



THE AEROSPACE
CORPORATION



UT



CRaTER Pre-Environmental Review
(I-PER)

Completed Verification Results
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Cosmic RAY Telescope for the Effects of Radiation



System Performance Changes

- Detectors
 - Engineering units met requirements (32-05001); flight units were better.
- Internal Gain
 - Thin detector gain changed from 1GeV full scale to 300MeV full scale.
- Mass, Power, Telemetry
 - No substantive changes since CDR.
- Analyses presented at CDR are still valid
 - No updates have been generated
 - Mechanical loads, stress, and torque margins still adequate
 - Parts stress calculations still valid
 - Radiation effects calculations still valid
 - No limited life items



Engineering Unit Testing

- Extensive science performance testing in particle beams
- Ambient pressure temperature testing
 - -40C to +40C
 - Gain and offset drift are order of 0.1% over entire range; requirement is 0.5%
 - Ran Functional Test Procedures to debug the testing process



Flight Unit Testing

- Comprehensive test (Long Form Functional) baseline completed
- Verification activities per Instrument Verification Plan (32-01206) in process.
 - Data base reference: 32-06020 to 32-06050

Category	A/I/D/T
Science	2/9/0/7
Data	2/6/5/0
Electrical	3/8/0/2
Mechanical	8/1/2/3
Thermal	0/13/1/2