ESDIS

Flight Operations Segment

June 24, 1998

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EOS

FLIGHT OPERATIONS SYSTEM STATUS

6/22/98

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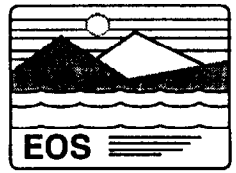
FOS STATUS



- **ECS developer continues to work off outstanding discrepancy reports**
  - **47 Severity 1 (impacts operations, no workaround) discrepancy reports still outstanding**
  - **Government is concerned that discrepancy report closure rate has remained at a steady state for the last few weeks**
- **ECS developer has brought in additional staff from Gaithersburg, Houston and Denver offices**
- **Some performance improvements have been achieved**
  - **Scheduling of ASTER activities has improved from 1500 seconds/activity in March to 9 seconds/activity in June**
    - **>> Requirement is 18 seconds/activity**
  - **Ingest and validation of 7 week Flight Dynamics System data has improved form 120 minutes in April to 9 minutes in June**
    - **>> Requirement is 40 minutes**

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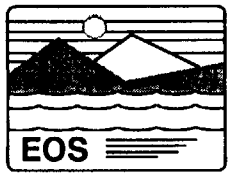
FOS STATUS



- **Significant problems still exist with system stability**
  - **Latest FOS weekly software drop, FOS Version 2.2.0J, seems to have exacerbated problems**
  - **Problems seem to center around directive Controller window**
- **-Expanded testing program with goal of surfacing software defects as soon as possible**
  - **Executing weekly Operations Readiness Testing (ORT) Mondays and Tuesdays on evening shift**
    - **>>Run by flight operations team**
    - **>>Monday tests simulate AM-1 launch and early orbit**
    - **>>Tuesday tests simulate AM-1 normal operations**
  - **Executing weekly 60 hour stability test**
    - **>>Friday evening through Monday morning**

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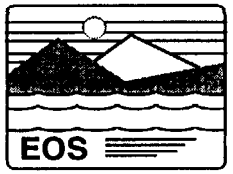
FOS STATUS



- ECS developer is- revamping internal test plans and procedures to exercise FOS software in a more operational manner
  - Participation from FOS test team, flight operations team and spacecraft manufacturer
- ECS developer is currently working to internal schedule reflecting January 30, 1999 AM-1 launch date
  - Government assessment is that March 15, 1999 AM-1 launch date is more realistic

AMOC STATUS

- **Epoch Prototype**
  - **Ingested AM-1 project database successfully**
    - >> Still have 15-character mnemonic limitation, with fix planned for July
    - >> Temp workaround is to use a translation table
  - **Implemented EDOS real-time telemetry interface**
    - >> Able to process housekeeping (16 kbps) and health & safety (1 kbps) data on I & Q channels using multiple workstations
  - **Implemented EDOS real-time command interface**
    - >> Able to send commands to Multimode Potable Simulator (MPS), and MPS able to back-convert to the correct mnemonic
    - >> Able to receive CLCW packet from EDOS and perform command receipt verification
  - **Created and using approximately 10 AM-1 displays**
  - **Created and successfully executed 4 AM-1 command procedures**

AMOC STATUS

- **Flowed AM-1 thermal vac spacecraft data from EDOS**
  - >> Recorded and processed data successfully
  - >> Using for Epoch and ABE (analysis tool) evaluation
- **Flight Dynamics System (FDS) making good progress on implementing data stream interface**
  - >> Near completion on interface

- **Mission Planning System**
  - **Identified goals for upcoming demo**
    - >> Simulated TDRS schedule ingest
    - >> Simulated activity creation and scheduling on timeline
  - **Working with FDS to define planning aid interface**
  - **Identified COTS hardware/software needs for development/test**
  - **Generated preliminary system architecture**

AMOC STATUS

- **Requirements Scrub**
  - **Completed review of all FOS Level 4 requirements**
    - >> Removed redundant and FOS-specific requirements
    - >> Reviewed launch criticality status
    - >> Created new requirements where necessary for clarity and/or completeness
  - **Also included thorough review of Epoch, ABE, and MOPSS tool capabilities with implementation teams**
- **System Design/Architecture**
  - **Generated draft hardware and software architecture**
- **Facility/Hardware**
  - **Placed order for system hardware needed for development facility**
  - **Generated draft facility layout**