

HASP 2015

UND-UNF Payload

Monthly Status Report for June 2015

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Teams did the following work during June 2015:

UND:

- (i) Sean has terminated his work on the HASP 2015 due to other assignment. He is replaced by Christopher Follette.

UNF:

- (1) Team is actively working on several works, which is shown in the following pictures.



Fig.1 Brittany is explaining Joe about the block diagram of the payload, electronic circuits and sensors.

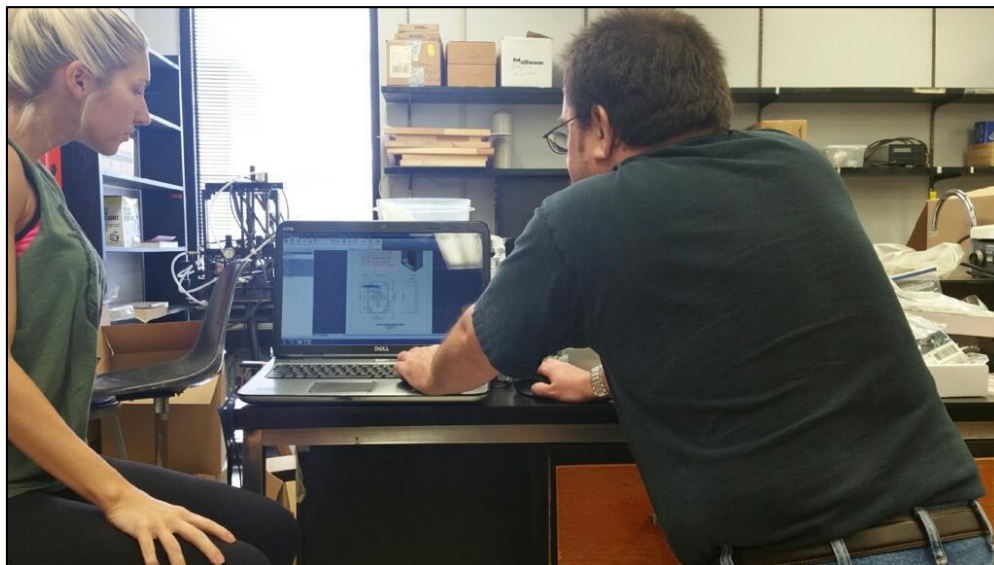


Fig.2 Joe is discussing with Brittany about the design of payload and software work.

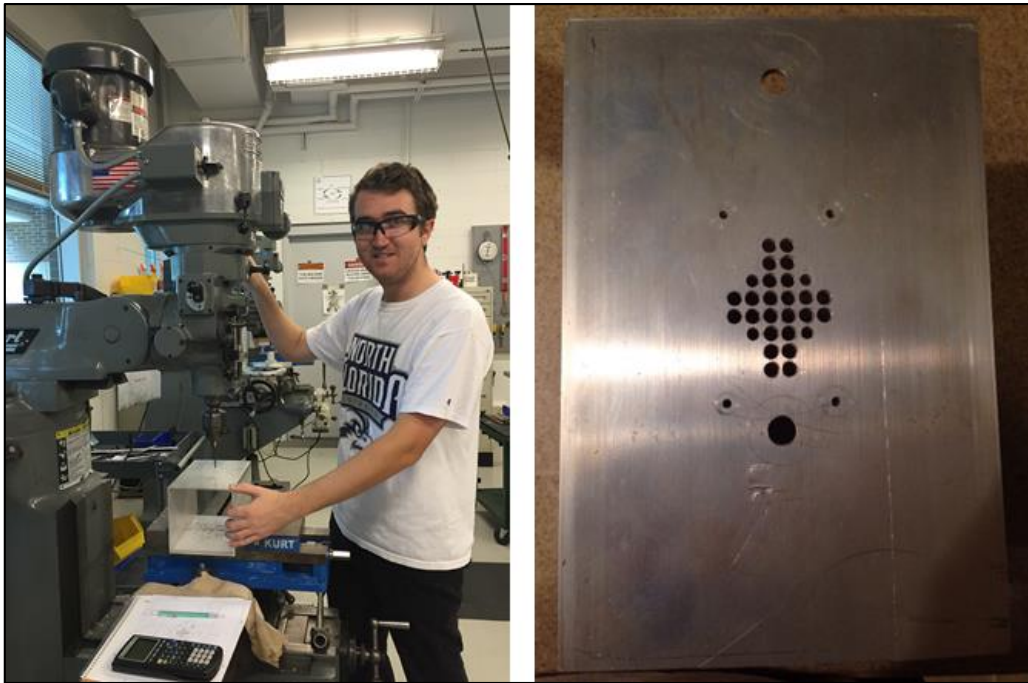


Fig.3 (a) Mathew is fabricating the payload body and (b) View of one side of the payload body



Fig.4 Joe is operating the high vacuum systems for the fabrication of thin film gas sensors.

- (2) Fabrication of the final version of sensors and its testing and calibration are going on.
- (3) Body work of the payload is about to complete. Then, sensors boxes and electronic circuit board will be integrated with the payload body.
- (4) The team is working on the final version of PSIP, which will be submitted in the next week.
- (5) Team is thankful to Mr. Michael Stewart for his pre-PSIP comment. The tentative complete test data string may have the following information. Table-1 shows the information about serial data record including record length and information contained in each record byte. Total record length will be 238 byte.

Byte #	Description	Example	Units
1 - 4	Packet Sync	HASP	n/a
5 - 8	GPS Source	XGPS	n/a
9 - 23	Time stamp	,1407604205.265	sec
24 - 29	Altitude	,38044	m
30 - 35	Sensor 1-1	,01067	ohms
36 - 41	Sensor 1-2	,01390	ohms
42 - 47	Sensor 1-3	,01438	ohms
48 - 53	Sensor 1-4	,01248	ohms
54 - 59	Sensor 1-5	,01282	ohms
60 - 65	Sensor 1-6	,01450	ohms
66 - 71	Sensor 1-7	,01358	ohms
72 - 77	Sensor 1-8	,01060	ohms
78 - 83	Sensor 2-1	,01623	ohms
84 - 89	Sensor 2-2	,02874	ohms
90 - 95	Sensor 2-3	,02999	ohms
96 - 101	Sensor 2-4	,01820	ohms
102 - 107	Sensor 2-5	,01993	ohms
108 - 113	Sensor 2-6	,02956	ohms
114 - 119	Sensor 2-7	,02812	ohms
120 - 125	Sensor 2-8	,01371	ohms
126 - 131	Sensor 3-1	,01495	ohms
132 - 137	Sensor 3-2	,01652	ohms
138 - 143	Sensor 3-3	,01669	ohms
144 - 149	Sensor 3-4	,01748	ohms
150 - 155	Sensor 3-5	,01720	ohms
156 - 161	Sensor 3-6	,01619	ohms
162 - 167	Sensor 3-7	,01506	ohms
168 - 173	Sensor 3-8	,01441	ohms
174 - 179	Temp 1	,00298	K
180 - 185	Temp 2	,00309	K
186 - 191	Temp 3	,00297	K
192 - 197	Photovoltage 1	,00460	mV
198 - 203	Photovoltage 2	,00464	mV
204 - 209	Photovoltage 3	,00467	mV
210 - 215	CPU Temp	,00304	K
216 - 221	Power Rail Voltage	,03317	mV
222 - 227	Power Rail Current	,00148	mA
228 - 233	Pressure	,00117	mBar
234 - 238	Heater Status	,1101	n/a

Table-1. A complete test data string record length

(6) Brittany Nassau, Joe Silas, Matthew Linekin (UNF Students) and Dr. Nirmal Patel (UNF-Faculty) will participate the HASP 2015 integration workshop at NASA-CSBF, Palestine, TX. Team will book the air tickets during next week.