

HASP 2013
UND-UNF Payload
Monthly Status Report for May 2013

UND Team

Faculty Advisors:

Dr. Ron Fevig
Email: rfevig@aero.und.edu,
Phone: 701-777-2480

Students Leader:

Marissa Saad
Email: Marissa.saad@my.und.edu
Email: mrzhasaad@gmail.com
Phone: 617-462-0610

Consultant:

Jonathan Snarr
Email: Jonathan.snarr@und.edu
Email: wade@speedhut.com
Cell: 485-851-3572

Brian Badders
Email: brian.badders@my.und.edu
Cell: 814-746-0971

UNF Team

Faculty Advisor:

Dr. Nirmal Patel
Email: npatel@unf.edu
Office Phone: 904-620-1670
Cell: 904-200-2855

Students:

- (i) Jason Saredy
Email: sarj00007@unf.edu
Cell: 954-205-1251
He got married on May 10, 2013 and gone for honeymoon.

- (ii) Kenneth Emanuel
Email: k.emanuel@unf.edu
Cell: 904-607-6034

- (iii) Kayla Colbert
She left the group as she got off campus job. One new student may be replaced her.

UND-UNF team did the following work during May 2013:

- 1) UND/UNF received the comments on the PSIP. We will reply the all answers and will send you an updated version with one week or so.
- 2) UND-UNF team developed new sensors printed circuit board. This PCB has onboard microcontroller and signal conditioning circuit in addition to heater, fan and temperature controller.

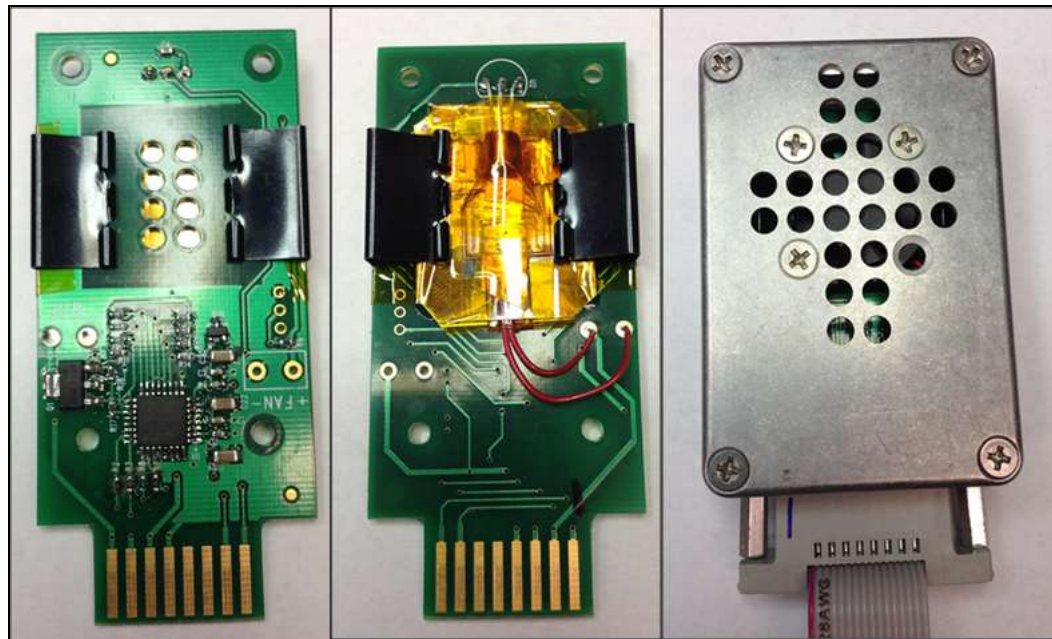


Fig.1 (a)

(b)

(c)

Fig.1 (a) shows front side of 8 sensors array mounted on PCB.

(b) shows back side of 8 sensors array mounted on PCB.

A flexible Kapton heater (MINCO make HK 5573R30.0 L12BU) and, temperature sensor (Analog Device TMP36) are mounted on backside of sensors glass plate. Electrical fan (SUNON, MC25060V2-0000-A99, DC 5V, 0.38W) is mounted on a lid of box.

(c) 8-Sensors array system in a box.

The dimension of a sensor box is about 9.00 cm x5.5 cm x2.5 cm and total weight is about 135 grams. Dr. Ron Fevig carried this sensor box to Iowa State University to integrate with the payload of the Dr. Nelson, Iowa State University and Dr. Don Takehara of Taylor University during this week for measurements of ozone profile on their NSF funded balloon flight.

- 3) UNF team has also supplied the sensor array to Mr. Zachary Baum of Louisiana State University for the student's balloon flight.

- 4) Fabrication of new series of sensors arrays is going on. Testing of sensors under different concentration of ozone gas under different temperature and pressure is going on.
- 5) Team will use the same outer payload body as the HASP2012 payload year in order to save money and time. UNF team is working on the payload body. The electronics components were ordered.