

The Spitzer Users Panel met at CalTech on May 10, 2011, with the Panel members in attendance given below. This report serves as a written record of the Panel comments that were given verbally in the debrief at the conclusion of the meeting.

General Comments

- Overall the Panel was impressed by the improvements that have been made in an era of reduced funding.
- The SSC continues to operate Spitzer ever more efficiently, with 7,925 hours per year of scheduled observations in Cycle 8. The Panel strongly commends the management and staff of the Spitzer Project for achieving this performance.
- The Panel was pleased to hear that the over-subscription ratio remained high in the latest call for proposals – Spitzer time is still in high demand.
- It appears that the staff retention concerns that were expressed at the last SUP meeting have diminished, although this may still prove to be a significant challenge in the future.
- The Panel was pleased to hear that the funding cliff in 2013 is not as steep as was originally projected, and commends the SSC for adjusting their spending plans to allow this.
- The Panel strongly concurs with the Project that futures calls for proposals must continue to be scientifically compelling and that Spitzer remain a community-based mission.

Spacecraft Performance Findings

- The Panel was pleased to hear that the tightening of a heater dead-band has worked as expected in reducing the magnitude of a thermally-induced pointing wobble.
- The Project has found a 4 micro second per second pointing drift is due to uncorrected stellar aberration. This will be mitigated with an ant-drift term and will be available for July scheduling.

Data Reduction Findings

- The data quality of the IRAC instrument from the cryogenic mission continues to improve with the discovery and repair of a problem in the flux conversion portion of the data pipeline. The inclusion and averaging together of flats throughout the mission have resulted in flats that are 5 times better than those that were used previously.
- The Panel was very pleased to hear that accuracies as low as 50 ppm have been achieved in observations of transiting exoplanets.
- The Panel was pleased to see the progress with the source list and the image mosaic projects. It is important to ensure a proper balance between these two efforts. The Panel was a bit concerned about how well the source list would be validated.

User Support and Outreach Findings

- The Panel was very impressed with the IRSA front end for the Spitzer data, it has significantly better capabilities compared to the Leopard interface that it replaced. As the IRSA web interface becomes even more powerful the Panel cautions the Project to make sure that the first pages remain clean and uncomplicated, allowing simple tasks to be done without first mastering a steep learning curve.
- The Project continues to do an excellent job in public and scientific outreach. The Panel liked the meta-data and teacher programs that were presented.
- As Spitzer approaches its final end-game, the Panel recommends that the Project clearly articulate the final goals of the outreach program.

Panel Recommendations

- Prior to the submission of the warm mission proposal, the Spitzer Project convened a science workshop to investigate the science potential of a warm Spitzer. The Panel suggests that the Science Center do something similar before submitting the next mission extension proposal to the NASA Senior Review – the science landscape has changed significantly since the last workshop.

- Updated Spitzer instrument calibration publications are important, and the panel would urge the Spitzer Project to put a higher priority in getting these out into the open literature.
- The Project should make sure that they continue leveraging the Spitzer data reduction work being done in the community – this is particularly important given the limited funding that will likely be made available in the future.
- In order to address the Panel’s concerns about the validation of the source list, there should be an independent review of the product before it is released to the community.
- The Panel would like to see a metric of data reduction problems (not inquiries) reported to the Spitzer Help Desk over the years. In an analogy with software problem report counts in software development efforts, this would be a good measure of the maturity of the Spitzer data products and tools.
- The Project presented the panel with two options for the future of Spitzer. The Panel strongly recommends keeping a GO program, even if there is little or no money to pay the investigators, although the Panel also recommends that the Project at least cover the publication costs of authors who publish their data within a year of the observations. Without some sort of a GO program graduate students and post-docs will be effectively disenfranchised.
- If larger programs are to be encouraged, they should be specifically called out in the Call for Proposals, e.g. “The Project anticipates selecting approximately six programs of at least 1,000 hours each.”

5/10/11 SUP Meeting Attendees:

Tom Roellig, JD Smith, Mike Skrutskie (on phone), John Gizas, John Carpenter, Bill Danchi (on phone), Aneta Siemiginowska (on phone), Mark Marley, Alice Quillen (on phone), Heather Knutson, Brad Whitmore