

Hardware and Software Development for MOSES II Flight Operations



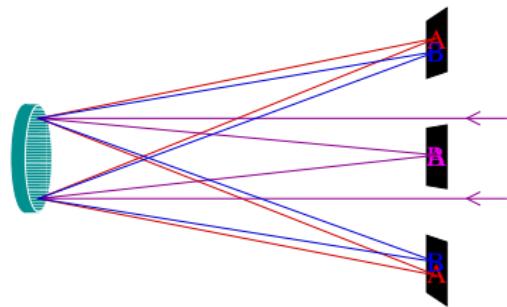
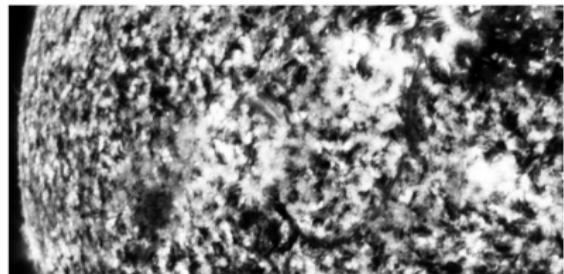
Roy Smart Jackson Remington
Montana State University
May 1st, 2015

...

MOSES Scientific Goals



- hey!



...

First Launch



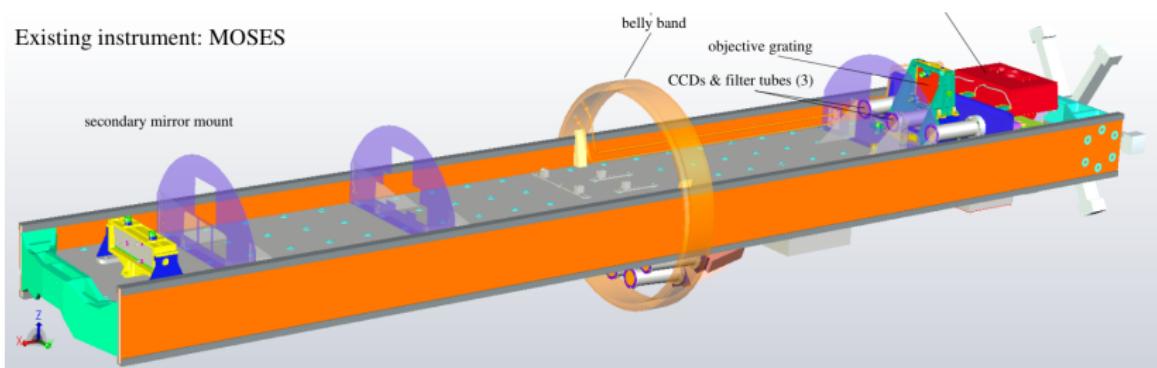
■ hey!



System Requirements



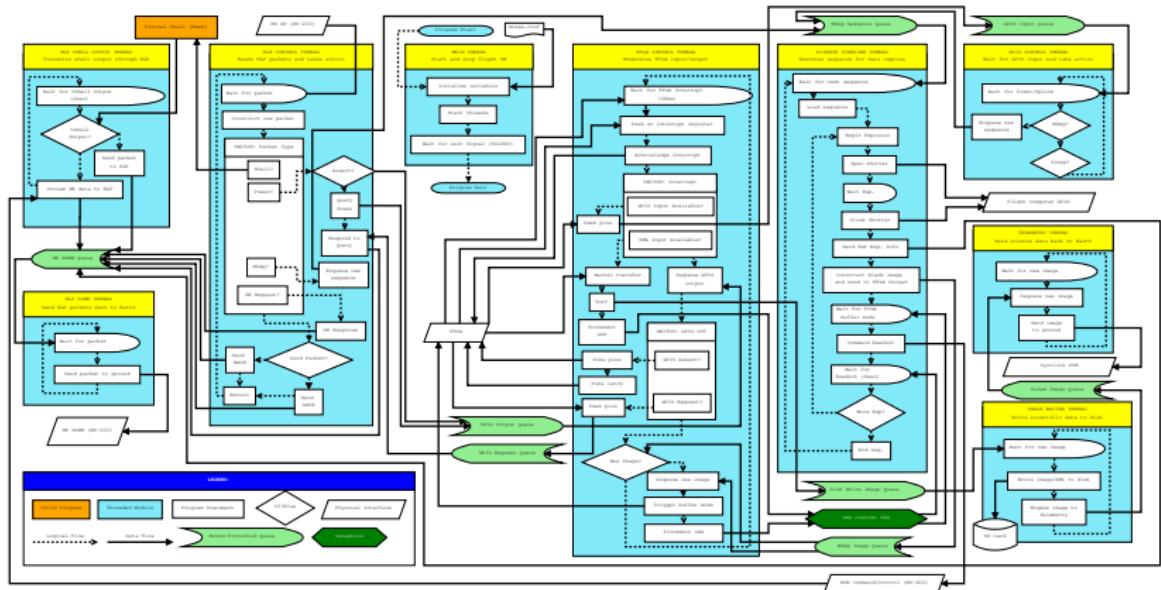
Existing instrument: MOSES



Hardware Overview



Flight Software





Ground Station Software

- Server module
- Client module
- Grounded communication
 - Serial console
 - Ethernet
- In-flight communication
 - Housekeeping Link Protocol (HLP)
 - Timers
 - High-speed telemetry

Two screenshots of the Moses software interface. The top screenshot shows the "Moses Server" window with tabs for "Uplink Com Port" and "TCP IP Server". It includes dropdown menus for baud rates and connection status, and two panes for "Packets Received (Downlink)" and "Packets Sent (Uplink)". The bottom screenshot shows the "Moses Client" window with tabs for "Received Data" and "Timers Shell Power Housekeeping Custom Uplink HDAC". It displays a list of commands like "Get Sequence Info", "Get Current Seq...", and "Get Frame Length". A "Sent Data" pane shows log entries such as "Apr 22, 2015 8:50:03 PM %205903UDX101%" and "Apr 22, 2015 8:50:05 PM %205903UDX101%". On the right, there are checkboxes for "Telemetry", "Channel 0", "Pos", and "Stress" with "Query", "On", and "Off" options. A "Time of last ACK:" input field is at the bottom.

...

Capturing Data



...

Data Retrieval



...

Next Launch

