



Spitzer Cycle-8 Proposal Selection Summary



Overview – Call for Proposals



- **Hours Solicited**
 - *6,000 hours Exploration Science – priority 1 > 500 hrs each*
 - *1,000 hours regular GO – priority 1 < 500 hrs each*
 - *3,000 hours regular GO + Snapshot – priority 2*
 - *Cycle-8 Dates: August 2011- September 2012*

Cycle-8 Schedule

- **Proposal Call Issued** **October 15, 2010**
- **Proposal Submission Deadline** **January 28, 2011**
- **Secondary Kepler Deadline** **March 1, 2011**
 - *2 updated proposals expected, none received*
- **Cycle-8 Panel Reviews** **March 22 – April 8**
- **Cycle-8 TAC Meeting** **April 27**



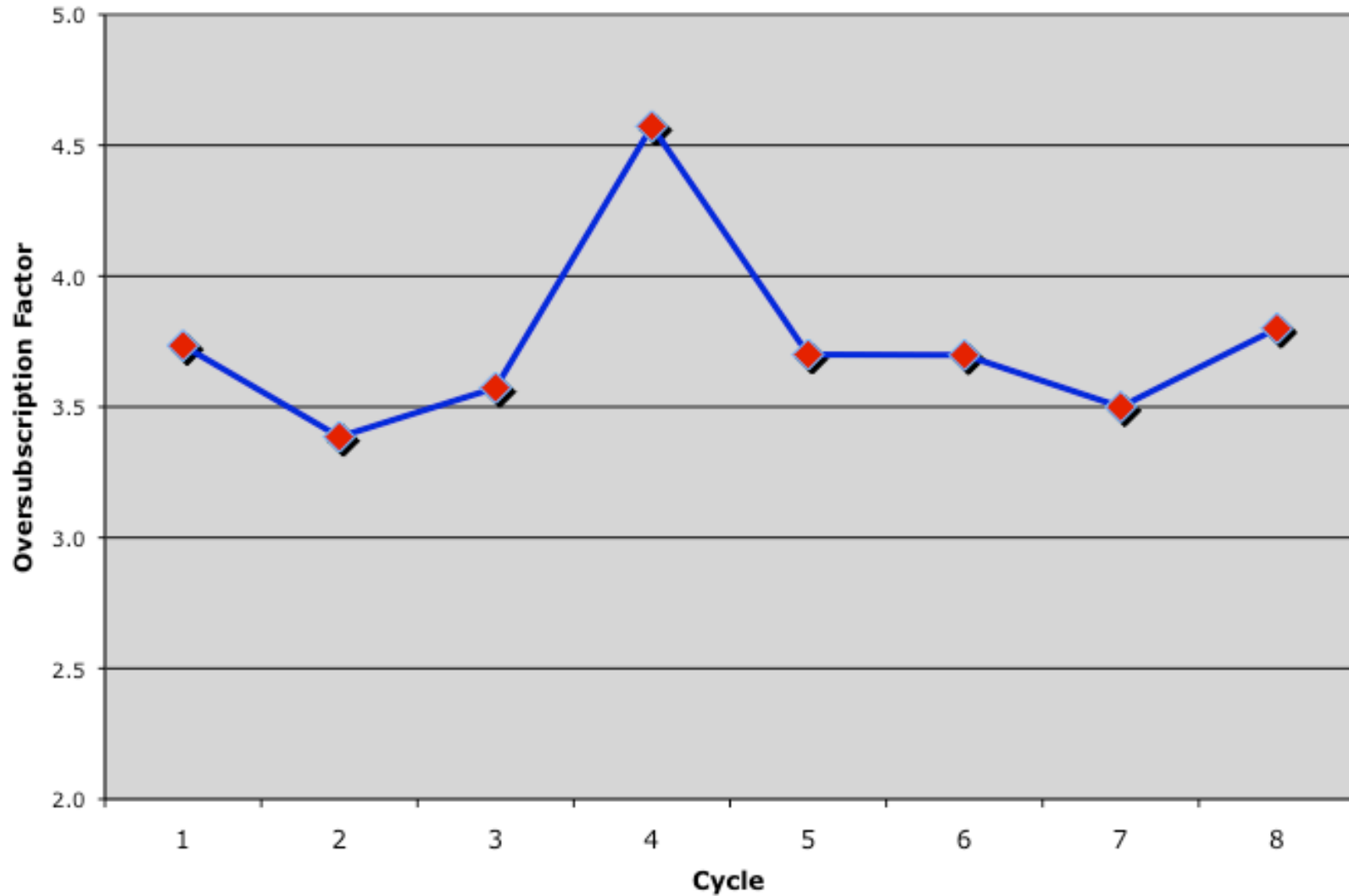
Proposals Received



- **167 proposals received – 27,949 hrs requested**
 - *Priority 1 oversubscription = 3.8*
 - *(Cycle-7: 154 proposals - 9,475 hours received– no Exp. Sci.)*
 - *C6 ES +C6-C7 GO average 24,000 hr/year requested*
- **Exploration Science – 22 proposals, 20,951 hours**
 - *6,000 hrs available – oversubscription = 3.5*
- **Regular GO – 132 proposals, 5856 hours**
 - *1,000 hrs available – oversubscription = 5.8*
 - *Also eligible for priority 2 time*
- **Snapshot – 13 proposals, 1141 hours**
 - *Only eligible for priority 2 time*



Oversubscription (hours)





Hours & Priorities



- **Scheduling efficiency continues to be spectacular**
 - *Executed 7825 hours in first year of warm operations*
 - *On track to execute ~ 7925 hours in second year*
 - *Originally anticipated executing 6500-7000 hours/year*
- **Spitzer Funding**
 - *Cycle-8 operations funded through at least September 2012*
- **Prioritizing Observations**
 - *Uncertain mission end date means selecting more hours than we are currently funded to execute*
 - *Similar situation to final cycle of cryogenic operations*



Cycle-8 Updated Plan



- **Priority 1 Programs**
 - *6,000 hours Exploration Science*
 - *1,500 hours Regular General Observer*
- **Priority 2 Programs**
 - *1400 hrs Exploration Science + 900 hrs GO & Snapshot*
 - *Execute as filler and time becomes available in schedule*
- **Priority 3 Programs**
 - *2,000 hours Execute as bridge observations to Cycle-9 if NASA extends mission into 2013*



Cycle-8

The Selected Program



Cycle-8 Priority 1 ES



- **Exploration Science – 8 programs – 6178.4 hours**
 – 3479 hrs extragalactic, 2699.4 hrs galactic/planetary

PID	Science Category	PI Institution	Title	Cols	Hours
80025	nearby galaxies	Liese van Zee <i>University of Indiana</i>	Stellar Distributions in Dark Matter Halos: Looking Over the Edge	7	1005.3
80096	high-z clusters	S. Adam Stanford <i>UC Davis</i>	The SPT-Spitzer Deep Field	33	766.0
80057	high-z gal galaxies	Giovanni Fazio <i>Smithsonian Astro. Obs.</i>	Spitzer Very Deep Survey of the HST/CANDELS Fields	12	1181.5
80100	high-z galaxies	Casey Papovich <i>Texas A&M</i>	Spitzer-HETDEX Exploratory Large Area (SHELA) Survey	28	526.2
80073	exoplanets	Heather Knutson <i>UC Berkeley</i>	Life on the Edge: Planetary Atmospheres in Extreme Environments	12	596.4
80117	exoplanets	David Charbonneau <i>Harvard University</i>	Validating the First Habitable-Zone Planet Candidates Identified by the NASA Kepler Mission	13	600.0
80040	YSOs	John Stauffer <i>Spitzer Science Center</i>	YSOVAR II: Mapping YSO Inner Disk Structure in NGC 2264 with Simultaneous Spitzer and CoRoT Time Series Photometry	40	630.0
80179	brown dwarfs	Stanimir Metchev <i>SUNY Stony Brook</i>	Weather on Other Worlds: A Survey of Cloud-Induced Variability in Brown Dwarfs	9	873.0



Cycle-8 Priority 1



- **Regular GO – 38 programs – 1498.1 hours**
 - *10 large programs – 1158.5 hours*
 - 447.4 hours extragalactic, 713.8 hours galactic/planetary
 - *28 Small programs – 339.6 hours*
- **1 high risk/high gain DDT – 120.6 hours**
 - *“Spitzer and DIRBE Studies of the Infrared Background” - Werner, JPL*
- **3 joint HST/Chandra programs approved**



Joint Programs



- **HST – 7 proposals submitted – 64 orbits requested**
 - *2 selected – 14 orbits*
- **Chandra – 2 proposals submitted – 120 ksec requested**
 - *both selected*

PID	Science Category	PI Institution	Title	Spitzer Hours	HST Orbits	Chandra ksec
80015	evolved stars	Christopher Kochanek <i>Ohio State</i>	Understanding A New Class of Mid-IR Transients	5.0	6	20
80128	exoplanets	Drake Deming <i>NASA GSFC/U. Maryland</i>	Atmospheric Composition of the ExoNeptune HAT-P-11	30.0	8	-
80174	YSOs	Kevin Flaherty <i>U. Arizona</i>	Connecting YSO Variability Across the Great Observatories: Combined Spitzer and Chandra Study of Variability in IC 348	21.5	-	100



Cycle-8 Priority 1 – GO Large



- **Regular GO Large – 10 programs – 1158.5 hours**

PID	Science Category	PI Institution	Title	Hours
80063	local group	Martha Boyer <i>STScI</i>	A Complete Census of Dust Production in Local Group Dwarf Galaxies	119.4
80159	high-z galaxies	Samir Salim <i>University of Indiana</i>	Beyond the 'acronym populations': H α -selected galaxies at $z \sim 2$	59.6
80168	high-z galaxies	Rychard Bouwens <i>Leiden University</i>	ICLASH: Coherent Views of the Galaxy Formation Puzzle over $z \sim 3-10$ Through the Looking Glass	69.7
80120	AGN	David Axon <i>Rochester Inst. Tech.</i>	Reverberation Mapping of the size of the Dusty Tori in Active Galactic Nuclei	196.0
80071	exoplanets	Massimo Marengo <i>Iowa State</i>	Search for Planetary Mass Companions of Nearby Young Stars	58.1
80094	exoplanets	Gregory Laughlin <i>UC Santa Cruz</i>	Third Time's the Charm: The Tidal Q, Heating and Spin of HD 80606b	50.0
80053	star formation	Roberta Paladini <i>Spitzer Science Center</i>	Hunting Coreshines with Spitzer	165.9
80109	brown dwarfs	J. Davy Kirkpatrick <i>IPAC</i>	Spitzer Verification of the Coldest WISE-selected Brown Dwarfs. II.	171.7
80213	brown dwarfs	Jacqueline Radigan <i>U. Toronto</i>	Weather on Substellar Worlds: Mapping the Atmospheres of Cool Brown Dwarfs	130.0
80116	KBOs	Joshua Emery <i>University of Tennessee</i>	IRAC Reflectances of Resonant KBOs and Scattered Disk Objects	138.1



Cycle-8 Priority 2



PID Type	Science Category	PI Institution	Title [PRIORITY 2 PROGRAMS]	Hours
80016 ES	exoplanets	Jessica Krick <i>Spitzer Science Center</i>	Comparative Atmospheric Study of Exoplanets	619.0
80072 ES	nearby galaxies	Brent Tully <i>U. Hawaii</i>	Cosmic Flows	200.0
80074 ES	galactic structure	Barbara Whitney <i>U. Wisconsin</i>	Deep GLIMPSE: Exploring the Far Side of the Galaxy	1350.0 **
80089 SNAP	ULIRGS	David Sanders <i>U. Hawaii</i>	Deep IRAC1,2 Imaging of the Extended Tidal Debris Fields for the Complete GOALS Sample of LIRGs (Part 2)	106.1
80093 SNAP	AGN	Ohad Shemmer <i>U. North Texas</i>	Sensitive Spitzer Photometry of Supermassive Black Holes at the Final Stage of Adolescence	10.9
80154 SNAP	high-z clusters	Daniel Stern <i>JPL</i>	A Snapshot Survey of Galaxy Clusters around High-Redshift Quasars	289.4
80161 SNAP	high-z clusters	Elizabeth Blanton <i>Boston University</i>	A Targeted, Distant (z>0.7) Cluster Survey, Using Bent, Double-Lobed Radio Sources	113.1
80032 GO	local group	Pauline Barmby <i>U. Western Ontario</i>	Far out: tracing the mass in M31	41.1
80039 GO	high-z galaxies	Claudia Scarlata <i>U. Minnesota</i>	The Spitzer IRAC-MIPS Extragalactic Survey: Imaging of the South Ecliptic Pole	78.7
80062 GO	CIB	Richard Arendt <i>U. Maryland, Baltimore Cty</i>	The Influence of Zodiacal Light on CIB Measurements	89.4
80126 GO	extragalactic stars	Peter Garnavich <i>Notre Dame</i>	Late-Time Light from Type Ia Supernovae	24.5
80135 GO	star formation	Karl Stapelfeldt <i>JPL</i>	Characterization of New Herbig-Haro Flows in the Taurus Star Formation Region	12.2
80138 GO	cosmology	Felipe Menanteau <i>Rutgers University</i>	IRAC Imaging of Massive ACT SZ Clusters in SDSS Stripe 82	57.5
80164 GO	exoplanets	Peter Wheatley <i>Warwick University</i>	Testing the effects of metallicity on the atmospheric chemistry of exoplanets	48.6
80177 GO	compact objects	Stefanie Wachter <i>IPAC</i>	How Common are Pulsar Debris Disks?	36.1

P2 Hours

ES – 1419

Snapshot – 520

GO – 388

** 600 hours priority 2
+ 750 hours priority 3



Cycle-8 Priority 3



- **Priority 3 programs are unlikely to be scheduled unless the mission is extended for Cycle-9 and observations to bridge the gap between Cycle-8 and 9 are required**

– <i>Exploration Science</i>	<i>750 hours</i>	<i>1 program</i>
– <i>Snapshot</i>	<i>30 hours</i>	<i>2 programs</i>
– <i>Regular GO</i>	<i>1247 hours</i>	<i>19 programs</i>



Priority 1 Institutions/Countries



- **34 Institutions, 10 countries**
- **Number of proposals/institution**
 - *4 Arizona, SSC*
 - *3 Harvard-SAO, NASA GSFC*
 - *2 Indiana, JPL, Berkeley*
 - *27 institutions – 1 proposal*
- **9 of 47 priority 1 proposals are foreign-led**
 - *19% (14% of submitted proposals were foreign-led)*
 - *2 France, UK*
 - *1 Canada, Finland, Germany, Hungary Netherlands*



Science Categories

Priority 1 - Number of Proposals



- **Extragalactic (46.8%)** **22**

AGN/QSOs/RG	1	ULIRGs	2
Cosmology	2	Clusters	3
High-z galaxies	9	Nearby Galaxies	3
Local Group	2		

- **Galactic/Planetary (53.2%)** **25**

Extra-solar Planets	5	YSOs	3
Stellar Populations	1	Evolved stars	4
Star Formation	1	Debris Disks	2
Brown Dwarfs	7	KBOs/NEOs	2



Science Categories

Priority 1 - % Time Awarded



• Extragalactic (54.2%)		4222.8 hours	
AGN/QSOs/RG	2.5%	ULIRGs	0.1%
Cosmology	1.6%	Clusters	10.1%
High-z galaxies	24.4%	Nearby Galaxies	13.7%
Local Group	1.8%		
• Galactic/Planetary (45.8%)		3574.3 hours	
Extra-solar Planets	17.1%	YSOs	8.4%
Stellar Populations	0.1%	Evolved stars	0.3%
Star Formation	2.1%	Debris Disks	0.4%
Brown Dwarfs	15.5%	NEOs/KBOS	1.9%