

SOFIA Proposal Review Process

B-G Andersson

USRA

SOFIA Associate Director for Science Operations

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Outline of proposal review and selection

- Proposal Ingest
 - Support GOs with rules, condition and process
 - USPOT, SITE, etc.
- Technical Review
 - Who, how and when?
 - Compliance
- TAC
 - US/German interaction
 - Recruitment, assignments, conflicts
- Post-TAC process
 - Scheduling simulations
 - Deployment constraints
 - SMO Director

Proposal Ingest and Technical Review

- Proposals are submitted via USPOT, supported by SITE and other tools on the web site
 - Updates to the tools are scheduled for each proposal round
 - Occasional issues (sensitivity calculation issues etc.) still occur
 - We have a common USPOT, so differences in GO and GTO rules can occur
 - For Cycle 7 the GREAT team limited the frequencies that they felt that they could guarantee support of for the GO community
 - A number of proposals therefore were [partially] non-compliant with the CfP by requesting such frequencies
 - This issue will be addressed in USPOT in future cycles
- Technical Reviews of proposals are performed by the SMO staff scientists (DSI staff review those with SMO PIs)
 - At 200+ proposals, these are somewhat cursory reviews.
 - The TRs are summarized before given to the TAC to mitigate differences in “tone” between reviewers

TAC Recruitment and set-up

- SOFIA has separate US and German reviews
 - The GSSWG feels that the US and German community have too disparate science priorities for a joint review
 - For Cy 7, the US and German TACs were co-located
- Recruitment has been a challenge
 - Some years a 5:1 ratio in invitations: acceptances
 - Cy 7 invitation ratio less severe
 - Timing for faculty stated to require “before last week of August” (first week of classes)
 - Mid-October (Cy 7) seemed to work better
- The IR community is limited so some of the more “secondary” conflict of interest definitions has to be relaxed
 - By starting the recruitment before the proposal deadline (Cy 7) some additional “shuffling” required, but achieved
 - Rely on SMO Director, Panel chair and panelist to adjudicate

TAC Membership Statistics Cy 7

Gender Distribution:

Male invite	31	53%
Female Invite	28	47%
Male accept	16	57%
Female accept	12	43%

i.e. the TAC “as seated” has M/F=57%/43%.

Panel chairs for subject panels: 3M 2F.

TAC members by affiliation types:

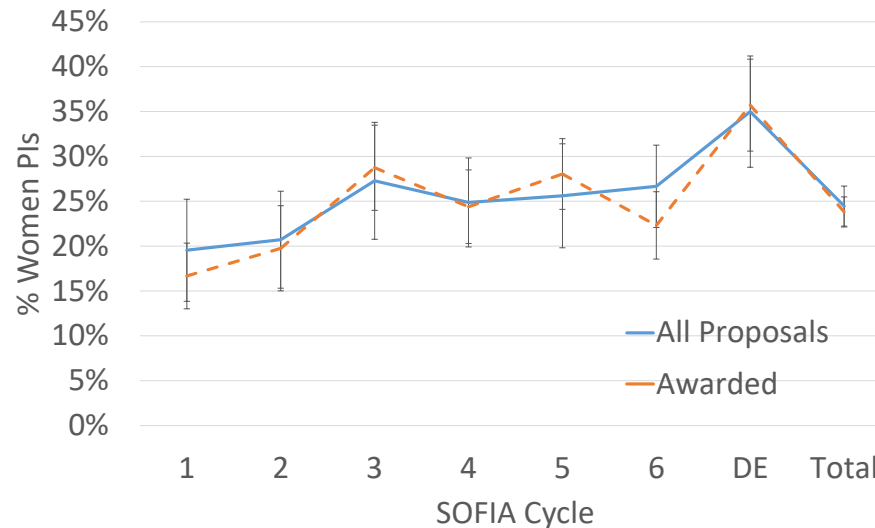
(R1 = R1 (etc.) research universities, UGC = Undergraduate College, FFRDC includes STScI and NRAO, CS=Civil Servants)

R1	17	59%
R2, R3 and UGC	5	17%
FFRDC	5	17%
CS	2	7%

Proposal Acceptance Statistics

- **Astronomy faculty members who are women in U.S. departments that offer an astronomy degree and no physics degree (2014. Source: AIP): 20%**
- **IAU members who are women (2018. Source IAU): 18%**
 - IAU members age 30-40: ~33% women
- **SOFIA proposal stats. - submitted and accepted:**

SOFIA Diversity Stats



TAC Review

- Proposals distributed to reviewers 3-4 weeks before TAC
 - Preliminary grades requested by the week before TAC
 - Preliminary score sheets generated by SMO and given to panel chairs at start of meeting
- SOFIA (US) uses the standard NASA process and rules
 - Primary and Secondary reviewers (about 20 P+S per panelist)
 - "Olympic voting"
 - NASA definition of grades
 - Use numerical grades in deliberations but absolute adjectival grade in final score
 - Compliance issues adjudicated by the SMO Director
- Review held off-site from Ames
 - Usually at an "airport-hotel" to ease travel complications
 - SMO staff present to support with logistics and answer questions (most have many years/proposal cycles experience)

Post TAC processing

- The TAC is charged with rating the proposals based on the criteria stated in the CfP
 - Scientific Merit primary criteria
- Because SOFIA scheduling is complex, the SMO analyzes the high-ranked proposal pool before the SMO Director and deputy selects the proposals
 - “Cycle Scheduler” (CS) runs determine the optimal instrument cadence (and series durations)
 - Including which instruments will be taken on the standard Southern Deployment
 - “Short Term Scheduler” (STS) simulations provide a nominal completion report allowing modification to the schedule for critical programs and rejection of programs that cannot be completed (“outcompeted”)
 - These simulations are run on Phase I inputs

Post TAC processing II

- The SMO Director and Deputy Director combine the recommended cycle schedule (CS/STS outputs) with request and constraints from the PSI teams – and other programmatic concerns to generate a “Cycle Selection Document” which is approved by the SOFIA program.
 - Ensuring a equitable German allocation and adjudicating US-German selection conflicts
- The SMO Director then allocates proposal specific funding and communicates the selections and declines to the proposers.

Proposal Statistics

Cycle	Basic Science	1	2	3	4	5	6	7
Cycle time period		6/2013-2/2014	2/2014-2/2015	3/2015-1/2016	2/2016-1/2018	2/1/2017-1/31/2018	5/19/18-4/26/19	4/27/19-
Hours offered US	75	200	175	450	500	475	500	500
Hours offered DE	24	48	47	45	80	75	75	70
total hours offered	99	248	222	495	580	550	575	570
Proposals received US	59	132	89	122	155	179	199	200
Proposals received DE	19	39	27	31	30	27	27	33
total proposals received	78	171	116	153	185	206	226	233
Hours requested US	329	1293	545	1340	1569	1749	2121	2354
Hours requested DE	36	186	67	104	150	221	156	219
total hours requested	365	1479	612	1444	1719	1970	2277	2573
oversubscription US	4.4	6.5	3.1	3	3.1	3.7	4.2	4.7
oversubscription DE	1.5	3.9	1.4	2.3	1.9	2.9	2.1	3.1
oversubscription total	3.7	6	2.8	2.9	3	3.6	4	4.5

Summary

- SMO Director (US) selection official (TAC is advisory)
- In person reviews with moderate assignment loads
 - Ensures high-quality reviews
- US and German TACs separate, but (in Cy 7) co-located
- Off-site from Ames, supported by SMO personnel
- Technical reviews by the SMO staff (fallible but usually good)
- Standard NASA (/NSF) procedures and processes