



Dr. Matthew A. Greenhouse
Mail code: 443.2
301 286-4517 (direct)
matt.greenhouse@nasa.gov

9 December 2016

Re: Meeting #10 of the [SOFIA Science Users Group](#):

The SOFIA Science Users Group (SUG) met at NASA Ames Research Center during 2 Nov 2016. This meeting was supported by 7 of 10 committee members (Chiar, Graf, and Su absent). The focus of this meeting is reflected by the [agenda and presentations](#) that are available on-line. Recommendations of the SUG resulting from discussion of these presentations with SOFIA staff follow (in no order):

We commend the Project for its resiliency and creativity in maintaining a strongly positive trend in executed flights and realized research hours despite aircraft instrument issues during Cycle 4. We concur with the plan to add schedule margin through increased use of contingency flights during Cycle 5.

The SUG strongly supports the plan to solicit a 4th generation science instrument during late FY-17.

R10.1: The SUG recommends that the SOFIA and HIRMES Projects jointly document lessons learned from the 3rd generation instrument solicitation and instrument project management for incorporation into the next solicitation.

The SUG thanks Kristine Erickson for providing NASA-HQ's perspective on the focus of the SOFIA Airborne Ambassadors program. The committee understands the constraints that have led to restricting its scope to California teachers and schools. However, the committee believes that the program has been an outstanding asset for SOFIA and NASA as a whole. It has been a valuable resource and inspiration for educators and their students nationwide. We hope that it can be re-introduced to this larger community as rapidly as possible.

The SUG congratulates the HAWC+ team on demonstrating the remarkable new capability enabled by this instrument via acquisition of a high resolution polarimetry map of W3. Given the 35X increase in angular resolution wrt Planck, the Project should consider a press release.

R10.2: We recommend that the Project try to get these W3 data included at least one of two planned plenary talks on star formation at the January AAS meeting.

R10.3: The SUG strongly recommends that the Project ensure that availability of JPL and other engineering support for resolution of the HAWC+ acoustic dissipation anomaly is not limited by financial resources.

We commend the Project data processing team for ongoing good schedule performance on delivery of Level 3 data products. We note the critical role that this team plays in enabling SOFIA's performance to its mission productivity goal of 1 journal article per 20 research hours of flight time.

We commend the Project on a successful Cycle 5 solicitation and the community engagement reflected by the factor of 3.6 over subscription. We note that the utilization of SOFIA by the planetary community seems surprisingly low wrt other disciplines. We suggest that the Project consider focused professional outreach to the planetary community.

We support the Project's plan to display SOFIA at the 2018 winter AAS meeting in Washington. We recommend that SOFIA contact (through HQ) Smithsonian to determine if the aircraft can be parked at the Steven F. Udvar-Hazy Center (National Air and Space Museum) at Dulles airport in order to hold an evening event in the museum for congressional stakeholders and other NASA & DLR VIP guests.

We commend the project for successful integration of the secondary mirror spider vane covers to mitigate a long standing thermal stray light path from the #1 engine cone.

Regarding further stimulation of SOFIA science productivity as reflected in refereed publications: We note that a large fraction of current SOFIA publications came from special journal issues. We suggest that one consider continuing this strategy with a special journal issue on HAWC+ and FIFI-LS. We also recommend that the Project contact Cycle 1-3 guest observers (who were not funded at the current rate), to determine if additional support for publication page charges is needed.

The SUG is surprised by the paucity of graduate students and post-docs working within the SOFIA Science Center. We note that this missing team of young in-house researchers lessens the research productivity of the observatory and that of the more senior project science staff.

R10.3: The SUG recommends that ARC and USRA endeavor to utilize the [NASA Graduate Student Research Program](#) to proactively attract several graduate students annually for in-residence PhD thesis research utilizing SOFIA. We further recommend that the SOFIA operations contract value be adjusted to enable creation of approximately three, entry-level, purely research, postdoc positions within the SSC to be awarded on a three year rotating basis.

We thank the Project for clear concise presentations and we appreciate the effort that went into producing them.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Greenhouse', written over a horizontal line.

Matt Greenhouse
Chair: SOFIA Science Users Group