Ground Subsystem
H.2 Mission Operations Computer System

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Mission Operations Computer System Functions

- **Payload Operations Center (POC)**
  - Command Generation and Transmission
  - Real-Time Instrument Evaluation
  - Telemetry Acquisition and Logging
- **TIDI Science Data Processing**
  - Production Data Processing
  - Data Storage
  - Data Service

Mission Operations Computer System Requirements

- **Data Storage**
  - 12 Gbytes per year, 2 year mission with extensions possible
- **Communications**
  - Local Area Network access for printing and file transport
  - Wide Area Network access for communications with the TIMED MDC/MOC
- **Software Compatibility Requirements**
  - OASIS/CC Control and Display Software
  - IDL Graphics
- **Field Operations Requirements**
  - A fully functional computer must accompany the instrument to APL
  - Communications to UM/SPRL and to TIMED MDC/MOC must be maintained in the field

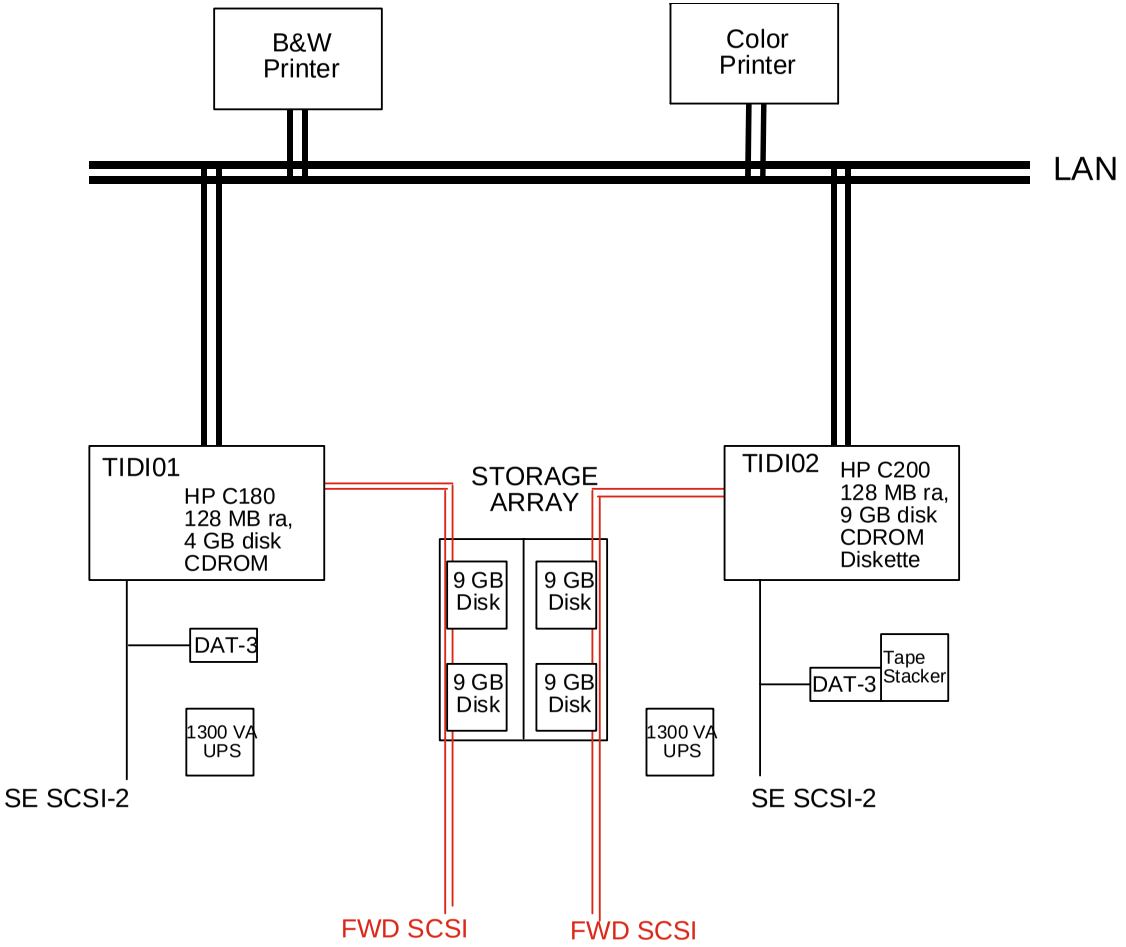
SPACE PHYSICS RESEARCH LABORATORY

TIDI

Mission Operations POC

- **Communications with instrument through TIMED MOC/MDC**
- **System located at Michigan within the TIDI POC**
- **Components include**
  - **2 HP workstations**
  - **Disk array**
  - **Tape backup systems**
  - **Uninterruptable power supplies**
  - **printers**

Mission Operations Computer System Configuration



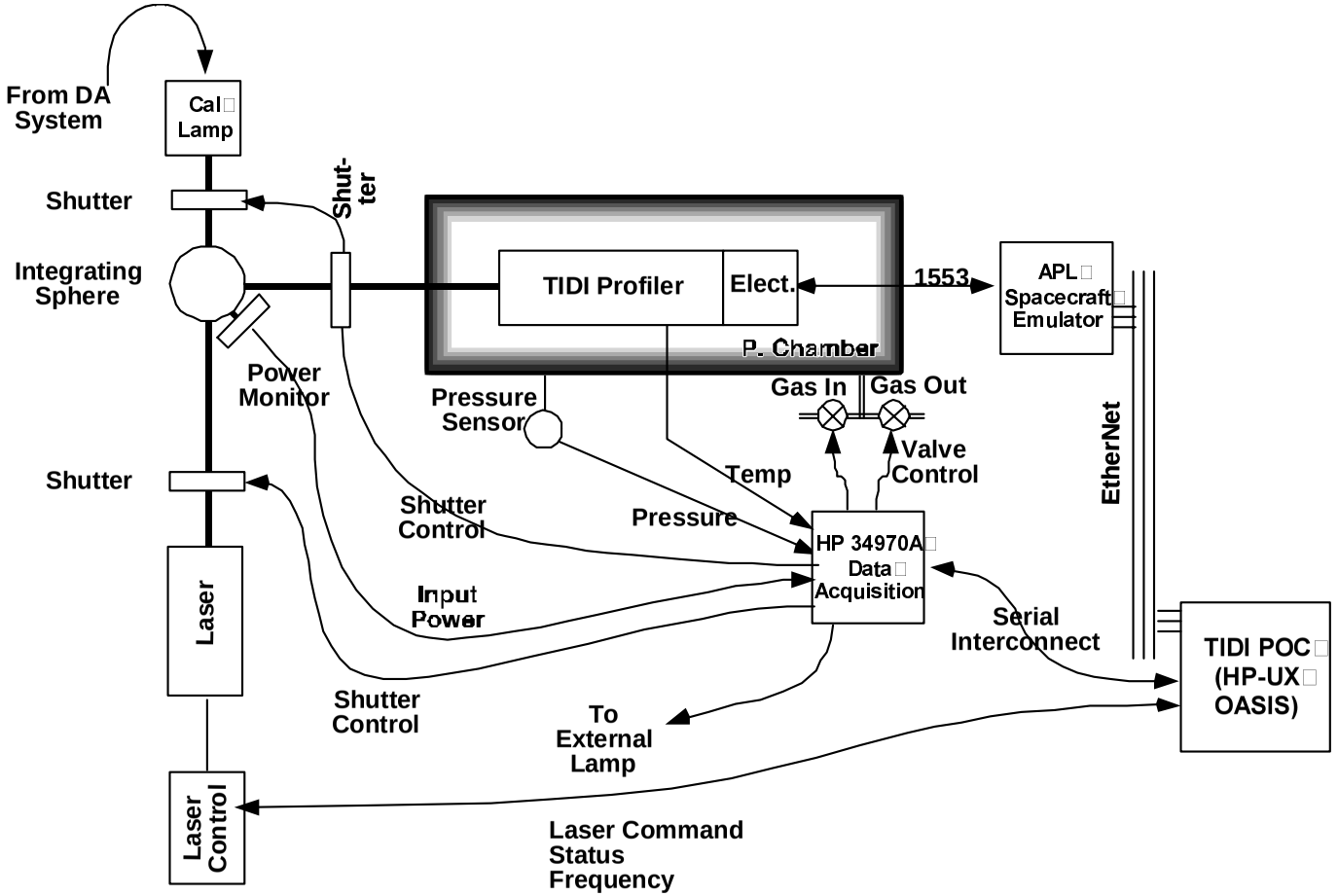
SPACE PHYSICS RESEARCH LABORATORY

TIDI

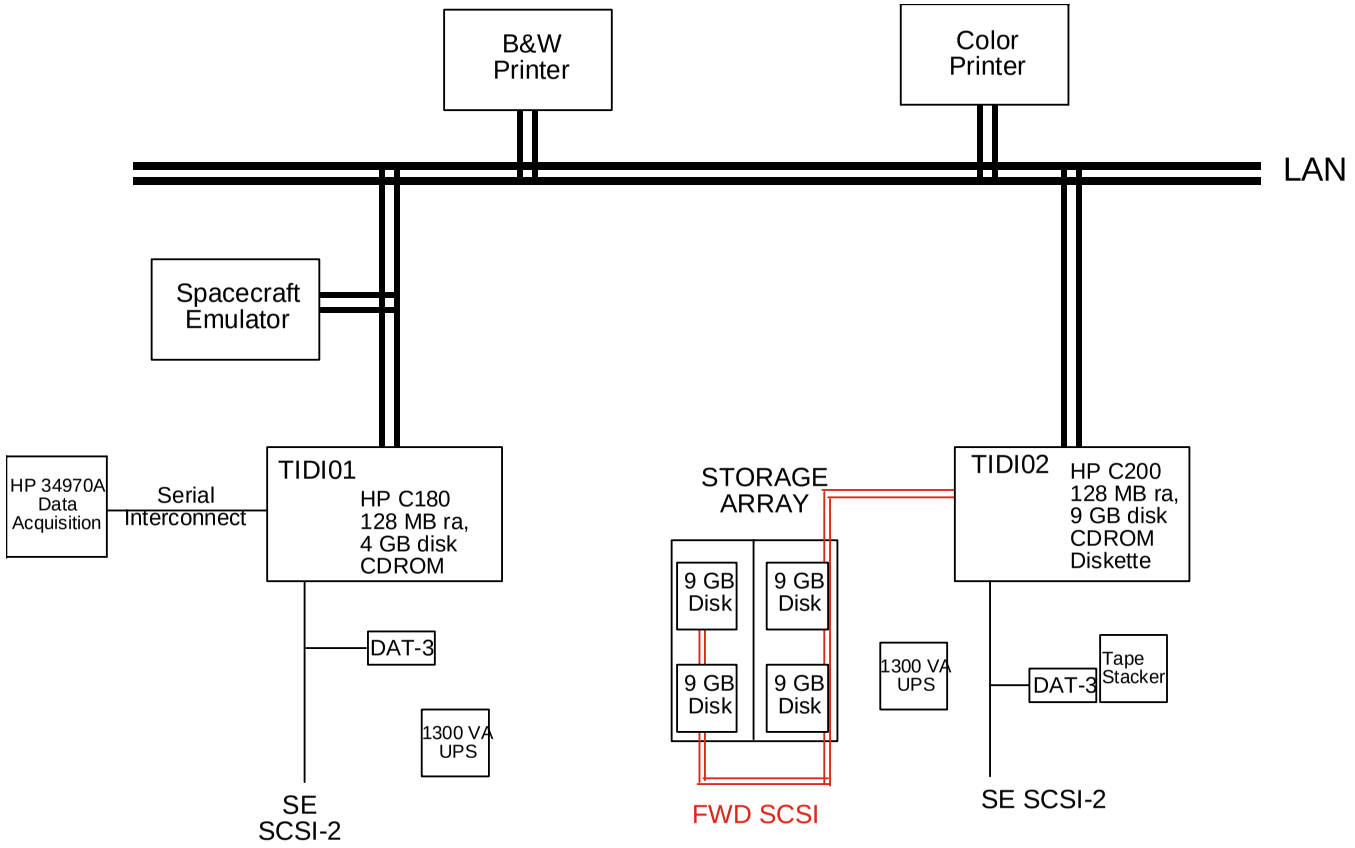
Instrument Calibration POC

- **Communications with instrument through Local Area Network and TIMED spacecraft emulator**
- **System components located at Michigan**
  - **One workstation located to act as test conductors console**
  - **One workstation, disk array and other peripherals located within the TIDI POC**
- **Additional hardware used to operate calibration systems**
  - **HP data acquisition switch**
  - **dye laser controller**

Calibration System



Instrument Calibration Configuration



SPACE PHYSICS RESEARCH LABORATORY

TIDI

Field Operations and Test POC

- Communications with the instrument via the TIMED test MOC
- System components located at the test site forming test POC
  - Workstation
  - tape system
  - UPS
- System components located at Michigan forming flight POC
  - Workstation
  - disk array
  - tape system
- POC and Test POC communicate via Internet

Spacecraft I&T and Field Ops Configuration