Astrophysics
Division

Astrophysics Research Programs

NASA Advisory Council
Astrophysics Subcommittee

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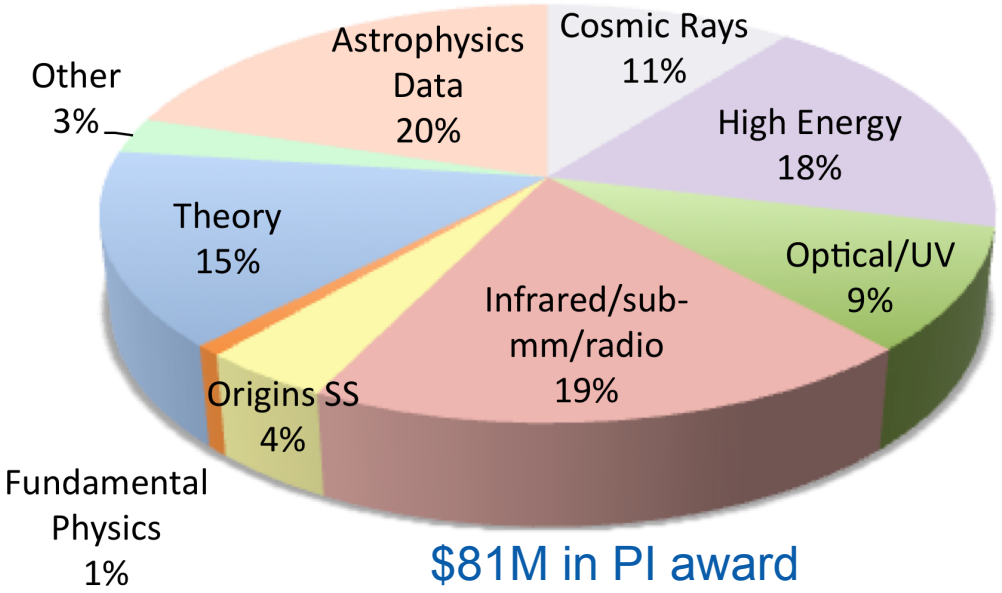
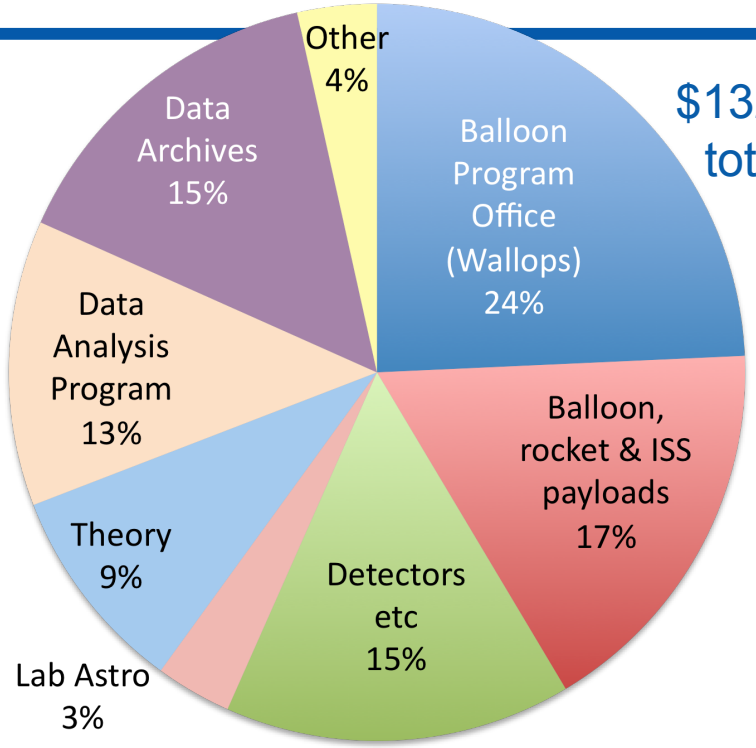
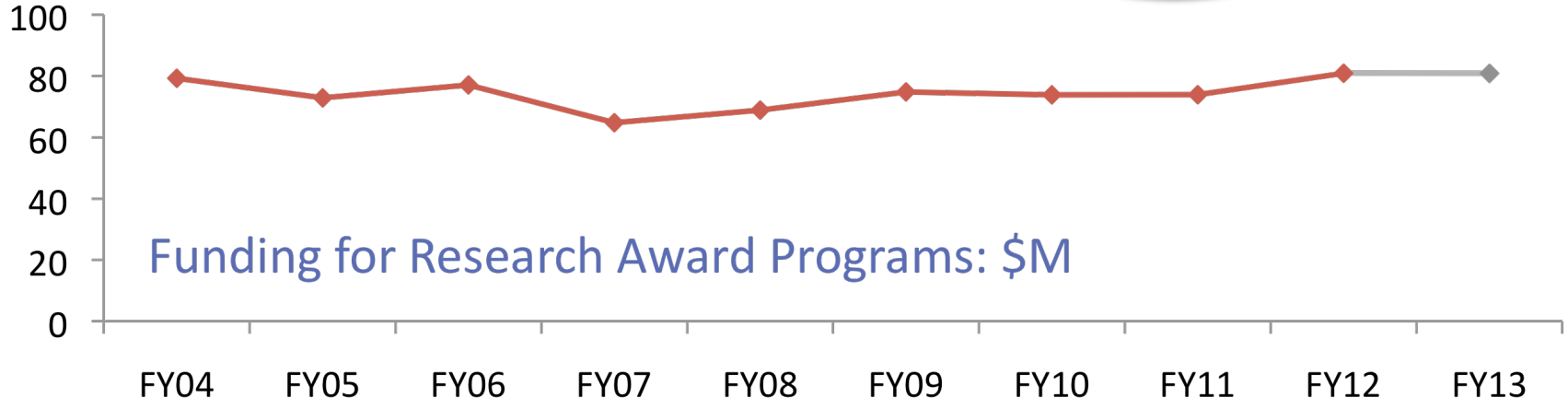
Research Program Spending in FY12



$81M in PI award programs



$132M total



Funding History for Research Awards

Amounts in $k	FY04 Final	FY05 Final	FY06 Final	FY07 Final	FY08 Final	FY09 Final	FY10 Final	FY11 Final	FY12 Projected	FY13 Request
Particle Astro	$ 8,544	$ 7,671	$ 8,544	$ 7,631	$ 6,672	$ 8,201	$ 8,260	$ 8,243	$ 8,585	
High Energy	$ 14,779	$ 13,693	$ 14,779	$ 12,782	$ 12,406	$ 13,886	$ 14,110	$ 13,911	$ 14,909	
UV/Opt/IR/ Sub-mm	$ 21,851	$ 18,742	$ 21,851	$ 17,442	$ 19,094	$ 22,353	$ 21,534	$ 21,295	$ 23,537	
Other	$ 338	$ 854	$ 338	$ 394	$ 594	$ 670	$ 673	$ 641	$ 1,644	
APRA Total	$ 45,511	$ 40,960	$ 45,511	$ 38,250	$ 38,765	$ 45,110	$ 44,577	$ 44,090	$ 48,675	
Orig Solar Systems	$ 4,150	$ 3,872	$ 4,150	$ 3,673	$ 2,965	$ 3,000	$ 2,807	$ 2,944	$ 3,244	
Astro Theory Program	$ 10,245	$ 7,363	$ 10,245	$ 10,227	$ 11,696	$ 11,890	$ 12,262	$ 12,577	$ 12,137	
Tech Fellows									$ 538	
R&A (399131)	$ 59,906	$ 52,195	$ 59,906	$ 52,150	$ 53,426	$ 60,000	$ 59,646	$ 59,611	$ 64,595	$ 64,438
ADAP/LTSA	$ 15,189	$ 15,700	$ 15,189	$ 12,641	$ 12,013	$ 14,384	$ 13,258	$ 14,132	$ 16,320	$ 16,429
Core R&A	$ 75,095	$ 67,895	$ 75,095	$ 64,791	$ 65,439	$ 74,384	$ 72,904	$ 73,743	$ 80,915	$ 80,867
TPF/FS		$ 2,000		(Foundation						
Beyond Einstein FS	$ 2,000	$ 3,000	$ 2,000	Science: now in ATP)						
ASMCS (399131)	Mission concept studies				$ 3,452	$ 442				
PCOS SR&T				(Fundamental Physics; now APRA)			$ 968	$ 184		
TOTAL ($M)	**$ 77.10**	**$ 72.90**	**$ 77.10**	**$ 64.79**	**$ 68.89**	**$ 74.83**	**$ 73.87**	**$ 73.93**	**$ 80.92**	**$ 80.87**
		$7M cut	smaller R&A cut	15% cut	partial recovery	more R&A recovery	flat	flat	growth!	growth retained

The budget for research awards increased by 9% in FY12,
in response to Astro2010 Decadal Survey recommendations;
this growth is retained in FY13 request

	Due Date	Notification	Days from due date	Weeks past review	Rec'd		Selected	Success
ROSES-2012								
Astrophysics Theory	13-Jul-12		17	-12.2	183	→		
Origins of Solar Systems	25-May-12		66	-3.3	46	↑		
Astrophysics Data Analysis	18-May-12		73	-2.4	294	→		
ROSES-2011								
Strategic Astrophysics Technology	23-Mar-12		129	7.3	49			
Astrophysics Research and Analysis	23-Mar-12		129	7.3	162	→		
Elements with NEW STARTS IN FY13					734			
Fermi Guest Investigator -- Cycle 5	20-Jan-12	1-May-12	102	4.6	224	→	67	30%
Kepler Guest Observer - Cycle 4	20-Jan-12	27-Apr-12	98	3.1	61	↑	21	34%
Roman Technology Fellowships	18-Nov-11	7-Mar-12	110	7.5	16		3	19%
Swift Guest Investigator -- Cycle 8	28-Sep-11	21-Dec-11	84	1.6	152	→	32	21%
Astrophysics Theory	3-Jun-11	28-Oct-11	147	6.2	197	→	33	17%
Origins of Solar Systems	27-May-11	7-Oct-11	133	7.1	36	→	5	14%
Astrophysics Data Analysis	20-May-11	29-Sep-11	132	6.1	278	↑↑	60	22%
ROSES-2010								
Strategic Astrophysics Technology	25-Mar-11	31-Aug-11	159	9.0	56	↑↑	18	32%
Astrophysics Research and Analysis	25-Mar-11	31-Aug-11	159	9.0	166	↑↑	40	24%
Elements with NEW STARTS IN FY12		weighted mean =	126	5.6	1186		279	**24%**
Core (Non-GO) solicitations			144		749		159	**21%**
Guest Observer solicitations			95		437		120	**27%**

Theory and Computation Networks: a Decadal Survey Recommendation

In October 2011, Thierry Lanz (NASA ApD) and Tom Statler (NSF AST) asked AAAC to consider what a TCN program should look like:

- What constitutes a network? (multi-institution, meetings, ???)
- What distinguishes multi-disciplinary activities?
- Should proposals be restricted to address certain key questions?
- What are the needs for a TCN program, e.g. for balance between theory and computation? For workforce initiatives?

AAAC members MacLow and Laughlin agreed to lead the effort. They talked with community members, and drafted a report on what could usefully be done for $2M/year. The May 2012 AAAC report is posted at http://www.nsf.gov/events/event_summ.jsp?cntn_id=122569&org=AST

AAAC recommended 3-year awards of ~$0.5M/year to groups with PIs at 3 or more institutions, to focus on areas of greatest potential for progress: Astro2010 priority questions, and others. Review should evaluate effectiveness of the collaboration.

ApD and NSF AST are working on a joint solicitation for competition in FY 2013.

Nancy Grace Roman Technology Fellowships

These fellowships aim to

... give early career researchers the opportunity to develop the skills to lead astrophysics flight instruments/projects and become principal investigators (PIs) of future astrophysics missions;

... develop innovative technologies that have the potential to enable major scientific breakthroughs;

... foster new talent by putting early-career instrument builders on a trajectory towards long-term positions.

In November 2011 we received 16 proposals from early-career (<7 years since PhD) PIs in non-tenured positions (postdoc, tenure-track, etc.) for a one-year concept study to generate detailed plans and commitments for a 4-year development effort.

We selected 3 concept studies. The reports (=plans for development) will be peer-reviewed to select those to continue to development. Institutional commitments to lab space and other facilities are required.

Backups