CRaTER Pre-Ship Review
(I-PSR)

Installation Procedures/Orbiter Level Test Procedures
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Post-delivery processing flow at GSFC

• GSFC ready to receive CRaTER in GSFC Building 7 on 1/6
  – Store in room 188 that evening, move to adjacent “Big Top” clean tent next day
• CRaTER unpacks flight unit and EGSE at Big Top week of 1/14
  – Flight Instrument inside Big Top at north end
  – CRaTER EGSE outside Big Top
• CRaTER team performs Long Form Functional with Co60 source
  – Source provided by GSFC Code 690, safety provisions in place
• GSFC Mechanical Systems performs incoming inspection
  – Mass, dimensional check against Mechanical Interface Drawing
• GSFC 540 Performs (unpowered) bakeout certification with TQCM in B-7 chamber
  – Particulate contamination verification (lift/rinse) in conjunction with bakeout cert
• CRaTER ready for Orbiter integration
  – Currently scheduled for 2/06/2008
GSFC Facilities and Procedures ready

• Processing facility ready:
  – B-7 Big Top Tent, FTD-STD-209 level 10,000
  – ESD workstation in place w/wriststraps
  – Adequate power for EGSE
  – Purge capability meets CRaTER requirements
  – Project mechanical and contamination control technicians ready to support

• Test Procedure status:
  – CRaTER will rerun their standard Long-Form Functional test used at MIT with their GSE

• Integration Procedure status:
  – LRO/CRaTER Electrical Integration Procedure (451-PROC-001144)
    • Written and used at FlatSat to integrate CRaTER Instrument Simulator
    • Update for Flight Instrument integration in progress
  – LRO/CRaTER Mechanical Integration performed on Work Order Authorization (WOA)

• GSFC WOA status - all in process
  – Unpack / Post-Ship Functional Proc - in process with LRO Payload
  – Bakeout certification WOA - in process with LRO Contamination Control
  – Mechanical Integration WOA - in process with LRO Mechanical Systems
LRO I&T/systems deem CRaTER ready to integrate from ground I&T standpoint

• CRaTER ITOS/STOL scripts used at Orbiter level ready for use:
  – Long Form Functional, Short-Form Functional, Aliveness
    • “Condensed Functional” under discussion by LRO Mission Systems
  – Original CRaTER test procedures converted to ITOS scripts by CRaTER Mission Ops lead Rich Sanidad
  – LRO ITOS/STOL scripts run at LRO FlatSat using CRaTER Instrument Simulator
• LRO C&DH database updated
• Use of GSFC-supplied radioactive Co60 source at Orbiter level has been baselined
  – Source strength: 3E-6 Curies per John Keller
  – At GSFC, will use source only during CRaTER Post-Ship Functional and Orbiter Comprehensive Performance Test
  – Source not planned at Cape
Cosmic Ray Telescope for the Effects of Radiation