



## Spitzer Cycle-3 Statistics

Spitzer Cycle-3 Selection

June 1, 2006 LSL-1



### Awards



### Distribution of the selected science programs:

#### General Observer

<b>Legacy</b>	<b>8 programs (4 lrg/4 med)</b>	<b>1832 hours</b>
<b>Large</b>	<b>1 program</b>	<b>307 hours</b>
<b>Medium</b>	<b>11 programs</b>	<b>933 hours</b>
<b>Small</b>	<b>175 projects</b>	<b>3040 hours</b>

**Total: 195 programs, 6112 hours**

<b>Archival</b>	<b>13 programs</b>	<b>\$922,194</b>
<b>Theory</b>	<b>12 programs</b>	<b>\$824,809</b>

Spitzer Cycle-3 Selection

June 1, 2006 LSL-2



**Large Programs: 1640 hours**  
**4 Legacy, 1 Regular GO**



- Mark Dickinson (NOAO): 397 hours *Legacy*
  - *A Deep-Wide Far-Infrared Survey of Cosmological Star Formation and AGN Activity*
- David Sanders (U. Hawaii): 396.2 hours *Legacy*
  - *S-Cosmos: MIPS Deep Survey of the COSMOS 2-sq Degree Field*
- Lori Allen (SAO): 285 hours *Legacy*
  - *Gould's Belt: Star Formation in the Solar Neighborhood*
- Robert Benjamin (Wisconsin Whitewater): 254.5 hours *Legacy*
  - *GLIMPSE 3D: The Vertical Stellar and Interstellar Structure of the Inner Galaxy*
- Lin Yan (SSC/Caltech): 307 hours
  - *Mid-IR Ultra-Deep Spectroscopy of the Cosmic Infrared Background*



**Medium Programs: 1432 hours**  
**4 Legacy, 11 Regular GO**



PI		Institution	Hours	Title
<b>Legacy</b>				
Lee	Armus	SSC/Caltech	160	Spectroscopic Survey of a Complete Sample of Luminous Infrared Galaxies
Sean	Carey	SSC/Caltech	158	MIPSGAL II: Surveying the innermost part of the Galactic plane
David	Schiminovich	Columbia	121	SSGSS: The Spitzer SDSS GALEX Spectroscopic Survey
Deborah	Padgett	SSC/Caltech	60	Taurus 2: Finishing the Spitzer Map of the Taurus Molecular Clouds
<b>GO</b>				
Charles	Dowell	JPL	60.4	Pushing the Far-IR Capability of Spitzer in the Study of High-Redshift ULIRGs
Frazer	Owen	NRAO	60.6	The Impact of AGN on Galaxy Evolution
Erica	Ellingson	U. Colorado	63.7	Tracing Star Formation History in RCS Galaxy Clusters
Klaus	Pontoppidan	Caltech	71.9	Complete IRS survey of the evolution of circumstellar disks within 3 Myr
David	Nesvorny	SWRI	75.0	A New Source of Interplanetary Dust: Type II Dust Trails
Remy	Indebetouw	U. Virginia	81.2	Stellar Feedback on Circumcluster Gas and Dust in 30 Doradus
Tom	Megeath	U. Toledo	101	An IRS Survey of Spitzer Identified Protostars in the Orion A Cloud
Jeffrey	Kenney	Yale University	103	Spitzer Observations of Environmental Effects on Virgo Cluster Galaxies
David	Koerner	N. Arizona Univ.	105.0	Completing the Census of Debris Disks around Nearby Stars
Yanga	Fernandez	U. Central Flor.	105.4	Survey of Ensemble Physical Properties of Cometary Nuclei
Alberto	Bolatto	UC Berkeley	106	A Complete Picture of the Dust in the Small Magellanic Cloud

(Two proposals submitted as medium were accepted as small programs.)



## GO Investigations



### Domestic

	<u># programs</u>	<u>hours</u>	<u>% of time</u>
Spitzer Science Center			
- <i>small</i>	11	198	3.2
- <i>medium</i>	3	378	6.2
- <i>large</i>	1	307	5.0
IPAC + JPL	11	231	3.8
NOAO	2	436	7.1
Arizona	10	190	3.1
Caltech (campus)	4	170	2.8
Hawaii	5	464	7.6
CFA/SAO	8	466	7.6
Wisconsin-Whitewater	1	255	4.2
Other Universities	74	1923	31.5
Non-Profits/Industry	21	401	6.6
NASA/USRA	7	80	1.3

### Foreign

Europe	31	564	9.2
Japan/China	3	26	0.4
Canada, Australia, S. Africa	3	25	0.4

Spitzer Cycle-3 Selection

June 1, 2006 LSL-5



## GO Program Success Rates



	<u>Proposals</u>	<u>Requested Hours</u>
Legacy-large	36% (4 of 11)	35%
Legacy-medium	36% (4 of 11)	30%
GO-Large	33 % (1 of 3)	35 %
GO-Medium	23 % (13 of 56)	19 %
GO-small	33 % (174 of 531)	29 %
All GO/Legacy	33 % (196 of 612)	35 %
Foreign-led	26 % (37 of 143)	14 %
<i>Germany</i>	30 % (6 of 20)	24 %
<i>UK</i>	48 % (16 of 33)	20 %
Spitzer Science Center	29 % (15 of 52)	28%

Spitzer Cycle-3 Selection

June 1, 2006 LSL-6



## GO Program Success Rate (2)



	<u>Proposals</u>	<u>Hours</u>
<b>Extragalactic</b>	80 of 271 ( <b>30%</b> )	3247 of 13705 ( <b>24%</b> )
<b>Galactic</b>	102 of 307 ( <b>33%</b> )	2513 of 7310 ( <b>34%</b> )
<b>Solar System</b>	13 of 30 ( <b>43%</b> )	353 of 821 ( <b>43%</b> )



## Joint Time Awarded



- **HST**      **5 of 13 proposals,**      **78 orbits**
  - *Joint HST time is nearly fully subscribed*
- **Chandra**    **4 of 14 proposals,**      **202 ksecs**
  - *1 program requests simultaneous observations with Spitzer*
  - *1 program is a Target of Opportunity*
- **NRAO**      **1 of 2 proposals,**      **VLA 12 hours**
  - *Simultaneous observations with Spitzer*
- **NOAO**      **2 of 12 proposals,**    **CTIO 4m - 2 nights**



## Targets of Opportunity



### 3 high-impact ToO programs selected (10 ToO activations)

- **Spitzer-Chandra ToO Observations of Short/Hard GRBs**  
– PI: Hurley, includes simultaneous Chandra observations
- **Spitzer Observations of the Highest-Redshift GRBs**  
– PI: Fox, (also had ToOs in Cycles 1 and 2, none triggered)
- **Compact Jets from Galactic Black Holes**  
– PI: Tomsick, (also had ToOs in Cycles 1 and 2, all triggered)



## Archive/Theory Success Rates



### Proposals

- |                         |                |
|-------------------------|----------------|
| • Archive Proposals     | 19% (13 of 70) |
| – 16% of requested \$\$ |                |
| • Theory Proposals      | 38% (12 of 32) |
| – 33% of requested \$\$ |                |



## Selected Archive/Theory Programs



PI	Institution	Award	Title
<b>Archive</b>			
Douglas Whittet	RPI	\$64,052	Thermal evolution of ices in the environments of newly formed stars
James Jackson	IAR	\$125,771	Protostars in Infrared Dark Clouds
Louis Allamandola	NASA Ames	\$56,727	Diamonds are a PAHs Best Friend
David Trilling	U. Arizona	\$99,881	The Spitzer Asteroid Catalog
Ilaria Pascucci	U. Arizona	\$43,282	Stellar Companions as a Trigger for Rapid Dust Evolution
Gordon Richards	JHU	\$49,297	9-D Bayesian Quasar Classification in the Mid-IR/Optical
Jason Surace	SSC	\$46,910	Mid-Infrared Variability from AGN in the IRAC Dark Field
Jay Holberg	U. Arizona	\$55,256	White Dwarf-Based Investigation of IRAC Photometric Absolute Calibration
Stephan McCandliss	JHU	\$65,680	Comparison of the Infrared and UV Properties of Photodissociation Regions
Jeff Hester	ASU	\$90,040	Archival Study of the Effects of Massive Stars on Low-mass Star Formation
You Hua Chu	U. Illinois	\$100,000	Star Formation in the Large Magellanic Cloud
Michael Blanton	NYU	\$49,838	K-corrections in the mid- and far-infrared
Kelsey Johnson	U. Virginia	\$75,460	The Formation and Early Evolution of Star Clusters
		<b>Total</b>	<b>\$922,194</b>
<b>Theory</b>			
Stuart Weidenschilling	PSI	\$67,828	Collisional Evolution of Circumstellar Debris Disks
Robert Forrey	Penn State	\$50,525	Towards Complete Microphysical Modeling of Warm Interstellar Molecules
Romeel Dave	U. Arizona	\$56,649	Comparing Simulations and Observations of Reionization-Epoch Galaxies
Sarah Gallagher	UCLA	\$70,729	Illuminating the Dusty Wind: 3D Modeling of Quasar Silicate Emission
Mark Marley	NASA Ames	\$67,246	Role of Dust and Non-Equilibrium Chemistry in the Atmospheres of L/T Dwarfs
Travis Barman	UCLA	\$51,164	Planetary Atmosphere Models for Spitzer Targets
Patrik Jonsson	UCSC	\$100,145	Infrared Predictions from Simulations of Merging Galaxies
Aigen Li	Missouri-Col.	\$82,239	Modeling the PAH Emission Spectra of Protoplanetary and Debris Disks
Aigen Li	Missouri-Col.	\$82,798	Modeling the Destruction and Survival of PAHs in Astrophysical Regions
Fred Adams	U. Michigan	\$58,768	Theoretical Studies to Support Spitzer Cluster Surveys
Edwin Bergin	U. Michigan	\$90,805	Theoretical Studies of Ice Formation in the Dynamic Interstellar Medium
Barbara Whitney	SSI	\$45,913	A Tool to Analyze Spitzer Data on Stellar and Young Stellar Objects
		<b>Total</b>	<b>\$824,809</b>

Spitzer Cycle-3 Selection

June 1, 2006 LSL-11



## Science Categories of Approved GO Programs



	<u>Programs</u>	<u>Hours</u>
• Distant Universe	46	2242
• Nearby Universe	34	1005
• Stars & Interstellar Med	65	1742
• Star & Planet Formation	37	770
• Solar System	13	353

*Complete list of selected programs is online @*  
<http://ssc.spitzer.caltech.edu>

Spitzer Cycle-3 Selection

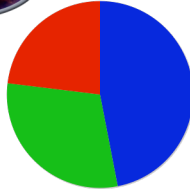
June 1, 2006 LSL-12



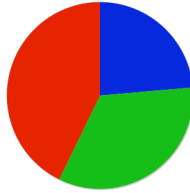
## Instrument Usage



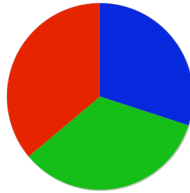
Cycle-0



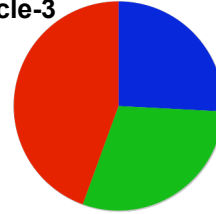
Cycle-1



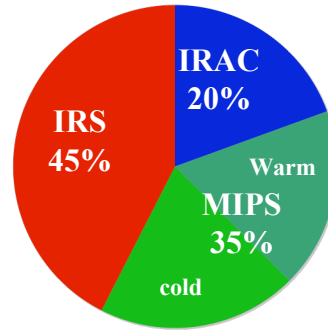
Cycle-2



Requested: Cycle-3



Awarded: Cycle-3



Spitzer Cycle-3 Selection

June 1, 2006 LSL-13