

**HASP2010
UND-UNF Payload
Monthly Status Report for February 2011**

UND Team

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UND-UNF team did the following work during February 2011:

- (1) Our team is in a waiting period for information on the HASP 2010 launch. No work has been or needs to be performed at this time.

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UND-UNF team did the following work during February 2011:

- (2) Reviewed three comments given by Mr. Mike Stewart. UND team will answer comments # 1 and 3.
 - i) The UND-UNF 2010 and 2011 HASP projects both use switch mode power supplies rather than LDO or linear voltage regulators.
 - ii) Our standard digital ozone meter reads concentration of ozone in ppm. We are working over converting of ozone gas from ppm into absolute measurement in micro bar. We will report you the details in the next month report.
 - iii) See i).
- (3) Working on preliminary design of review.
- (4) Initiated fabrication of new series of sensors.
- (5) Working on simpler, more reliable and accurate hardware design which incorporates a 12 bit ADC and Silicon Labs microcontroller running at 48 MHz. This embedded system will capture and write to a minimum of two external flash memory chips providing a backup in the case that one memory fails during flight or landing.
- (6) We found during HASP 2010 integration, being the only team that has used the GPS data from the HASP gondola, that the data was highly problematic. Because our 2010 project relied so heavily on the gondola GPS data we had to re-write our firmware at integration. As such our team has decided to embed our own GPS module from UBLOX for time stamping, velocity, position, and elevation capture.
- (7) Preliminary firmware development has begun.