

August 8, 2011

Dr. Alan Boss, Chair APS
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Dear Alan,

I'd like to thank you for giving me the opportunity to present GALEX to the July APS meeting. While I felt that it was useful to explain our situation, I was less than pleased to read the outcome of the APS deliberations in the summary letter to Wes Huntress and the NASA Advisory Council Science Committee. In particular the boldface statement that "The APS, however, cannot override the rankings established by the 2010 Senior Review" suggests that your committee is powerless to act on matters relating to operating missions. I find this alarming.

It was never my expectation that the APS would overrule any SR2010 recommendation or ranking. The Senior Review is a highly respected and deliberate process and it is sensible that we as a community defer to its judgment in ranking missions.

However, the Senior Review does not have the last word on the funding profile for operating missions, particularly in light of budgetary challenges. Instead, the astrophysics division director sets the level of funding for each mission. Why shouldn't the APS be allowed to weigh in on these decisions, and at a minimum, be provided with detailed explanation and rationale for how the choices are made?

For example, in FY2012, in the face of a ~10-15% funding cut for NASA astrophysics, GALEX received a >95% cut. Does APS really know why the cut for GALEX had to be so drastic? (e.g. as opposed to 30% or 50%?). I presented a scenario where GALEX could obtain high quality science data even if given a 70% cut. This would still be far greater than the cut received by higher-ranking missions.

Historical precedence might provide examples for such extreme actions, but there **are none in the past 8 years, as the attached chart illustrates. More often than not missions have been extended beyond the recommendation of the Senior Review.** SR2010 marked the first time that GALEX was not ranked in the top three missions, and it is quite evident that the fact that it is being terminated early, only one year after receiving that ranking, is completely anomalous.

Rank	Senior Review Year	Recommendation		
		Funding Thru Year	Closeout In Year	Comment
SR2004				
1	GALEX	FY08		
2	XMM-Newton	FY08		
3	FUSE	FY06		
4	WMAP	FY06		
5	RXTE	FY06		
6	CHIPS		FY05 (Feb)	Continued into 2006, solar obs. 2007
7	INTEGRAL	FY06	Cuts	Ended theory, archive program
8	HETE		FY05	Continued to early 2006
SR2006				
1	Swift	FY10		
2	GALEX	FY10		
3	XMM-Newton	FY10		
4	WMAP	FY08	FY09	
5	Integral	FY10		
6	Suzaku	FY08		
7	RXTE		FY09 (Feb)	Funding not terminated
8	FUSE		FY09	Mission failure mid-2007, ops end late 2007
SR2008				
1	Swift	FY12		
2	Chandra	FY12		
3	GALEX	FY12		
4	Suzaku	FY12		
5	Warm Spitzer	FY10		
6	WMAP	FY10		
7	XMM-Newton		FY10	Funding not terminated
8	INTEGRAL		FY09 (Sep)	Funding not terminated
9	RXTE		FY09 (Feb)	Funding not terminated
10	GP-B		No ext.	
SR2010				
1	Planck	FY14		
2	Chandra	FY12		
3	Spitzer	FY12		
4	Swift	FY14		
5	XMM-Newton	FY14		
6	WMAP	FY12 (data)	FY10 (ops)	Ops ended October 2010
7	Suzaku	FY14		Terminated FY11
8	GALEX		FY13	Terminated FY11 (Sep)
9	RXTE		no FY11	Funding through December 2011
10	INTEGRAL		No ext.	
11	Warm WISE		No ext.	
	Continuation beyond SR recommendation for closeout			
	Terminated earlier than SR recommendation			
	Mission ended due to HW failure			

Similarly there's little consistency between the FY2012 funding profile for operating missions and prior budgetary decisions. For example, in FY2005, after being ranked 1st in the Senior Review, GALEX received a significant decrease in funds (~15%), **because at the time it was decided that all missions should share the pain equally** following a comparable cut to Astrophysics. We were not pleased with that cut, but we lived with it.

I'm not arguing for equal distribution of cuts, nor am I arguing that missions should be operated well past the SR-recommended termination date, but by any comparative standard, the termination of GALEX is draconian (as it is for Suzaku).

In closing I'd like to emphasize three points:

- GALEX is continuing to collect high quality and useful scientific data and can complete its survey of the sky in FY2012. **We have developed a bare-bones plan for operating the mission at less than 30% of its present cost.**
- The decision to terminate GALEX in FY2012 acts contrary to the recommendation of SR2010. Furthermore, **GALEX is the only one of the four missions discussed at APS that is being permanently terminated in advance of the SR2010 recommendation.** (RXTE and Integral funding was to be terminated in FY2010, and Suzaku operates without US funds).
- In these \$\$\$-constrained times and during a transitional period at NASA, it isn't obvious that we should elect to terminate scientifically fruitful, operating missions. Nor is it obvious that we should make extreme decisions that are contrary to the recommendations of the Senior Review. **At a minimum, these decisions should be thoroughly reviewed.** Isn't the APS the correct forum to discuss these and the above issues?

As GALEX termination is scheduled for September 28, 2011, and will be permanent (no recovery possible), our situation is urgent.

I certainly hope that the APS does not declare itself impotent on matters such as these. I realize that with Congress seeking to enact enormous line-item cuts, our own plight may seem provincial. But why shouldn't decision-making within the astrophysics community be held to a higher standard?

Sincerely,

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