

# Instrument Overview

P. Hassler / EJ23

*CDR*  
*March 1, 1994*

**LIS**

## 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

*CDR*  
*March 1, 1994*

**LIS**

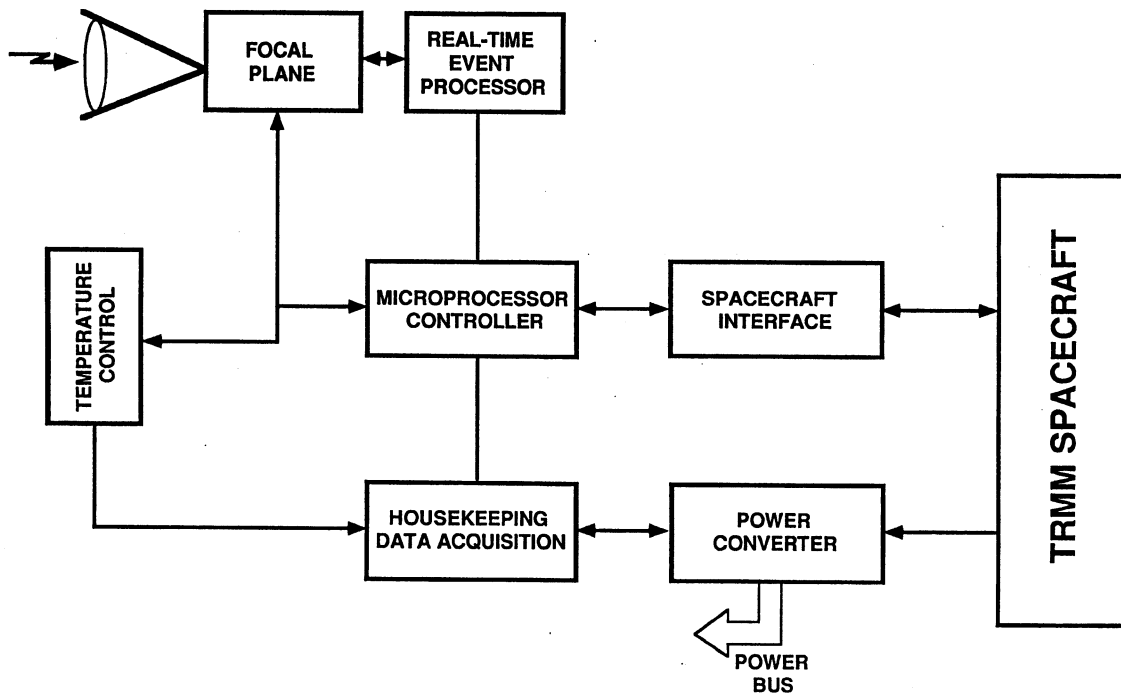
## LIS Basic Performance Specifications - How Achieved

- **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

CORR  
MMatc-B, 1,99994

LIS

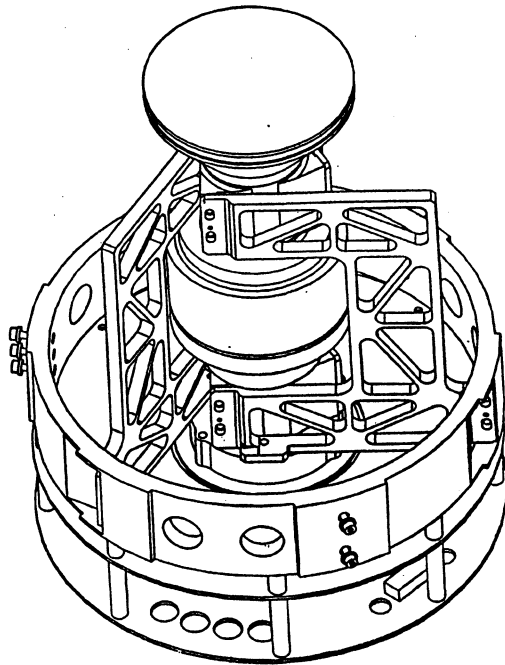
## LIS FUNCTIONAL BLOCK DIGRAM



CORR  
MMatc-B, 1,99994

LIS

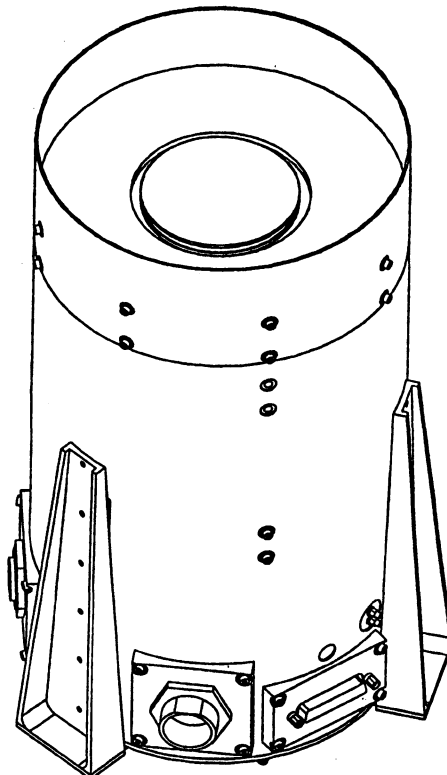
**SENSOR SUBASSEMBLY  
RING, LENS, STRUT, & CCD ELECTRONICS**



**CDR**  
**March 1, 1994**

**LIS**

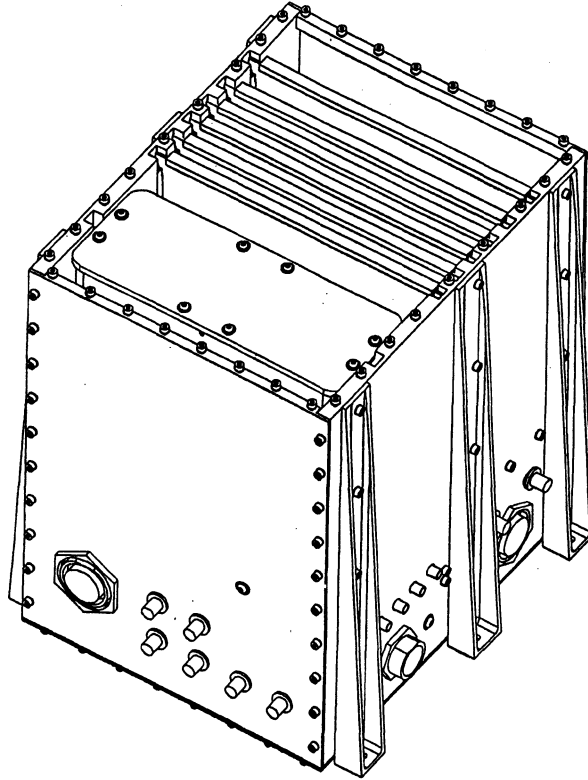
**SENSOR HEAD**



**CDR**  
**March 1, 1994**

**LIS**

# ELECTRONICS ASSEMBLY



**CDR**  
**March 1, 1994**

**LIS**

**This Page Intentionally Left Blank**

**CDR**  
**March 1, 1994**

**LIS**