STEREO OBSERVATORY Status

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STEREO
Major Mission Milestones

- ✓ Observatory SRR/CoDR 24-25 May 2000
- ✓ Observatory PDR WEEK – Dec 2001
- ✓ Confirmation Review - 27 March 2002
- ✓ Observatory CDR – Feb and Mar 2003
- ✓ Start Integration & Test – October 2004
- ✓ PER – September 26-27, 2005
- ✓ Pre Ship Review – April 25-26, 2006
- ✓ Shipped to Florida – May 3-4, 2006
- ✓ Flight Ops Review – May 3-4, 2006
- ✓ Pre-Vehicle On Stand – May 18, 2006
- Mission Readiness Review – June 27, 2006
- Launch Readiness Review ~July 19, 2006
- Launch Window – NET July 22, 2006

History of STEREO Environmental Testing

STEREO SWG

ITEM NO.	ACTIVITY DESCRIPTION	2005				2006				
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
1	Milestone Reviews	▼PER 9/26 - 27							▽PSR 4/25 - 26	
2	PAF Shock Separation Test		10/18 ◢▼ 10/21							
3	Stack Vibraion w/Aliveness Tests (at APL)		10/22 ▲— ▼11/1							
4	SAAB Shock Testing (at APL)		11/2 ◢ 11/4							
5	Magnetic Swing Testing (at APL)			▼11/7						
6	Shipment to GSFC			▼11/9						
7	Set Up and Post Ship Aliveness Testing		11/9 ◢ 11/11							
8	Acoustic Testing		11/12 ◢▼ 11/15							
9	SAAB Separation Testing		11/16 ◢ 11/18							
10	Post Acoustic Functional Testing			11/22 ◢ 11/23						
11	Stack Spin Balance Testing and Wet Mass Props			11/28 ▲— ▼12/18						
12	Thermal Vac Preps				12/19 ▲— ▼1/24					
13	Thermal Vac Balance Testing					1/24 ▲— ▼2/6				
14	Chamber Break Activities for Thermal Vac Cycling					2/7 ▲— ▼2/19				
15	Thermal Vac Cycling w/Mission Sim 3 & DSN					2/19 ▲— ▼3/18				
16	Post Thermal Vac Activities							3/18 ◢▼ 3/21		
17	Post Thermal Vac Performance Testing							3/22 ▲— ▼4/7		
18	Obs A Mass Properties X								▼4/8	
19	Obs B EMC								4/10 ▲— ▽4/19	
20	Obs A Yoke Mass Properties								4/10 ▲▽ 4/14	
21	Obs A EMC								4/19 △— ▽4/26	
22	Obs B Mass Properties X								▽4/20	
23	Obs B Yoke Mass Properties								4/21 △▽ 4/25	
24	Pack and Ship STEREO to ASO								4/25 △— ▽5/1	

Launch Campaign Schedule

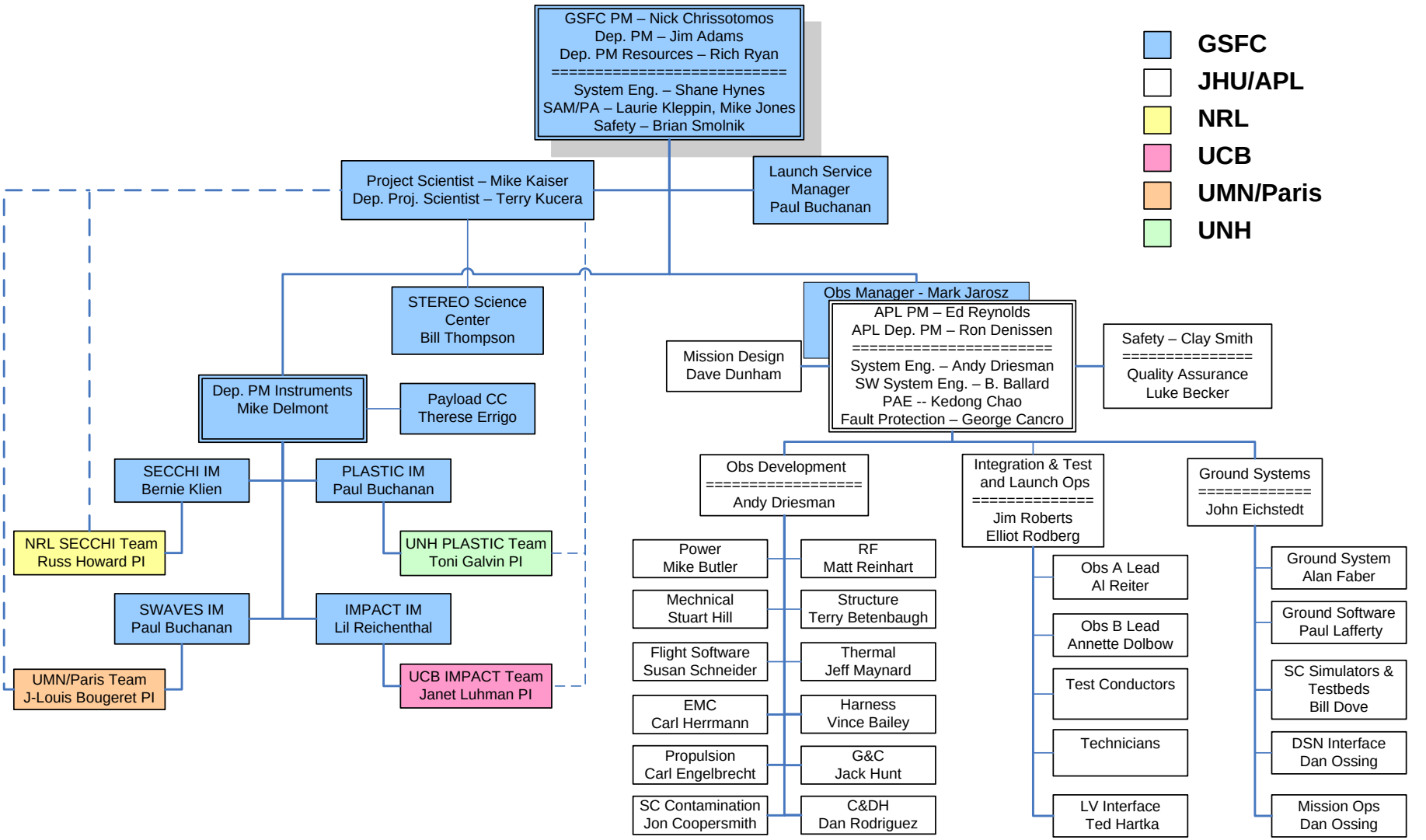
STEREO SWG

ITEM NO.	ACTIVITY DESCRIPTION	2006
		April | May | June | July | August
	STEREO Mission Rehearsals	5/10 3a - LEO; 5/15 4a - b Inst Ops; 5/30 3b LEO; 6/5 4c Inst Ops; 6/16 3c LEO; 6/26 4d Inst Ops; 7/18 Mission Dress Rehearsal @ Operational Stations
1	STEREO Arrives at ASO	5/2
2	Unpack/Cable Up/Perform Aliveness Tests	5/3 – 5/8
3	Open Decks/Fuse Checks/Cleanings/Inspections	5/8 – 5/15
4	Integrate Flight Batteries/Mil71 and Autonomy Regression Testing	5/15 – 5/22
5	Solar Array Mechanical Integrations and Vertical Alignments	5/22 – 5/24
6	HGA Rotation Tests and Phasing Tests	5/24 – 5/29
7	Obs B CPT and G-Neg Deployments	5/31 – 6/6
8	Obs A Mission Sim 4 w/DSN Compat Testing	5/31 – 6/6
9	Obs A CPT and G-Neg Deployments	6/9 – 6/20
10	Obs B Mission Sim 4 w/DSN Compat Testing	6/9 – 6/16
11	Battery Conditioning/Finalize Blankets/Cleanings and Inspections	6/16 – 6/23
12	Bag Both Observatories and Move to the HPF	6/26 – 6/28
13	Propulsion Leak Testing and Weighing	6/28 – 6/29
14	Propellant Loading/Pressurization and Weighing	6/29 – 7/1
15	Stack Spin Balance Test	7/5 – 7/7
16	Mate With Third Stage/Install in Transport Can	7/10
17	Boeing Launch Ops (Starting at T-10)	7/11 – 7/22
18	STEREO Launch Window (7/22 - 8/6)	7/22 – 8/6

NOTE: There are currently 21 weekend days of contingency at the launch site.

STEREO Team Organization

STEREO SWG



PM Assessment

	Grade	Significant Issue
Fault Prot. /Autonomy		
Mechanisms		
Structural		
Thermal		
Power		
C&DH		
G&C		
RF		
Propulsion		
Harness		
Flight Software		
I&T		
PLASTIC		
SWAVES		
IMPACT		STE door mechanism, detector replacement
SECCHI - SCIP		
SECCHI - HI		
Req. Verification		
Launch Vehicle		launch vehicle battery availability
Ground System/SW		

Observatory Readiness

- Both observatories are fully integrated and in flight configuration
- Environmental Test Program completed successfully
- Observatories arrived at launch site in good condition
- Launch processing is going smoothly
- All critical positions are staffed
- Hardware and software configuration frozen for launch (software freeze occurs before CPT)
- MOC is operational and the mission ops team demonstrated proficiency in operating two Observatories during 9-day mission simulation
- Mission rehearsals are underway to test operations in anomalous conditions
- Countdown sims underway and launch constraint criteria currently being establish
- Delta2 on track to support either a July or August launch window
  - Look to launch vehicle status in early June to see if they can support a July 22nd launch window.
  - Boeing approved to put first stage on the launch pad

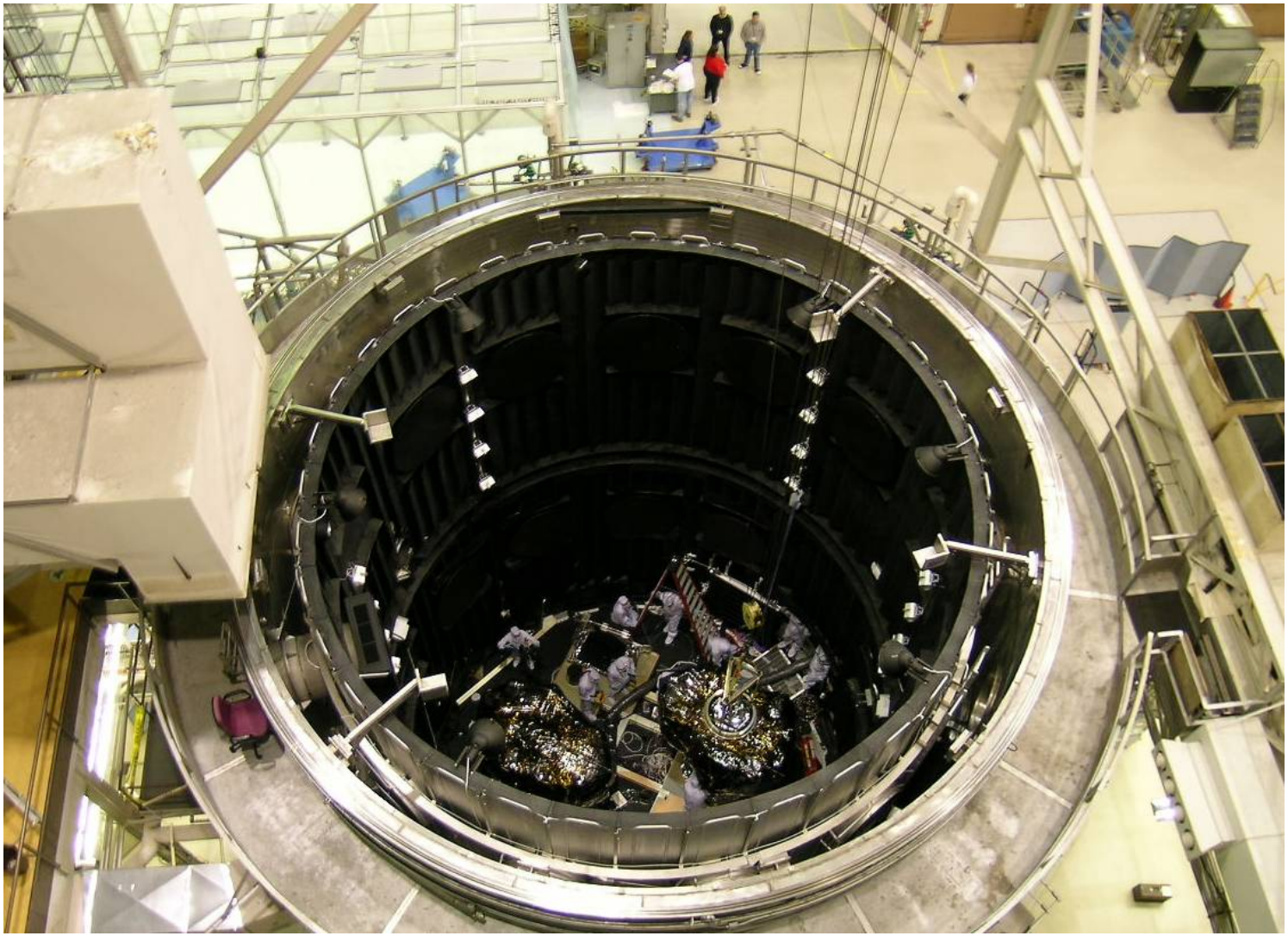
Working in SCA Cleanroom at GSFC

Astrotech Processing

http://science.ksc.nasa.gov/shuttle/countdown/video/chan14large.jpg

Observatories arrive at Launch Site

Looking Down into GSFC TV Chamber



The STEREO Team is Ready to Go