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# Responses to Actions from previous meeting (SUG6)

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SOFIA Users Group #7

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# List of SUG6 Areas of Concern

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1. Inadequate staff for calibrating science data
2. Systematically monitor calibration sources
3. Inadequate project management for data processing [*SHUPING*]
4. Proprietary periods should start when calibrated data are available
5. Increase DDT from 7% to 15% [*YOUNG*]
6. Need to rapidly acquire new science instruments [*GREENHOUSE*]
7. Water vapor monitor stated in intensity units [*VAN CLEVE*]
8. Only state SOFIA will “entertain” rather than “intend to select” large observing programs in Call for Proposals [*ANDERSSON*]
9. Optimize science impact above all other metrics





# 1. Inadequate staff for calibrating science data

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- For the most-used science instruments in Cycle 3 (FORCAST and GREAT), capabilities are up to speed with existing staff
  - SMO delivered calibrated data within 2 weeks for FORCAST
  - The GREAT team has consistently been on time in delivering products to guest investigators
- Adding resources to improve data processing
  - The SOFIA Program authorized an additional calibration scientist for FY15
  - The Congressional budget allowance of \$70M in FY15 was 20% lower than what NASA had planned for, and the SMO offered to not fill this position as part of its contribution to the reduced budget
    - Essentially a choice between ~2 science flights and the new scientist
  - The new hire is back in the FY16 budget request
- The impact of lack of an additional scientist is primarily on new capabilities (quality assessment database, pipeline improvement, EXES reduction, FIFI-LS development)





## 2. Systematically monitor calibration sources

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- The SUG report mentioned including calibrators in science programs to support high accuracy requirements
  - All proposals can include such observations. The SMO provides a basic calibration strategy to cover all observations. We have found the repeatability of FORCAST calibration to be excellent (<5%). Only very high calibration accuracy requirements would require supplemental work, and such work will be challenging and require significant commitment by the guest investigator.
- The SUG suggested monitoring calibrators
  - We use a restricted set of calibrators (ideally, 1 per wavelength range per series but in practice ~2) to enable repeatability measurements
  - We considered monitoring the non-prime calibrators, but at present we believe that experiment is too expensive
    - Each new target requires aircraft turn, acquisition, ~30 minutes flight time
    - The new FORCAST calibration plan uses a star and an asteroid (hr/flight)
    - We are considering doing even LESS calibration for FORCAST because of excellent repeatability





## 4. Proprietary periods should start when calibrated data are available



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- This suggestion by the SUG was adopted and made into policy that is in effect now. Proprietary periods for guest investigator projects begin when the Level 3 data are archived.





## 9. Optimize science impact above all other metrics

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- At the meeting, use this time to discuss the meaning and definition of “science impact” from the Users Group’s point of view



# Areas of Effort Supported by SUG

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- Improve funding for Guest Investigators to support increased publication rate
- Trade flight hours for increased GI funding
- Increase speed of dissemination of calibrated data
- Investigate new deployment bases (north and south)
- Strategies to maximize SOFIA scientific output
- Fly FLITECAM solo at least once to eliminate FLIPO backgrounds

