

## Spitzer - 2014 NASA Senior Review

Issued: 20may2014

The results from the 2014 NASA Senior Review were released May 16 and no funding has yet been identified to support continuing Spitzer operations past Cycle-10. NASA has “invited Spitzer to respond with a request for a budget augmentation to conduct continued operations with reduced operations costs.” Spitzer will be providing such a revised budget plan. We will also issue a Cycle-11 call for proposals, contingent on the approval of future funding, with proposals due at the end of August.

The SRP report was highly complementary about the science enabled by Spitzer, the desire of the astronomical community to utilize Spitzer, and the community support provided by the mission.

*"The availability of over 7000 hr/yr in support of peer reviewed observing programs, and the largest oversubscription (7:1 in C10) of any NASA mission in FY13-14, are testaments to the continued strong demand for Spitzer observations to carry out a suite of multi-wavelength science programs."*

They recognized that:

1. Spitzer executes key Astro2010 science in the areas of New Worlds, Cosmic Dawn, Physics of the Cosmos, and the transient Universe.
2. For studies of galaxies at redshifts  $z > 7$  which are defining the landscape that will be explored in depth by JWST, both HST and Spitzer are required to estimate galaxy ages, masses, and star formation rates.
3. The health of the observatory and the IRAC instrument are excellent.
4. The sensitivity at 3.6 and 4.5 microns will not be approached until the launch of JWST.
5. Improved operating modes developed in the warm mission yield more than a factor of two gain in performance for exoplanet and other high-precision photometry observations.
6. Spitzer provides science-ready data products and expert technical support.

The Spitzer project clearly recognizes that the NASA Astrophysics budget is under severe pressure and that the Senior Review Panel (SRP) faced an extremely difficult task. Our operations philosophy is to operate the observatory safely, focus science support on the highest ranked programs from the community, and trade additional risk of losing science for reduced costs. We have reduced the annual operations cost today to 1/3 the level of cryo-operations. Since warm operations began in 2009 the cost has gone down 25% (\$21.5M → \$16.5M), while we continue to support 7000 hours of science per year. Depending on the scope of the GO program, the Senior Review proposal outlined additional cuts to reduce operations cost to \$13-15M, with an additional \$2-4.5M/year of direct community support.

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The full Senior Review Panel report is available here:

[http://science.nasa.gov/media/medialibrary/2014/05/15/Final\\_Report\\_Astro2014\\_SeniorReview\\_Panel.pdf](http://science.nasa.gov/media/medialibrary/2014/05/15/Final_Report_Astro2014_SeniorReview_Panel.pdf)

The NASA Response to the report is here:

[http://science.nasa.gov/media/medialibrary/2014/05/16/NASA\\_Response\\_to\\_2014\\_Senior\\_Review\\_for\\_Operating\\_Missions\\_FINAL4.pdf](http://science.nasa.gov/media/medialibrary/2014/05/16/NASA_Response_to_2014_Senior_Review_for_Operating_Missions_FINAL4.pdf)