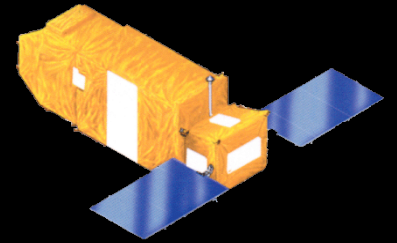


FUSE

JOHNS
HOPKINS
UNIVERSITY

FOAC Meeting-May 14, 2003



FUSE Mission Status

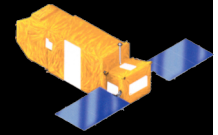
Bill Blair

FUSE Deputy PI

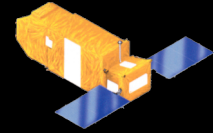
Chief of Observatory Operations

5/14/03

FUSE Mission Status



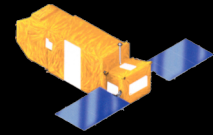
- FUSE PM concluded March 31, 2003.
- Operations continued nominally with the modified 2 RWA+ MTB control system through the end of Cycle 3.
 - Target pool (available targets) started getting thin toward end.
 - Started pulling in selected Cycle 4 observations during Feb-Mar 2003.
 - Ram angle has been reduced to 10 degrees; any further decrease dependent on solar cycle behavior.
- Development, Testing, and Implementation of “Gyroless” operations system dominated activities since last FOAC (talk later by Jeff Kruk).
 - Testing phase took longer than expected, but
 - Implementation (started 4/16/03) has gone very smoothly!
 - Back doing science in <1 week.
- FUSE (the project and the satellite) appear ready to support Extended Mission Operations!



Recent Performance

- **Statistics for Oct. 2002 - Mar. 2003:**
 - 26 weeks
 - Total science time: 4,403.8 ks (28.0% efficiency)
 - Primary science time: 2,755.4 ks (17.5% efficiency)
 - >482 Ks of D-programs scheduled prior to official Cy 4 start.
 - ~255 ks prime science time, 227 ks survey time.
 - Somewhat lower than previous 6 month period, but consistent with mission average for the PM.
 - Includes “lost week” in December from RWA hiccup.
- **Calibration status:**
 - Sensitivity remains excellent; no degradation from “Ram dipping.”
 - Wave cal and resolution/focus checks: no change.

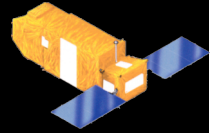
Prime Mission Summary



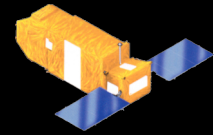
Cycle	Unique Objects	# of Science Observations	Total Time (Msec)
1	632	883	8.824
2	553	676	9.049
3	562	771	10.893
Total	1747	2330	28.767

- Summary of Executed Programs

Transition to Extended Mission

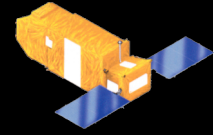


- EM officially began April 1, 2003.
- We have yet to transition to EM operations, due to the ZG preparations, load, and testing.
- SCC automation is largely in place and tested.
 - UPRM contacts with satellite automated.
 - SCC staffing will be reduced this summer, and we will quickly transition to ~16 hour/day M-F staffing (instead of 24/7).
 - Automated paging system during non-staffed hours.
- **Impacts to Operations: Nominally will only respond off hours to “Health & Safety” issues.**
 - “Saving science” is not Health & Safety!
 - Larger down times (increased “lost science” periods).
 - More rescheduling of missed targets.



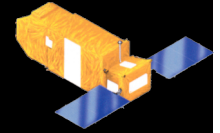
EM: Impacts to Operations

- Any operational activity requiring real time/near-real time contacts will be adversely affected.
 - UPRM pass schedule shifts wrt staffed periods.
 - May be partially offset by continued TDRSS support.
 - No USN/Hawaii station usage for normal operations.
 - Increased latency in archiving/processing data, esp. after weekend and holiday periods.
- Channel alignment strategy.
 - Standardize alignments to mid-week?
 - Longer lag time between taking and reacting to alignment data.
 - May have to accept periods of less than optimal channel alignment. (Depends on target pool and timing.)



EM: Ops Impacts, con't.

- **Recoveries from Anomalies**
 - Abort-obs: A thing of the past? (mitigated)
 - Failed acqs may result in lost exposures, but we stay on the T/L.
 - Attitude recoveries (from Inertial Hold or Safe-B-dot).
 - ZG testing to date: frequency of these anomalies should be low.
 - Detector anomalies (crackles, SEUs, etc.).
 - Recovery requires manual intervention.
 - Typically affects 1 detector at a time, but
 - Each recovery could take 1-3 days, depending on timing of event.
 - In principle, recovery could be automated, but
 - “Development” and “EM” are not synonyms.
- **Reduced opportunities for scheduling high risk or special operations.**



EM Staffing Changes

- **JHU Program Manager, J. B. Joyce, stepping down 6/6/03.**
 - Randy Ewing -> Program Mgr., new Resource/budget person.
- **SciOps staffing has decreased/is decreasing.**
 - Scott Friedman (not replaced).
 - Dave Sahnou (0.5 FUSE, 0.5 COS).
 - Damian Christian leaving at end of May.
- **SCC staffing changes:**
 - MOT Mgr Chris Silva phasing out (Steve Vaclavik taking over).
 - Harry Anderson left end of April.
 - Satellite engineers to be decreased by two.
- **Contractor support going/gone.**
 - AURA/STScI gone. ICS (Howard Calk) gone.
 - Orbital support phasing out this FY.

