Instrument Overview

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LIS Instrument Concept

- Solid State Optical Sensor
  - Staring; Fixed Field-of-View
- Detects and locates lightning along the orbital path of the spacecraft (620 x 620 km, instantaneous FOV)
- Subsystems
  - Lens/Filter
  - Charge-Coupled Device (CCD)
  - Electronics
LIS Basic Performance Specifications  
- How Achieved

- **Square Field-Of-View**: 75° x 75° (+/-5°) (Nominal)
  - Wide-angle lens system
- **Wavelength**: 777.65nm
  - Narrowband optical filter
- **Spatial Resolution**: <=4km
  - FOV and Pixel size
- **Temporal Resolution**: 2ms
  - High-speed CCD signal processing
- **TRMM Interfaces**
  - In accordance with ICD TRMM-490-022

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**LIS FUNCTIONAL BLOCK DIAGRAM**

- **FOCAL PLANE**
- **REAL-TIME EVENT PROCESSOR**
- **MICROPROCESSOR CONTROLLER**
- **SPACECRAFT INTERFACE**
- **POWER CONVERTER**
- **HOUSEKEEPING DATA ACQUISITION**
- **TEMPERATURE CONTROL**
- **POWER BUS**
- **SPACECRAFT**