



Astrophysics
Division

Astrophysics Research Programs

NASA Advisory Council Astrophysics Subcommittee

23 February 2012

Linda Sparke
Research Program Manager
Astrophysics Division



Funding History for Research Awards

	FY04 Final \$k	FY05 Final \$k	FY06 Final \$k	FY07 Final \$k	FY08 Final \$k	FY09 Final \$k	FY10 Final \$k	FY11 Final \$k	FY12 Projected
Particle Astro	\$ 8,248	\$ 7,671	\$ 8,544	\$ 7,631	\$ 6,672	\$ 8,201	\$ 8,260	\$ 8,243	\$ 8,585
High Energy	\$ 14,548	\$ 13,693	\$ 14,779	\$ 12,782	\$ 12,406	\$ 13,886	\$ 14,110	\$ 13,911	\$ 14,548
UV/Opt/IR/ Sub-mm	\$ 20,409	\$ 18,742	\$ 21,851	\$ 17,442	\$ 19,094	\$ 22,353	\$ 21,534	\$ 21,295	\$ 23,032
Other	\$ 1,019	\$ 854	\$ 338	\$ 394	\$ 594	\$ 670	\$ 673	\$ 641	\$ 1,627
APRA Total	\$ 44,224	\$ 40,960	\$ 45,511	\$ 38,250	\$ 38,765	\$ 45,110	\$ 44,577	\$ 44,090	\$ 47,791
Orig Solar Systems	\$ 4,209	\$ 3,872	\$ 4,150	\$ 3,673	\$ 2,965	\$ 3,000	\$ 2,807	\$ 2,944	\$ 2,978
Astro Theory Program	\$ 7,860	\$ 7,363	\$ 10,245	\$ 10,227	\$ 11,696	\$ 11,890	\$ 12,262	\$ 12,577	\$ 13,226
R&A (399131)	\$ 56,293	\$ 52,195	\$ 59,906	\$ 52,150	\$ 53,426	\$ 60,000	\$ 59,646	\$ 59,611	\$ 63,995
ADAP/LTSA	\$ 16,986	\$ 15,700	\$ 15,189	\$ 12,641	\$ 12,013	\$ 14,384	\$ 13,258	\$ 14,132	\$ 16,320
Core Research	\$ 73,279	\$ 67,895	\$ 75,095	\$ 64,791	\$ 65,439	\$ 74,384	\$ 72,904	\$ 73,743	\$ 80,315
TPF/FS Beyond Einstein FS	\$ 2,000	\$ 2,000		(Foundation Science; now in ATP)					
ASMCS (399131)					\$ 3,452	\$ 442			
PCOS SR&T							\$ 968	\$ 184	
Technology Fellows									\$ 600
TOTAL	\$ 79.3M	\$ 72.9M	\$ 77.1M	\$ 64.8M	\$ 68.9M	\$ 74.8M	\$ 73.9M	\$ 73.9M	\$ 80.9M
		\$7M cut	smaller cut	15% cut	partial recovery	more recovery	flat	flat	growth!

The budget for research awards increased by 10% in FY12, in response to the Astro2010 Decadal Survey recommendations



	Due Date	Notification	Days	Rec'd	Selected	Success
			from due date			
ROSES-2011						
Fermi Guest Investigator -- Cycle 5	20-Jan-12		27	221	→	
Kepler Guest Observer - Cycle 4	20-Jan-12		27	64	↑	
Roman Technology Fellowships	18-Nov-11		92	16		
Swift Guest Investigator -- Cycle 8	28-Sep-11	21-Dec-11	86	152	→	32 21%
Astrophysics Theory	3-Jun-11	28-Oct-11	149	197	→	33 17%
Origins of Solar Systems	27-May-11	7-Oct-11	133	36	→	5 14%
Astrophysics Data Analysis	20-May-11	29-Sep-11	132	278	↑↑	60 22%
ROSES-2010						
Strategic Astrophysics Technology	25-Mar-11	31-Aug-11	159	56	↑↑	14 25%
Astrophysics Research and Analysis	25-Mar-11	31-Aug-11	159	166	↑↑	39 23%
Elements with NEW STARTS IN FY12	weighted mean =		135	885		183 21%
Kepler Participating Scientists	11-Feb-11	17-Jun-11	126	30		12 40%
Fermi Guest Investigator -- Cycle 4	21-Jan-11	28-Apr-11	97	210		87 41%
Euclid Science Teams	20-Dec-10	15-Feb-11	57	2		0
Kepler Guest Observer - Cycle 3	17-Dec-10	25-Mar-11	98	40		22 55%
Suzaku Guest Observer -- Cycle 6	19-Nov-10	28-Feb-11	101	91		40 44%
Swift Guest Investigator -- Cycle 7	29-Sep-10	21-Dec-10	83	182		61 34%
Astrophysics Theory	4-Jun-10	21-Oct-10	139	193		33 17%
Origins of Solar Systems	28-May-10	19-Oct-10	144	36		6 17%
Astrophysics Data Analysis	14-May-10	2-Sep-10	111	186		63 34%
ROSES-2009						
Astrophysics Research and Analysis	26-Mar-10	5-Aug-10	132	143		37 26%
Elements with NEW STARTS IN FY11	weighted mean =		111	1113		361 32%



Research Program Forward Look

	Actuals	Enacted		Request	Notional	
Thousands of dollars	FY11	FY12	Δ from FY11	FY13	FY14	
APRA + Theory + Origins of Solar Systems	59,611	64,595	8%	64,238	65,520	Flat budget beyond FYi4
* Suborbital payloads	21,843	23,000	5%	22,200	22,500	
* Lab Astrophysics	3,169	4,000	26%	3,750	3,750	
APRA Detectors, Supp Technology; OSS	21,321	22,653	6%	22,200	22,700	
* Astrophysics Theory	12,148	13,226	9%	12,500	12,500	
* Theory and Computation Networks	still to be decided			1,500	1,500	with NSF
Roman Technology		600		925	1,288	
Fellows						
Other	1,131	1,116		1,163	1,283	
Astrophysics Data Analysis	14,132	16,320	15%	18,329	18,508	
Research awards total	73,743	80,915	10%	82,567	84,028	

* Astro2010 recommendation

Funding balance is revisited annually in budget preparation, and at APRA selection



Theory and Computation Networks: a Decadal Survey Recommendation

In October 2011, Thierry Lanz (NASA ApD) and Tom Statler (NSF AST) asked AAAC to organize a workshop bringing experts from the theory & computation community together with agency representatives to discuss what a TCN program should look like. A written report by April 2012 would inform drafting of a joint solicitation for FY 2013. The report would consider:

- 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?

By December 2011 it was clear that time was too tight for a workshop. AAAC members MacLow and Laughlin agreed to talk to community members and report on what could usefully be done for \$2M/year.

In February 2012 AAAC discussed preliminary thoughts from MacLow & Laughlin, but was far from having a draft report. AAAC will discuss further at its March telecon, and may request community comment by e-mail.