

The team is in the beginning stages of the 2010 project. As such, the concentrations of UND's team members, Shannon Negaard and Dr.'s Naima Kaabouch and Ron Fevig, have been on recruiting new student members. The meetings thus far have been decision-making meetings. The topics of discussion have been where to recruit new team members and changes to make from the 2009 payload to improve the function in 2010. These changes include slight mechanical and electrical changes and massive overhauling of the data collection and interpretation software. Minor changes will also be made concerning the programmable chips on the PCB.

Issues encountered thus far are really just the issues from last year's mission. Mechanical changes to be made include adding an output whole if deemed necessary. If testing reveals that a passive system with a single whole (input and output) will function, this will make maintaining temperatures easier. The thermal control may require additional mechanical changes.

Changes to the electrical design include replacing the temperature sensor and possibly the heating device. This should be put in the hands of the UND team, so that integration with the electrical system can be tested and modified. The ability to write to a flash storage device is still desired. It is likely that the reduction in data amounts will allow for the use of a flash chip that will work with our PIC microcontroller. Else, there is adequate time to change the PIC and the payload program before integration (minor changes would be needed to fit a new PIC in the same series). Finally, one of the precision voltage regulators malfunctioned. It is likely the problem was a simple capacitor failure, but this hypothesis has not been tested. The other regulators (which were monitored during the flight) were outputting the correct voltages to within less than 0.5% of the expected voltage. If problems are encountered during testing, these can be replaced with the suggested DC/DC converters.

The software modifications are many. Testing should reveal desirable intervals for sampling sensor data and possibly separately for making decisions on the heater. Previous software should be better documented. It might prove advantageous to receive altitude and time data from the HASP gondola. The support and data interpretation code should be coordinated through LABVIEW or similar programming and interface software.

The decisions made on these modifications also mark the team's milestones thus far.

As of now, there are no new team members. Kaiwalya Telang is still in contact and will be consulted on any mechanical modifications. Official team members are Shannon Negaard and Dr.'s Fevig and Kaabouch.