

Guest Observer Flight Participation, User Queries and Inputs

B-G Andersson

USRA

SOFIA Associate Director for Science Operations

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Content

- GO flyer participation
- Individual program support
- GO grant management and support

Guest Observer Participation

- SOFIA observation scheduling is highly sensitive to boundary conditions (SUAs, field-orientation, LOS rewind frequencies, etc.)
 - long range schedules are not reliable at the individual observation level
- Changes (of a few days) in the instrument schedule can require significant changes in flight plans
 - Every cycle, to date, has seen changed, delayed or canceled flight series
 - We can (and do) run “long range” and “automated flight plan” simulations, but significant optimization and iterations with science is needed to have both efficient and prioritized plans
- Flight Series schedule (instruments) is published at the beginning of each Cycle
- Flight planning starts 11 weeks before the series, with “post science” at T-7 weeks
- Flight plans are posted to web and e-mails are sent out to affected GOs at that time

GO invitations - Nominal process

- User Support invites GO's to fly (Nominally 3 seats per flight)
 - If there are uncertainties, or re-planning, this notification is delayed
 - SMO staff travel or illness can delay the notifications
 - Flight Participation Forms, Medical Forms and Badging information must be returned and processed.
 - For non-US citizens this can be challenging to process in time (NASA security requires 4 weeks notice)
 - Basic travel & “Palmdale” information is also sent out
 - We, deliberately, do not recommend hotels, restaurants etc., since that can be found more complete and up-to-date on line
- At B703, Palmdale, one scientist has been tasked with hosting and escorting GO flyers.
 - Very limited office space at B703, no “visitor cubes”
 - Instrument scientists and Mission Ops crew are on night schedule
 - Hand-off to instrument scientist at Mission Brief to after flight

GO flyers Cycle 5 – so far

- Cycle 5 GO invitations have not been as smooth as we want.
- Because of (very) late changes to OC4M (EXES), and subsequent aircraft issues, flight planning for Cy 5 have been running late, or required significant re-planning and contingency planning
 - Detailed plans have been uncertain late, leading to some late GO invitations
- Personnel absences (illness and extended travel) have caused some additional delays
- However, most flights have had GO flyers – many with more than 3
 - GO flyers have been “stranded” in Palmdale due to canceled flights or flight series
- Augmenting the User Support staff should alleviate the problems encountered

Instrument Support Staffing

Instrument	Instr Sci (primary)	Instr Sci (Backup)	Instr Op	Instr Op 2	Pipeline (Primary)	Pipeline (Backup)
EXES	Boogert	N/A	PI team	PI team	N/A	Adwin Boogert
FIFI-LS	Klein	Fischer (DSI)	Trinh	Adams	Dario Fadda	William Vacca
FLITECAM	Vacant (Vacca/Sheno)	Boogert (assigned)	Adams	Trinh	Sachin Shenoy	William Vacca
FORCAST	Helton	De Buizer	Adams	Trinh	J. Radomski/S. Shenoy	William Vacca
GREAT	Chambers	Sandell	PI team	PI team	N/A	Ed Chambers
HAWC+	Hamilton	Lopez-Rodriguez	Adams	Trinh	J. Radomski/S. Shenoy	William Vacca
HIPO	N/A	N/A	PI team	PI team	N/A	N/A
HIRMES	Vacant (interviewing)	Vacant				William Vacca

Red=departing, Yellow=off-nominal/"borrowed"

- Because of limited staffing, we have prioritized the support of the most highly sought after instruments (FORCAST, GREAT and HAWC+), and highest priority activities
- Additional hires are approved and under way, but we are also having significant attrition

Instrument/Guest Observer Support

- User Support portal is through sofia_help@sofia.usra.edu
 - Uses a “Request Tracker” database which tracks responses
 - Monitored by User Support and Science Ops management
- The SMO staffing is stretched to cover on-going tasks
- Each program is assigned a support scientist who provide phase II and observation set-up supports, and additional specific support as needed.
 - But they are also responsible for queue observation preparations and execution, documentation etc.
- Pipeline group is fully occupied with development, processing and QA of data, but do provide ad hoc additional support to GOs
- User Support (technical) staff consists of Ravi Sankrit, Raquel Destefano, Andrew Helton (part), with science staff matrixed in.
- User documentation on web provides support and information
 - Observers Handbook
 - Guest Observer Data Handbooks (EXES, FLITECAM, FIFI-LS, FORCAST)
 - Proposal tools (ETCs, ATRAN, etc.)

Instrument/Guest Observer Support, cont.

- Available SMO staffing does not allow (general, extensive) data analysis support.
 - New contract addition will allow some additional staffing for this, when implemented
- More extensive support is on a case-by-case basis
- Pipeline group provides level 3 and (where appropriate) level 4 data and data handbooks, and required reprocessing, etc.
- In the specific case brought by SUG chair, one help-desk ticket was received and responded to, in addition to a significant amount of correspondence with SMO staff. The factual communication with the SMO was limited.
 - It is not clear what additional support could have been provided given the staffing, responsibilities and observational set-up

GO Grants administration I

- USRA is administering the SOFIA GO grants on behalf of NASA, so most federal rules apply
- Grants are (as of cycle 4) organized as “authority to invoice”
- For all approved programs a first (Cy4: \$3k, Cy 5: \$7k) amount is authorized upon acceptance to cover AOR preparations (and, optionally, travel to Palmdale for first flight)
 - Since SOFIA is prone to weather (etc.) accepted programs can end up without data
- For “Must Do” programs, the full (remaining) grant amount is released (for invoicing) after the first observation in the program is completed
- For “Do if Time” programs, funding proportional to the amount of observing time is released with each observation

GO Grants administration II

- SOFIA proposals are not required to be submitted institutionally (like NSF or NASA funding proposals)
 - We therefore do not automatically have financial contact information
- Upon acceptance the GO is given a grant amount and requested to:
 - Provide the institutions Sponsored Research Office (SRO) contact information to the SOFIA Contracts Manager
 - Submit a nominal budget (intended to ensure that no un-allowed or inappropriate expenses are planned) to the SOFIA Contracts Manager
 - Beyond the review of appropriate spending, USRA/SOFIA does not control the budgets
 - As a NASA requirement (Cy 1-4) foreign travel must be pre-approved
 - This has been removed as of Cy 5.
 - After review the contracts manager and SOFIA/USRA business office issue the grants
- After the 2 year nominal period, a simple final report is due (broad outline of cost and activities and resulting publications)
 - NCE are routinely given

GO Grants administration; Issues I

- FY17 has seen some issues with SOFIA grants
- NASA SOFIA contract re-competition
 - Because the USRA contract to run the SMO expired Feb 28 2017, SOFIA GO grants could only be issued to THAT date. With each delay in the new SOFIA contract (irrespective of contractor) grant extensions can only be issued to the end of each contract extension
 - On Feb 27, 2017 we notified all affected GOs of this via e-mail:

Dear Colleagues,

As part of accepted SOFIA observing projects, Guest Investigator grants are issued by USRA, as the contractor for SOFIA Science Mission Operations (SMO).

The current NASA contract to USRA for running the SMO had a nominal expiration date on Feb. 28 of this year, which is why the SOFIA grants to you, the SOFIA Guest Investigators, also had that nominal expiration date. USRA has now received a contract extension, for two months, and we are issuing extensions to all outstanding SOFIA grants as quickly as possible. Please expect a further extension beyond April 30, 2017 prior to that date, requiring no action on your part.

To expedite the process of grant extensions, please ensure that your Sponsored Research Office (SRO), or equivalent, is in contact with the SOFIA/USRA contracts manager, Pamela Henry (pHenry@sofia.usra.edu).

GO Grants administration; Issues II

- The continued uncertainty in the contract status (selection delays, protest etc.) led to a significantly increased work load for the SOFIA contracts manager
- An assistant was recruited to support the contract manager, but recruitment, selection and training takes time.
- Many astronomers do not understand the status of federal grants – For instance, that they, as proposal PI, are not the grant recipient, but that the grant is formally between USRA and their employer and that, therefore, the SOFIA grants manager must have an SRO contact that they can interact with. There often seem to exist a lack of communication between PIs and their SROs. Often the SRO's know the grant status but this information doesn't seem to get passed to the PI's. This **has** to be a local responsibility. These kind of issues can lead to significant delays and additional work.

GO Grants administration; Resolutions

- SOFIA/USRA contracts manager has simplified the requirements for Cy 6 grants and initiated a dialog with NASA Ames to implement a streamlined approach for grant processing, including an simplified grant award document.
- Grants manager assistant is up to speed and significantly improving the flow-through
- SOFIA contract situation expected to be resolved in the near future lifting many complications.