

Release of GREAT Cycle 1 Calibrated Data Product

From: Rolf Güsten (GREAT Principal Investigator)
To: R. Sahai, General Investigator of Cycle 1 proposal # 01_0138
Cc: Erick Young, Hans Zinnecker, Göran Sandell
Date: 08.11.2013
Ref.: release of GREAT Cycle 1 data

Dear Raghvendra–

Please find attached the validated, calibrated GREAT science data that was obtained for your project 01_0138 during SOFIA's cycle #1 flights in April and November 2013. 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 & 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. Unless noted otherwise you will receive data processed by the XFFT spectrometers.

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 early next year. If you are interested to join, please stay tuned.

With best wishes,

Rolf Güsten (for the GREAT consortium)