CALL FOR HAWK-I/GRAAL SCIENCE VERIFICATION PROPOSALS

Deadlines

Deadline for SV proposals: 31 October 2017 18:00 CET

SV Run: 2-5 January 2018

HAWK-I is a cryogenic wide-field imager installed at the Nasmyth A focus of UT4. The on-sky field of view is 7.5'x7.5', with a cross-shaped gap of 15" between the four detectors. The pixel scale is of 0.106". The instrument is offered with 10 observing filters placed in two filter wheels: 4 broad band filters (Y, J, H & K) and 6 narrow band filters (Bracket gamma, CH_4, H_2, 1.061 μm, 1.187 μm & 2.090 μm).

In combination with GRAAL (the ground layer adaptive optics module of the VLT Adaptive Optics Facility) HAWK-I will offer a significantly improved image quality. GRAAL is able to compensate for the lowest layers of the atmospheric turbulence (up to ~ 300 – 500m, depending on the spatial frequencies considered), carrying more than half of the turbulence variance.

The HAWK-I + GRAAL "seeing enhanced" mode is expected to provide:

- deeper expositions for nearly point-source objects, or
- higher sensitivity (i.e. deeper detection limiting magnitude)
- the operation of HAWK-I more than 80% of the time with an equivalent K-band seeing of 0.55" (instead of 0.7" without GRAAL)
- excellent image quality in good atmospheric conditions (0.3" for around 30% of the time).

The adaptive-optics assisted HAWK-I mode is now offered to the community for Science Verification (SV) for 4 nights in January 2018.

All astronomers are invited to participate in this opportunity to obtain unique science with the HAWK-I/GRAAL mode and thus to demonstrate its scientific capabilities.

The deadline for this call for proposals is 31 October 2017, 18:00 CET.

Proposals will be reviewed by an internal panel and allocated time based on scientific merit and feasibility, as well as in the demonstrated ability of the Principle Investigators to deliver results on a timely basis.

The observations will be conducted during the nights of 2-5 January 2018 in Service Mode by a dedicated team of ESO astronomers. The HAWK-I/GRAAL SV team will be able to assist the successful PIs in the preparation and optimization of the observation blocks.

The latest version of the HAWK-I data reduction pipeline will be available for reduction of the SV data. Proposers are reminded that all SV data are made public worldwide immediately after passing the usual quality control checks.

Please use the special proposal LaTex template that can be downloaded from the HAWK-I/GRAAL science verification web site, where you will also find links to the HAWK-I documentation. Proposers are strongly encouraged to use the HAWK-I ETC to estimate the exposure times. Overheads may be estimated using the information in the Overheads webpage, and considering 5 minutes of extra overheads for the GRAAL acquisition.

Proposals may also be prepared using any suitable text editor following the guidelines of the LaTex template, but please send us **only the pdf output** and please do not send finding charts at this time. The SV team will request these in due course.

Applications should be sent by EMAIL to hawkisv@eso.org not later than 31 October 2017, 18:00 CET.

The HAWK-I SV team should be contacted in all matters regarding the proposal preparation.