally