Spitzer Cycle-10 Program Selection

Cycle-10 Overview

- **Nominal Cycle-10 Execution: Dec. 2013 – Oct. 2014**
- **8 months (4500 hours) of priority 1 time available to schedule**
  - *Priority 2 and 3 programs also selected*
- **Exploration Science, Regular GO and Snapshot proposals solicited**
- **137 proposals received – 31,800 hours requested**
  - *Oversubscription of 7 – highest for the mission*
- **Proposal Review Process**
  - *Panel telecons held in September*
  - *Time Allocation Committee met October 15 - 16*

Scheduling Priorities

- **Priority 1**
  - *SSC will endeavor to schedule all priority 1 programs*
  - *Since many are highly constrained, all priority 1 programs will not be completed unless the mission is extended*
- **Priority 2**
  - *These programs will execute in gaps in the schedule where no priority 1 programs are feasible to schedule*
- **Priority 3**
  - *These programs are unlikely to schedule unless gaps develop in the schedule where no priority 1 or 2 programs can schedule or the mission is extended by a few months instead of a full cycle*

Programs Selected

- **4672 hours priority 1**
  - *3917 hours Exploration Science & Large*
  - *555 hours Medium & Small*
  - *200 hours Innovative/High Risk Director's Discretionary Time*
- **1300 hours priority 2**
  - *1065 hours Exploration Science & Large*
  - *235 hours Medium & Small*
- **2649 hours priority 3**
  - *2469 hours Exploration Science & Large*
  - *180 hours Medium & Small*

Exploration Science Programs

PID	Science Category	Hours	Hours - Scheduling Priority			PI, Institution	
		Total	1	2	3		
10015	Extragalatic Stars	646.0	**646.0**			Kathryn Johnston	Columbia
SMASH: Spitzer Merger History and Shape of the Galactic Halo							
10042	High-z Galaxies	1650.0	**1195.0**	455.0		Peter Capak	SSC
SPLASH: Spitzer Large Area Survey with Hyper-Suprime-Cam							
10076	High-z Galaxies	812.5		200.0	612.5	Pascal Oesch	UCSC
Ultra-deep IRAC Legacy over GOODS: Earliest Galaxies to the Peak of Cosmic Star-Formation							
10019	High-z Galaxies	726.4			726.4	Karina Caputi	Groningen
SMUVS: Spitzer Matching survey of the UltraVISTA ultra-deep Stripes							
10102	Exoplanets	542.3			542.3	Drake Deming	Maryland
Eclipses of New Giant Exoplanets							
	Totals:	4377.2	**1841.0**	655.0	1881.2		

DDT Programs

- **Two exoplanet proposals, identified as innovative and high risk, were awarded Director's Discretionary time**

PID	Science Category	Hours		PI, Institution	
		Requested	Awarded		
10036	Exoplanets	832.0	**100.0**	Andrew Gould	Ohio State
Spitzer Microlens Planets and Parallaxes					
10127	Exoplanets	246.4	**100.0**	Daniel Fabrycky	Chicago
Two Eyes on the Prize: Revealing the Complete Architectures of Planetary Systems through Transit Timing with Kepler and Spitzer					

Large Programs

PID	Science Category	Hours	Hrs - Sched. Priority			PI, Institution		Title
		Total	1	2	3			
10136	Extragalatic Stars	338.0	**338.0**			Mansi Kasliwal	OCIW	SPIRITS: SPitzer InfraRed Intensive Transients Survey
10054	Exoplanets	449.4	**449.4**			Heather Knutson	Caltech	Exploring the Relationship Between Planet Mass and Atmospheric Metallicity
10103	Exoplanets	150.0	**150.0**			Nikole Lewis	MIT	Exoplanet Atmospheres in High Definition: 3D Eclipse Mapping of HD 209458b …
10067	Stellar Pops	449.4	**449.4**			Michael Werner	JPL	SpiKeS: Spitzer Kepler Survey
10060	Compact Objects	144.6	**96.4**	48.2		Giovanni Fazio	SAO	Watching a supermassive black hole eat Sgr A* and cloud G2
10140	High-z Galaxies	112.0	**112.0**			Dan Coe	STScI	Age, Stellar Mass, and Rest-Frame UV Slope of a z ~ 11 Galaxy
10147	Cosmic IR Bgrnd	157.0	**157.0**			James Bock	Caltech	The North Ecliptic Pole Extragalactic Background LIght Fluctuations Survey
10098	AGN	134.4	**134.4**			Daniel Stern	JPL	Warm Spitzer Imaging of NuSTAR Fields
10043	Nearby Galaxies	188.1	**188.1**			Kartik Sheth	NRAO	Not Dead Yet! Completing Spitzer's Legacy with Early Type Galaxies
10055	High-z Galaxies	132.2		132.2		Linhua Jiang	ASU	Deep Spitzer/IRAC Imaging of the Subaru Deep Field
10046	ULIRGS	230.6		230.6		David Sanders	Hawaii	Completing the Deep IRAC1,2 Imaging of the (U)LIRG Merger Sequence: the pre-merger galaxies and post-merger remnants
10013	YSOs	162.7			162.7	Joseph Hora	SAO	YSO variability in Massive Star-forming Regions
10138	Brown Dwarfs	318.2			318.2	Jacqueline Faherty	DTM CIW	The Young and the Restless: Revealing the Turbulent, Cloudy Nature of Young Brown Dwarfs and Exoplanets
10012	Star Formation	107.4			107.4	Joseph Hora	SAO	A Survey for Outflows in Infrared Dark Clouds
	Totals:	3074.0	**2074.7**	411.0	588.3			

Medium & Small Proposals

Science Category	Priority 1		Priority 2		Priority 3	
	#	Hours	#	Hours	#	Hours
Galactic						
Exoplanets	2	98.4	2	43.2		
Debris Disks	4	14.8			1	99.0
Brown Dwarfs	4	178.6	1	52.8		
Evolved Stars	2	41.0	3	57.8		
Solar System						
Comets	1	4.9				
NEOs	1	19.9	1	6.4		
KBOs	1	6.5				
Extragalactic						
High-z Galaxies	2	45.8	1	8.0		
Nearby Galaxies			2	30.8	1	80.7
AGN	3	91.8	1	12.0		
Galaxy Clusters	1	4.9	1	22.3		
Interacting Galaxies	1	0.3	1	1.6		
Local Group	2	11.7				
Starburst Galaxies	1	37.0				
Totals	25	555.6	13	234.9	2	179.7

Joint Hubble/Chandra Proposals

- **5 joint proposals submitted, 3 HST & 2 CXO**

- **2 programs selected**
  - *10081 – Kochanek* *3.4 hrs Spitzer, 4 orbits HST*
    - Dust to Dust: Monitoring the Evolution of the New Class of Self-Obscured Transients
  - *10094 – Vieira* *37 hrs Spitzer, 6 orbits HST*
    - High-Redshift Starburst Galaxies Under the Cosmic Microscope: Unveiling the stellar histories of strongly lensed starburst galaxies with ALMA and Spitzer

Science Categories

Hours by Science Category	Scheduling Priority			Hours by Science Category	Scheduling Priority		
	1	2	3		1	2	3
Galactic				**Extragalactic**			
Exoplanets	897.8	43.2	542.3	High-z Galaxies	1352.8	795.2	1338.9
Debris Disks	14.8		99.0	Nearby Galaxies	188.1	30.8	80.7
Brown Dwarfs	178.6	52.8	318.2	AGN	226.2	12.0	
Evolved Stars	41.0	57.8		Galaxy Clusters	4.9	22.3	
Compact Objects	96.4	48.2		Interacting Galaxies	0.3	1.6	
Star Formation			107.4	Local Group	11.7		
Stellar Populations	449.4			Starburst Galaxies	37.0		
Extragalactic Stars	984.0			Cosmic IR Background	157.0		
Young Stellar Objects			162.7	ULIRGS		230.6	
Solar System				Total Galactic	2662.0	202.0	1229.6
Comets	4.9			Total Solar System	31.3	6.4	0.0
NEOs	19.9	6.4		Total Extragalactic	1978.0	1092.5	1419.6
KBOs	6.5			**Total**	4671.3	1300.9	2649.2

Investigators

- **40% of the Cycle-10 principal investigators for priority 1 and 2 programs are new Spitzer PIs (21 of 53)**

- **The priority 1 and 2 programs are from 40 institutions in 15 US states and 6 foreign countries.**

- **9 selected proposals have foreign PIs**
  - *three priority 1, four priority 2, two priority 3*

Future Cycles

- **The Spitzer project will return to the 2014 NASA Senior Review to propose for operations funding to support future observing cycles.**

- **We plan to issue a Cycle-11 proposal call by May 1, 2014, after consultation with NASA Headquarters regarding the results from the Senior Review.**