SPACE PHYSICS RESEARCH LABORATORY

TIDI

Harnesses

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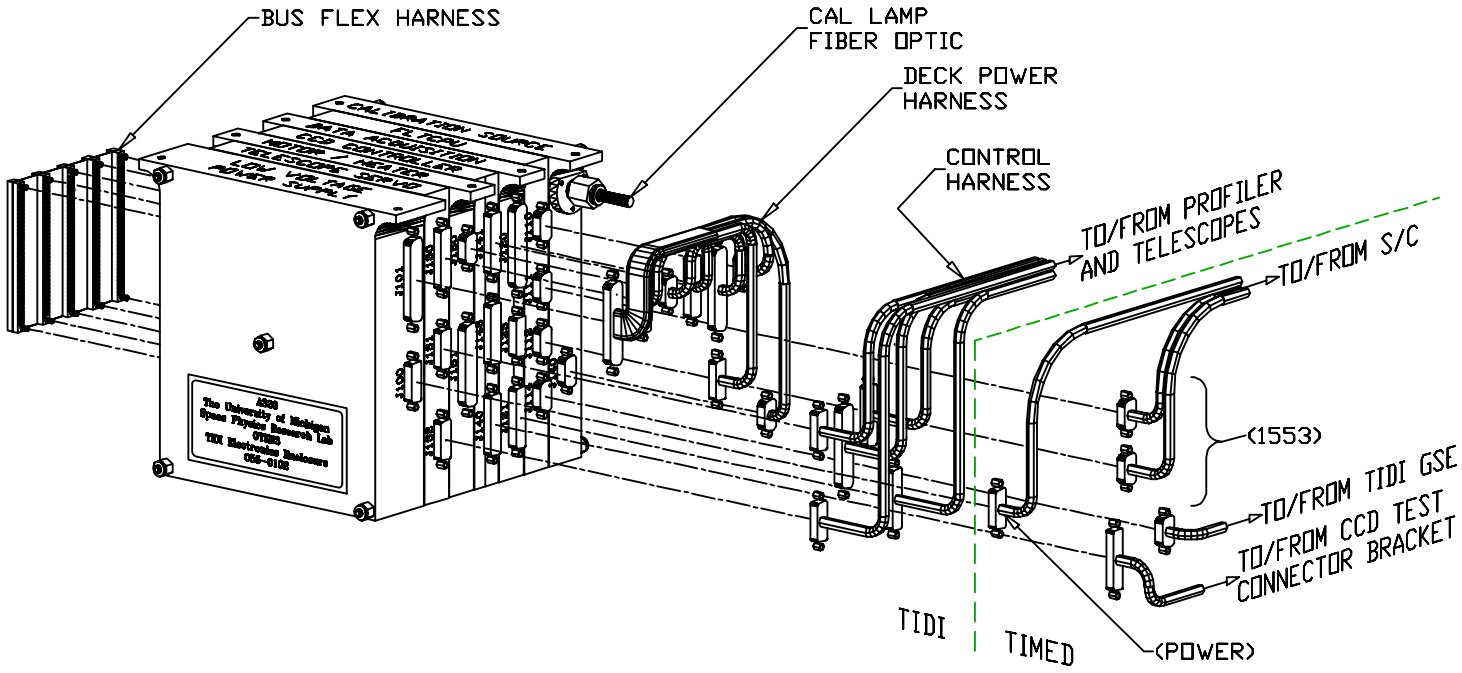
Harness Summary

- **Three harness designs**
  - **Bus Flex Harness**
  - **Deck Power Harness**
  - **Control Harness**

Harness Pictorial



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Control Harness

- **Provides connections between electronics stack, profiler, and four telescopes**
- **182 Separate circuit functions carried by this harness**
- **15 Connectors, all 311P407 or 311P409 type**
- **Status**
  - **Pin-outs defined for all but 2 connectors (MH deck & Profiler)**
  - **Connector selection complete, ready for flight connector procurement**
- **Remaining design tasks**
  - **Transfer pin lists to wire lists**
  - **Generate assembly drawing and parts list**
  - **Use Spacecraft top deck mock up to determine routing,break-out points and tie downs**

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Power Harness

- **Functions**
  - Provide secondary power distribution between stack decks
  - Provide analog signal distribution between stack decks
  - 121 different circuit functions
  - 8 Connectors, all 311P407 types
- **Status**
  - Pinouts for all but 2 connectors defined (MH deck and PS deck)
  - Connector selection complete, ready for flight procurement
- **Remaining design tasks**
  - Transfer pin lists to wire lists
  - Generate assembly drawing and parts list
  - Use stack connector mounting plate to determine routing,break-out points and tie downs

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Data Bus Flex Harness

- **Functions**
  - Provide digital communications between decks
    - 8 Bit Address bus
    - 16 Bit Data bus
    - Bus read/write control and clock
    - 8 Interrupt lines
    - 8 Bit CCD data bus
    - CCD memory control
  - Implemented with Flex-Circuit to reduce weight and provide a convenient method of shielding the many circuit connections
  - 5 Connectors, all Air-Borne WTB70 type
- **Status**
  - All pinouts defined
  - EM harness procured and in house

Data Bus Flex Harness (contd)

- **Remaining design tasks**
  - **Generate assembly drawing and manufacturing parts list**