

SMITH Payload March 2011 Status Report

The biggest accomplishment for the month of March is the decision to sample with a filter. We have tested three different liquids in a vacuum. Further discussion ruled out the use of liquids due to excess complications during flight. We will be using a two stroke model airplane engine to pull air through our sample systems and increase the amount of air we will sample. Instead of using doors to open and close for sampling, we have selected solenoid valves to maintain a vacuum seal on the sample chamber. We will be further developing our software flowchart to include all command flags and determining which variables can be reused. The mechanical interfaces have been laid out and full mechanical design is set to begin next week. The circuit diagram for the dc motor control, LED/photodiode setup, valves, and heater control has been developed. We will start developing circuit diagrams for the temperatures sensors and pressure sensors.