

Release of GREAT Cycle 1 Calibrated Data Product

From: Rolf Güsten (GREAT Principal Investigator)
To: G. Sandell, General Investigator of Cycle 1 proposal # 01_0051
Cc: Erick Young, Hans Zinnecker, Göran Sandell
Date: 14.05.2014

Ref.: release of GREAT Cycle 1 data

Dear Göran –

Please find attached the validated, calibrated GREAT science data that was obtained during the continuation of your project 01_0051 during SOFIA's cycle #1 flights in February 2014. With this distribution the data will also be ingested into the SOFIA data archive.

Your data has been processed with the latest version of the GREAT calibrator. Spectra are presented on the T_A^* scale ($\eta_{mb} = \eta_{for} = 0.97$). For main beam coupling efficiencies we recommend to use $\eta_{mb} = 0.67$ for the GREAT channels L1, $\eta_{mb} = 0.62$ for L2, and $\eta_{mb} = 0.70$ for M_a .

The data package (attached as .tar file) does contain

- an overview, providing basic information about your project
- data product level 3, containing
 - (a) the calibrated spectra in standard CLASS format, and
 - (b) the final data product: the summed spectrum or a "lmv"-data cube.
- the *.class script used in CLASS to process the data.
- a read-me file with details of the data reduction (as appropriate).
- a brief log of the observations.

The "project_ID.great" file contains the science data of your target (identified by source name), but also the receiver (Trec) and system (Tsys) temperatures across the IF band. Because in 2013 your project was observed with the AFFT spectrometer only, here again we provide only data from this spectrometer. Per your request the (for this project) redundant XFFT spectra can also be made available.

All spectra have been calibrated for the transmission in the signal band. Should there be a line in the image band that you want to calibrate, make us of the Tcal arrays (provided for both detector bands). Spectra of Tsky-THot (observed and modeled) shall enable you to assess the quality of the fit to the atmospheric transmission [see Guan et al. (2012, A&A 542, L4) for details].

If you have questions about the data, the way they were processed or the observations proper, feel free to contact M. Requena (mrequena@mpifr.de), your GREAT data processing liaison.

In view of the expected large number of GREAT-based publications from cycle 1, and given the positive impact our joint publications in the A&A Special Volume # 542 had on the project's visibility in our communities, we aim again at a "packaged" publication in A&A. Timeline for submission will be August this year. If you are interested to join, please stay tuned.

With best wishes,

Rolf Güsten (for the GREAT consortium)