

# LAT EMI Requirements

- GLAST Observatory EMI Requirements Document, 433-RQMT-0005: based on
  - MIL-STD-461E, D, C
  - GEVS
  - Previous Projects
  - LAT and GBM responses to EMI questionnaire
  - RSDO competition rules; spacecraft contractor had not been selected

# LAT EMI Requirements

- Revision A (awaiting CCB approval), tailored version of 433-RQMT-0005
  - Meetings held November '02, January '03, April '03
  - Participants: SAI, LAT, GMB, GPO
  - Levels and requirements agreed to by all parties

# LAT EMI Requirements

- 433-RQMT-0005
  - Section 4 Observatory Requirements
  - Section 5 Instrument Requirements
  - Section 6 SC Component Requirements
- Section 5 applicable to LAT and GMB
- Requirements are applicable to the entire LAT, as a single unit
- Document does NOT contain instrument subsystem/box level requirements

# LAT EMI Requirements

- RE 101- unintentional magnetic field emissions
- RE 102- unintentional electric field emissions
- CE 101/102- prime power conducted emissions
- CECM- common mode conducted emissions
- RS 101- radiated magnetic field
- Static- magnetic torque rod field

# LAT EMI Requirements

- RS 103- radiated electric field
  - Survive: no permanent loss of performance capability
  - Operate: does not include ability to take scientific data
  - Perform: execution of the science mission
- CS 101/102- prime power conducted susceptibility
- CSCM- common mode conducted susceptibility
- CS06- conducted susceptibility to power line transients; survive, operate, perform

# LAT EMI Requirements

- Bonding
- Connectors and shields
- Grounding
- Interface circuits
- Thermal Blanket Grounding
- Secondary Power Referencing
- Instrument Ground Support Equipment