



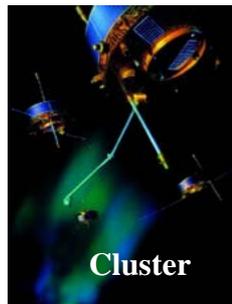
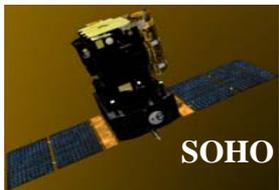
Notes from the Heliophysics MO&DA Program

STEREO SWG Meeting

Chuck Holmes
“Director, Heliophysics Great Observatory”
Heliophysics Division
Science Missions Directorate

November 13, 2007

The Heliophysics Great Observatory

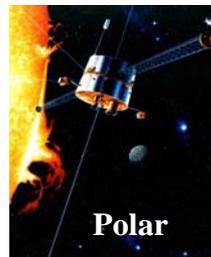


Solar Source

Solar Wind Drivers

Seed Population

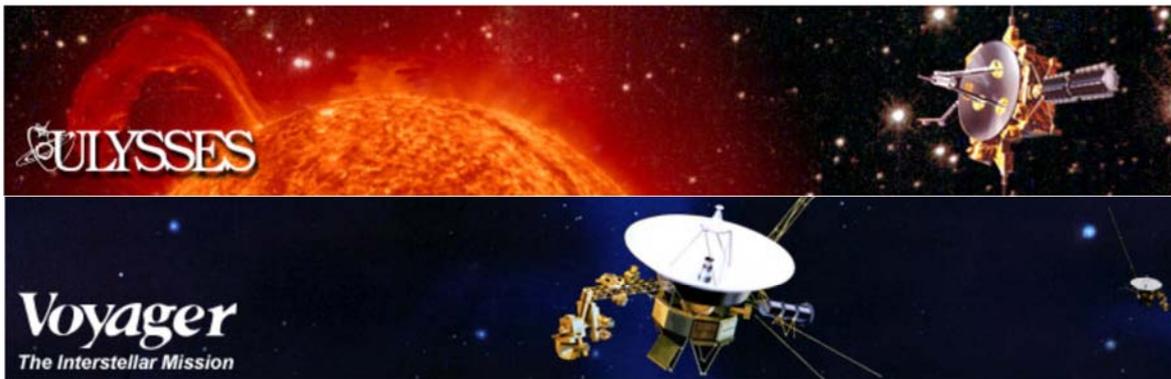
Precipitation And Loss



Heliospheric Structure



Atmospheric & Ionospheric Coupling



HQ Program Scientists & Mission Responsibilities



- **Eric Christian** **ACE, STEREO, Voyager**
- **Barbara Giles** **Polar, IMAGE**
- **Lika Guhathakurta** **STEREO**
- **Mona Kessel** **Cluster, Geotail, THEMIS**
- **Mary Mellott** **AIM, TIMED**
- **Alex Pevtsov** **Hinode, RHESSI, SOHO, TRACE**
- **Arik Posner** **SOHO, Ulysses, Wind**
- **Charles Swenson** **AIM, FAST, TIMED**
- **Aaron Roberts** **Heliophysics Data Environment**

- **Two (2) positions are currently being advertised:**
 - For more information on the position and How to Apply, see the announcement at www.USAJobs.gov. Search for Job# HQ08B0054.
 - Applications must be submitted by **November 19**.

QuickTime™ and a
TIFF (Uncompressed) decompressor
are needed to see this picture.

Status Summary for the 16 HP Operating Missions



Mission	Launch	Phase	Extension to *	July	Aug.	Sept.	Oct.	
Polar	2/24/96	Extended	Apr 2008	Green	Green	Green	Green	Passed 3rd perihelion in August 18
Ulysses	10/06/90	Extended	> Mar 2008	Green	Green	Green	Green	
FAST	8/21/96	Extended	Jul 2008	Green	Green	Green	Green	
Geotail	7/24/92	Extended	Jul 2008	Green	Green	Green	Green	
TRACE	4/01/98	Extended	Nov 2008	Green	Green	Green	Green	Sustaining ~30% bit-lock success rate Working around contamination of XRT detector
STEREO	10/25/06	Prime	Feb 2009	Green	Green	Green	Green	
THEMIS	2/17/07	Prime	Mar 2009	Green	Green	Green	Green	
AIM	4/25/07	Prime	June 2009	Yellow	Green	Green	Green	
Hinode	9/23/06	Prime	Nov 2009	Green	Green	Green	Green	2-wheel control algorithms tested Voyager 1 - 30 years in flight
Cluster	7/16/00	Extended	~ 2010	Green	Green	Green	Green	
ACE	8/27/97	Extended	> 2012	Green	Green	Green	Green	
RHESSI	2/05/02	Extended	> 2012	Green	Green	Green	Green	
SOHO	12/02/95	Extended	> 2012	Green	Green	Green	Green	2-wheel control algorithms tested Voyager 1 - 30 years in flight
TIMED	12/07/01	Extended	> 2012	Yellow	Green	Green	Green	
Voyager 1 + 2	8/20/77	Extended	> 2012	Green	Green	Green	Green	
Wind	11/01/94	Extended	> 2012	Green	Green	Green	Green	

* Extension date subject of future Senior Reviews: 2008, 2010, etc.

Going to their 1st Senior Review

Not going to the 2008 Senior Review

Managing the Observatory



- **NASA HQ monitors the scientific performance of the missions:**
 - The annual report to Congress under the Government Performance Report Act.
 - The bi-annual senior reviews which look ahead to future contributions to Heliophysics science.
- **Inputs from the scientific performance plus informal consultation with the operational space weather organizations, go into the programmatic decisions by NASA.**

From the Heliophysics Roadmap



The Great Observatory will continue to evolve as new spacecraft join and older ones retire or change their operating modes. Missions both in their prime phase and in extended phases ... provide the variety of observation posts needed to study Heliophysics science, as demonstrated by the 2003 Halloween Storms.

A great strength of the Great Observatory fleet is that it is regularly evaluated and reviewed by the community to maximize the return on the agency investments. [The Senior Review process](#) determines which spacecraft are most necessary to meet the needs of the HP program as defined by the community developed Roadmap document.

The criteria for continuation include relevance to the goals of HP; impact of scientific results as evidenced by citations, press releases, etc.; spacecraft and instrument health; productivity and vitality of the science team ...; promise of future impact and productivity (due to uniqueness of orbit and location, solar cycle phase, etc.); and broad accessibility and usability of the data.

From the Panel's report for the 2005 Senior Review



- I. **Projected FY09-10 Funding:** Due to the reduced funding levels projected for FY09 and FY10 compared to earlier years and the impact of new missions transferring from their prime mission funding to the extended mission budget, the latter will be severely under-funded, by the order of **\$15M per year in FY09 and FY10**. This is in spite of the fact that the budget assumes that 5 of the 13 currently operating missions will have terminated operations in this time period. This projected funding shortfall will severely impact the capabilities of the HP Great Observatory and its ability to properly address the goals of the NASA HP program. This under-funding of the Great Observatory occurs at a particularly inopportune time, at the next maximum of the solar cycle with its expected frequent occurrence and diversity of solar-terrestrial events that impact studies of many HP goals.

The 2008 Senior Review of the HP Operating Missions



● **Schedule**

- February 2007 - Mid-term announcement
 - August 17, 2007 - Draft call for proposals
 - November 3, 2007 - Call for proposals
 - **February 21, 2008 - Proposals due**
 - March/April - Virtual Data Panel evaluations and findings
 - April 8-11, 2008 - Meeting of the Senior Review Panel
 - On or about June zz, 2008 - Publication of the panel's report, dissemination of new budget guidelines, and instructions to the projects
-
- **New: Mission Archive Plans will be attached to the mission's proposal**
 - The data panel will evaluate the MAPs
 - **New: E/PO 'proposals' will be due in the Summer of 2008; provides opportunities for multi-mission collaborations.**