HASP2010- UND-UNF Payload #7
University of North Dakota Team
Monthly Status Report for July 2010

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Our team did the following work during July 2010:

1. PCB hardware was simplified by removing instrumentation operational amplifiers U3, U4, U7, and U9 along with corresponding passive components. Inputs to outputs are now jumpered providing a straight through path to the microcontroller's ADC channels. Removing these components reduces the chance of premature, temperature, and vacuum related failures.

2. Thorough testing of the microcontroller's firmware was completed. This testing included:

    a) GPS data parsing capabilities. Valid and invalid GPS strings mimicking what the HASP platform would send via RS232 was transmitted using Digi's X-CTU software. No "hangups" were noticed. Valid GPS strings were parsed correctly. No valid GPS strings were ignored.

    b) HASP controller commands were mimicked via X-CTU. All commands were received, parsed, and executed as required. Non valid commands were ignored.

3. Simple thermal testing was completed. The hardware was brought down to -10C and functionality was tested. All hardware was deemed to function correctly with minimal thermal offset and drift.

4. Methodology of capture, transfer, and interpretation of Ozone data was solidified with UNF team.

5. Program to interpret .raw files is in testing mode. Finalization and release to team will take place prior to August 2nd.

6. Flight Operation plan is under preparation and will be submitted by August 1, 2010. In case, we missed to submit on Aug.1, then, we will submit it on August2, 2010 morning.

7. Nathan Walker (UNF), Dr. Patel (UNF), and Jonathan Snarr (UND) will be travelling to Palestine, Texas on Sunday, August 1, 2010. Fernando (UND) may join with us at Texas.

8. Dr. Patel and Jonathan Snarr have been in contact several times weekly to discuss issues and questions.