STEREO Science Team Meeting

May 2, 2005

Presented by

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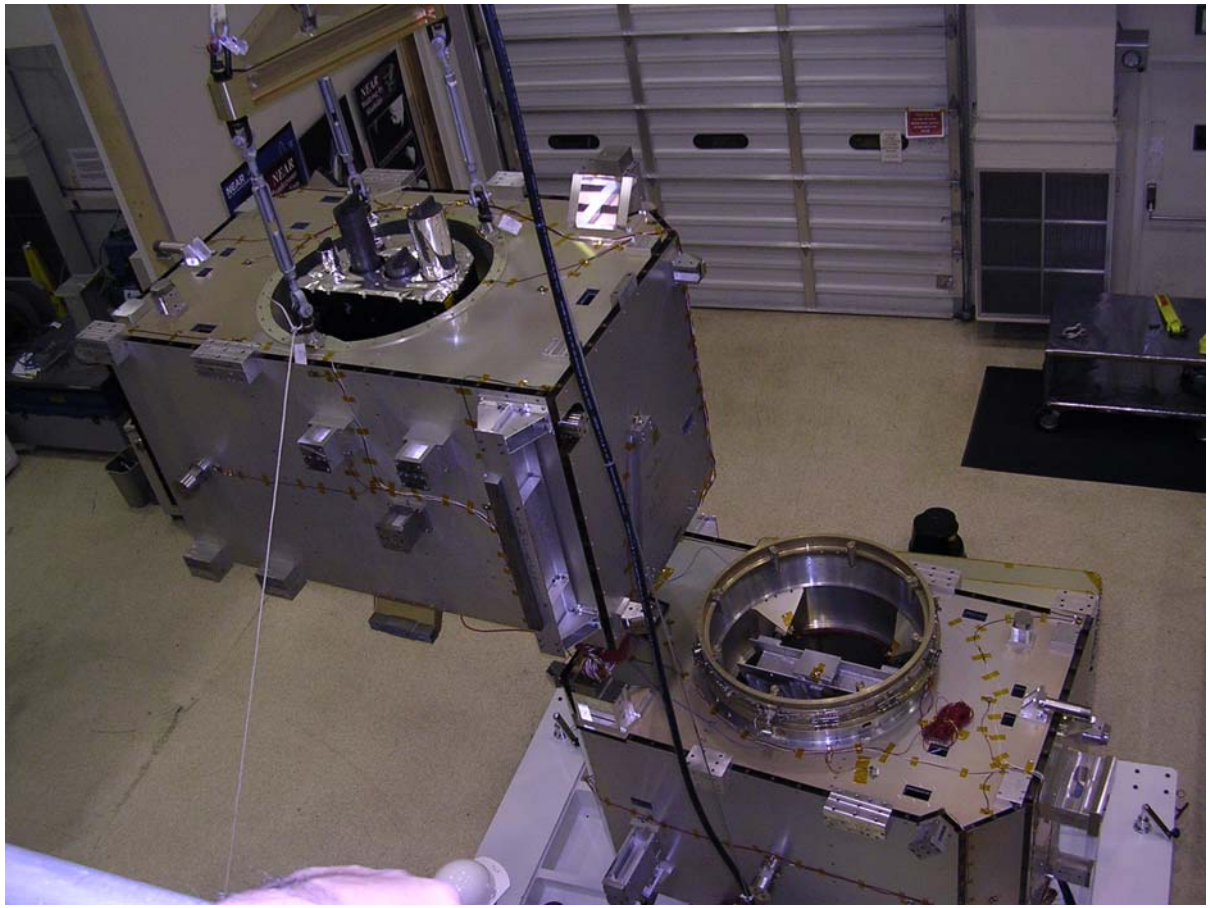
APL STEREO Project Manager

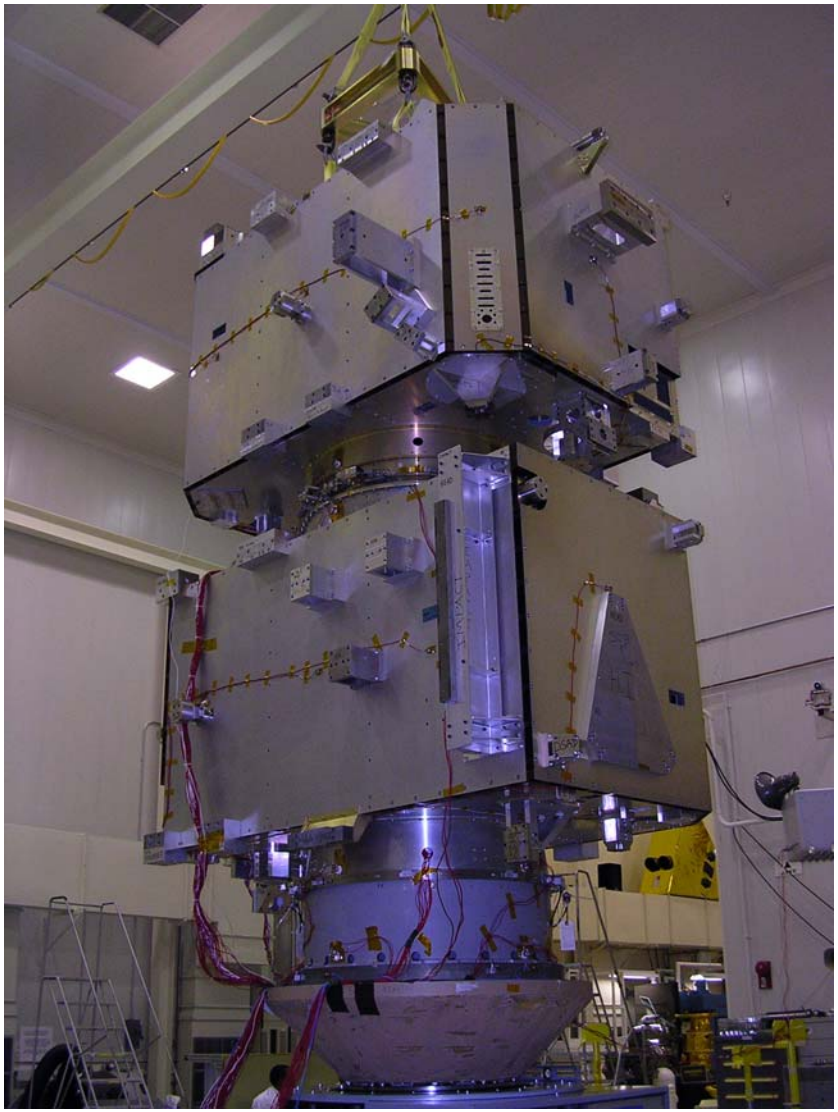
General Status

- Observatory Integration status
  - Core spacecraft integration is nearly complete
  - Both spacecraft are ready for instrument integration
- Mission Operations Center
  - Facility complete and equipment operational
  - MOC facility used for Mission Simulations and DSN tests
  - POC facility ready for instrument teams
- Four Mission Simulations performed on each spacecraft
- Five Dress rehearsals performed using equipment and personnel being planned.

Spacecraft Stacking Operations



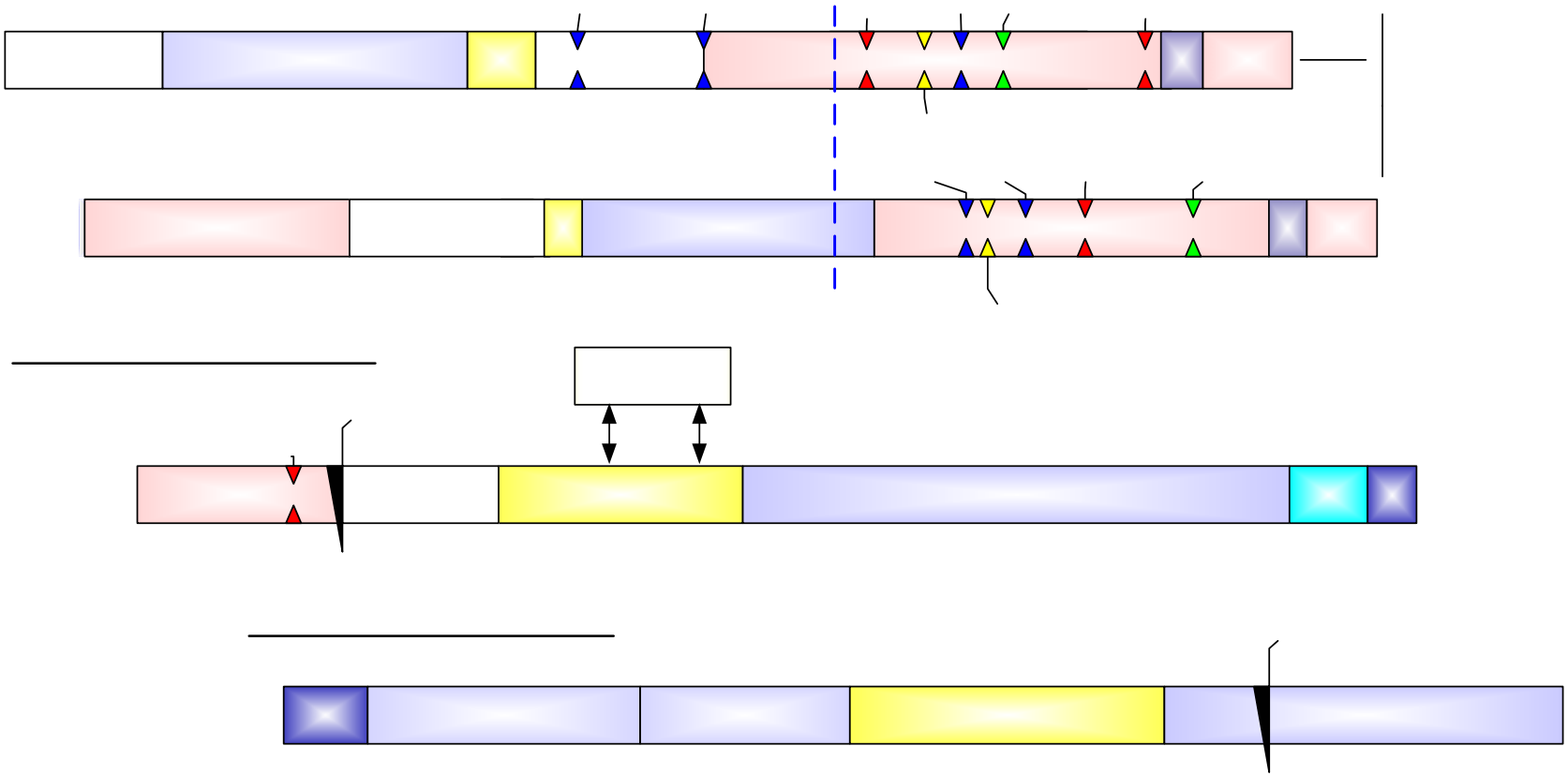
Spacecraft Stack – Dynamics Load Testing



Integration Status

- Spacecraft integration at APL
  - Both spacecraft integrated within the same room
  - Facility controlled for contamination, ESD, and security
  - Spacecraft to remain at APL until after stacked vibration testing
- Most environmental testing to occur at GSFC
  - Acoustics, thermal vacuum, shock, ESD, mass properties
- Launch activities will occur over a 11-week period
  - While at GSFC and Launch site, spacecraft will be controlled from MOC at APL
  - Project will follow security procedures of KSC/CCAFS
  - Background checks need to be submitted in a timely manner
  - Visitors and guests will be escorted when required
  - Once spacecraft is fueled, access around it will be limited to essential personnel

STEREO I&T Flow



Spacecraft A Integration - APL

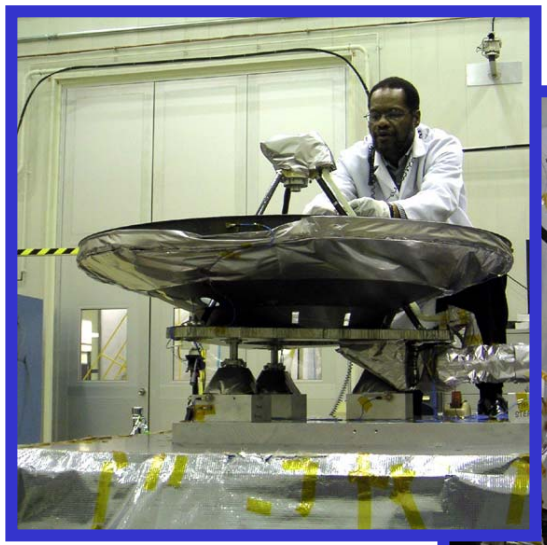
Harness insp.

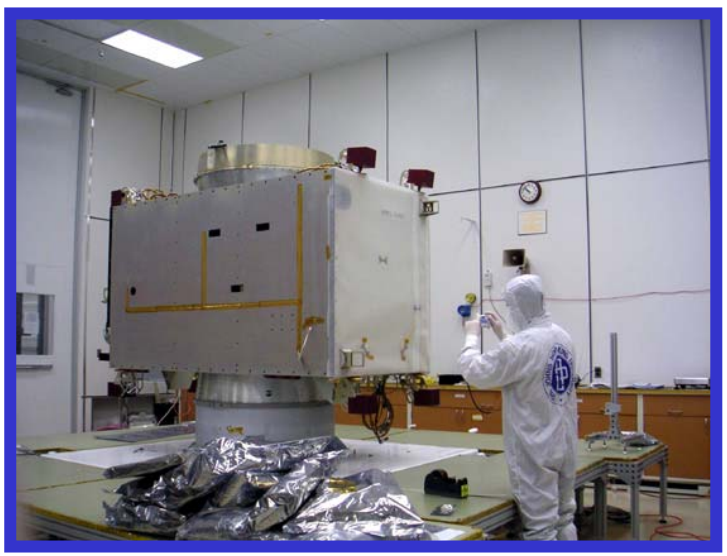
IEM, Power System

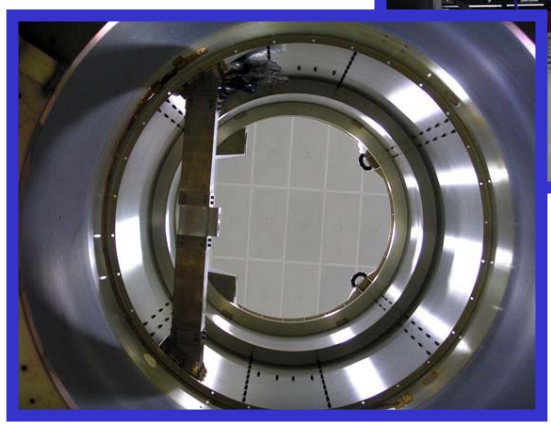
STEREO
Recent Accomplishments

- Hi-Shear under contract for Pyro Sep-Nuts (replaces STARSYS QwkNuts)
- DSN/CTT Testing Completed on Spacecraft A & B
  - Performance and Operations
- Power, RF, G&C subsystems integrated on Spacecraft A & B
- Propulsion system integrated and leak tested on Spacecraft A & B
- IEM B cold lock-up root cause identified and mitigated,
  - IEM B integrated on Spacecraft
- Mission Sim #1 on both Spacecraft A & B
  - Launch, Separation, Detumble, 1st contact, delta-V and momentum dumps, EA mode
- IMPACT IDPU & Boom Integrated on Spacecraft A
- Command Loss Timer Test (72-hour) Spacecraft A
- 85% of thermal blanketing complete
- Flight batteries ready for integration
- Solar arrays delivered and undergoing flash illumination testing
- HGA assemblies completing TV chamber testing (deployments, actuations)

Photo Gallery







Educational Video Production

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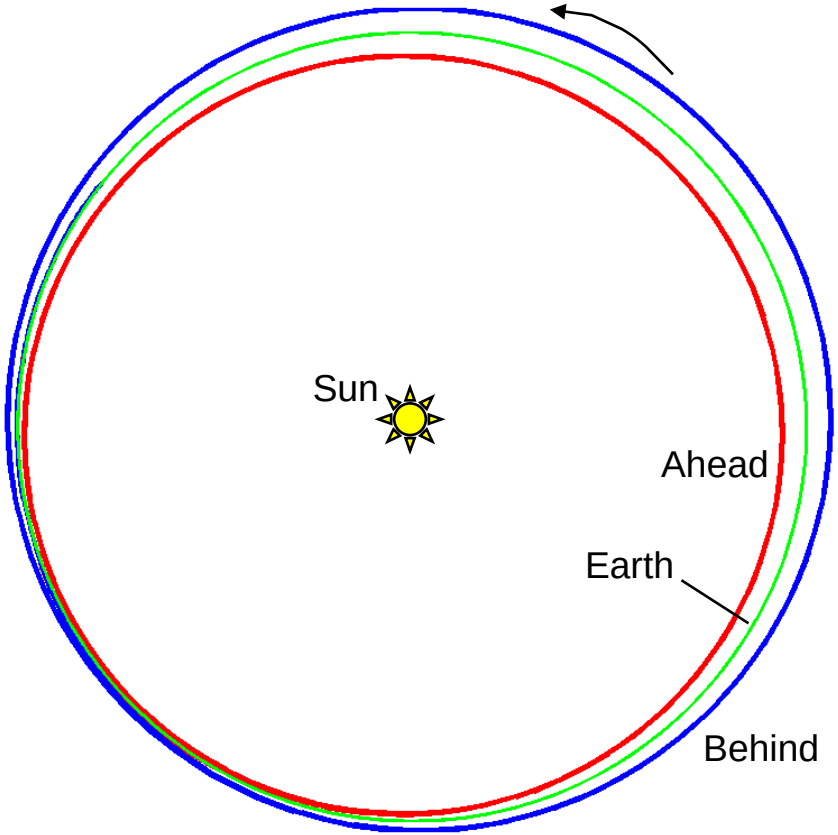
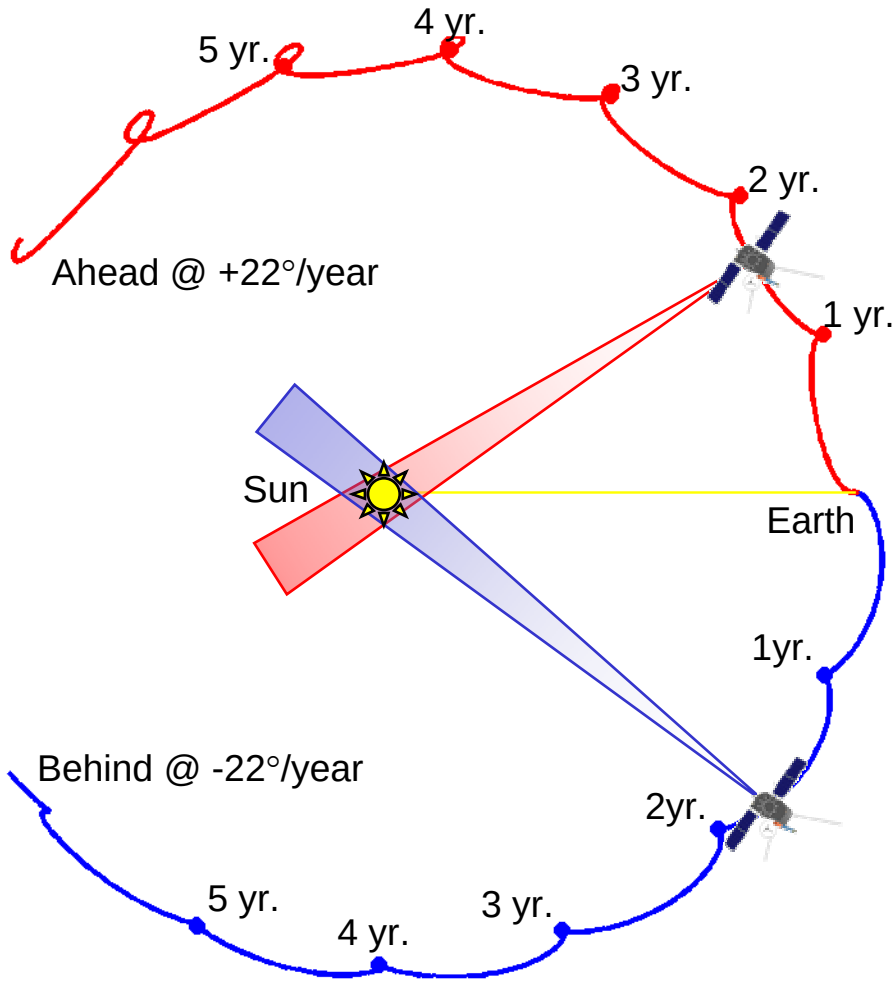
Mission Orbit

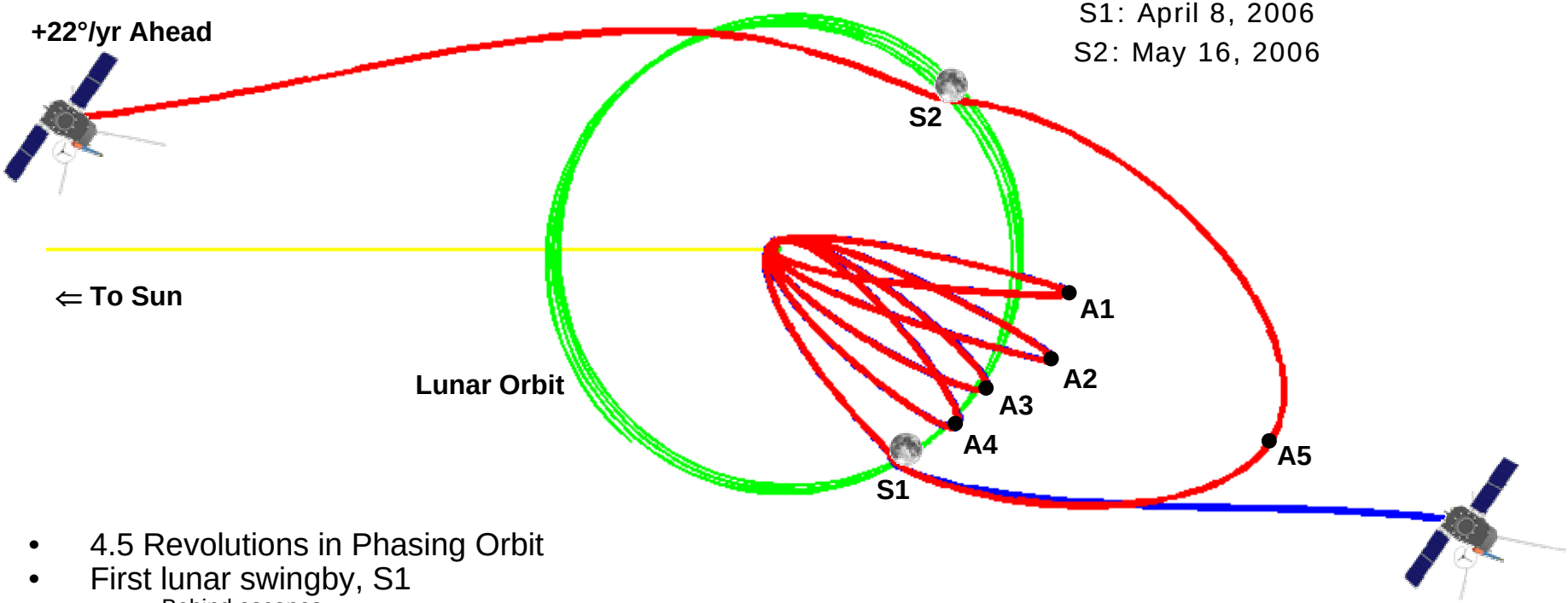


Heliocentric Inertial Coordinates
(Ecliptic Plane Projection)



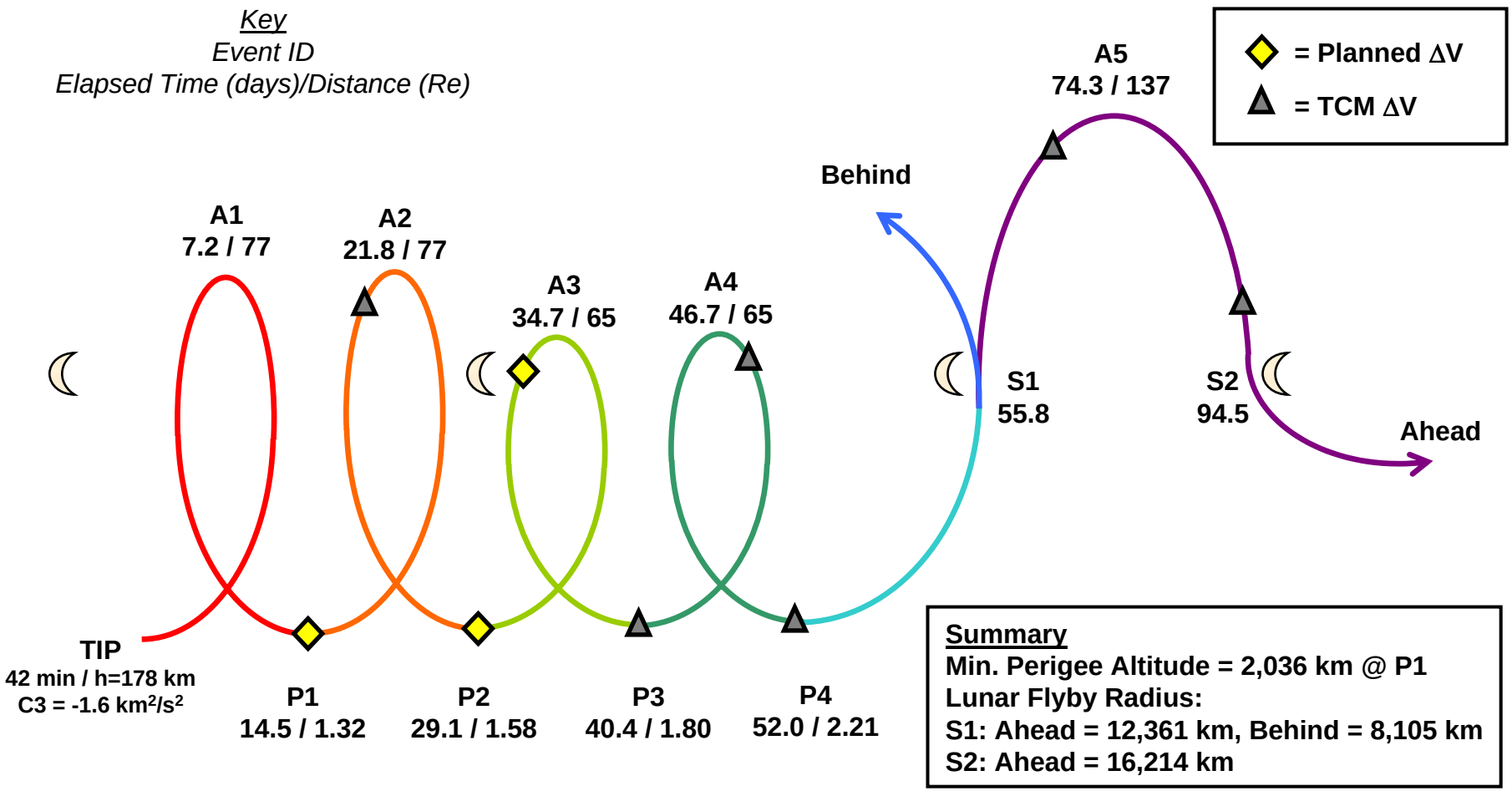
Phasing Orbit

Mission Timeline
Launch: Feb. 11 – 24, 2006 ~4:00 am EST
S1: April 8, 2006
S2: May 16, 2006

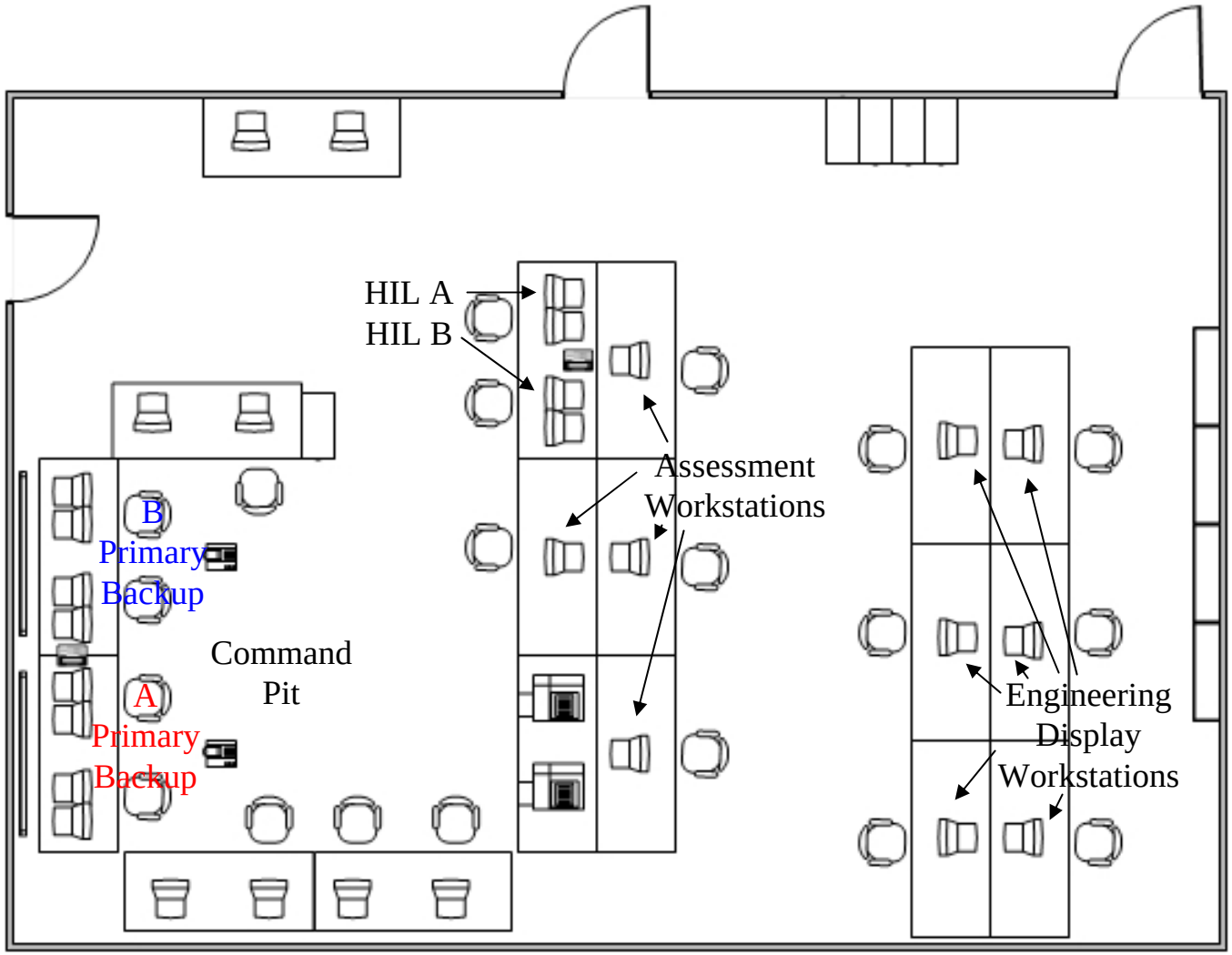


- 4.5 Revolutions in Phasing Orbit
- First lunar swingby, S1
  - Behind escapes
  - Ahead spacecraft enters 1 month 'outer loop'
- Second lunar swingby, S2
  - Ahead escapes

Day 1 (11-Feb)
Phasing Orbit Schematic



MOC Space


HIL A
HIL B
Assessment
Workstations
B
Primary
Backup
Command
Pit
A
Primary
Backup
Engineering
Display
Workstations

POC Space