

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

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

The flight data of ozone sensor box#1 were analyzed. **Box #1** sensors are nanocrystalline ITO thin film deposited on the glass substrate. Fig.1 (a) to (h) shows the response of all 8 sensors of box#1. All sensors were responded with ozone gas in the startosphere.

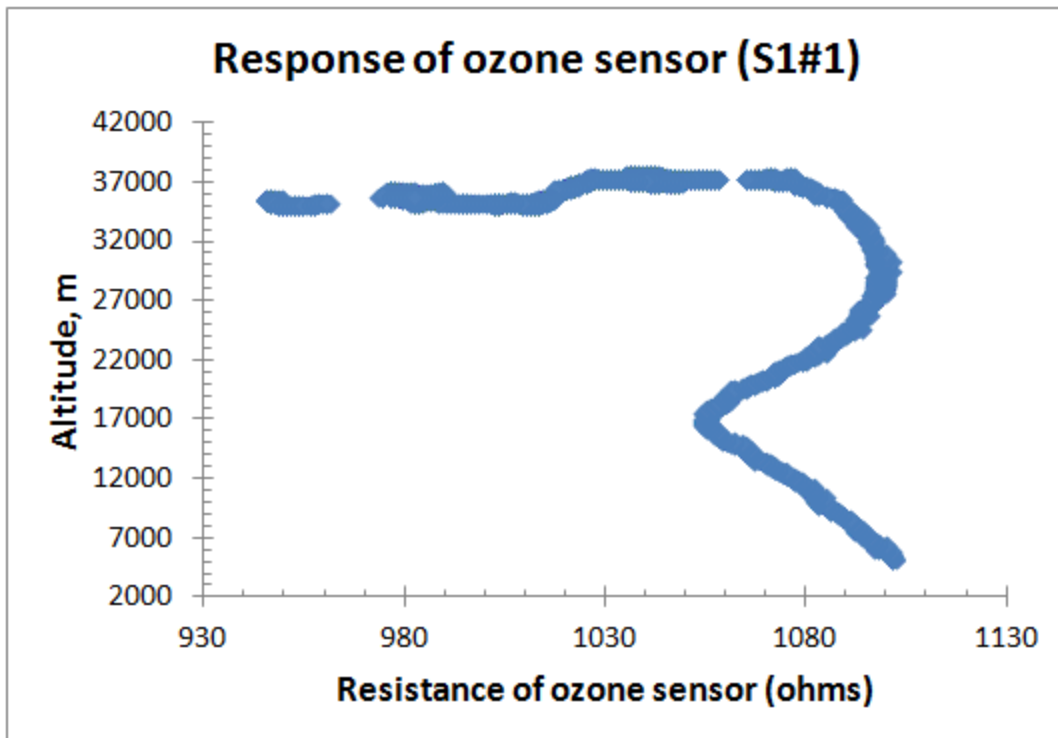


Fig.1 (a) Response of ozone sensor (S1#1)

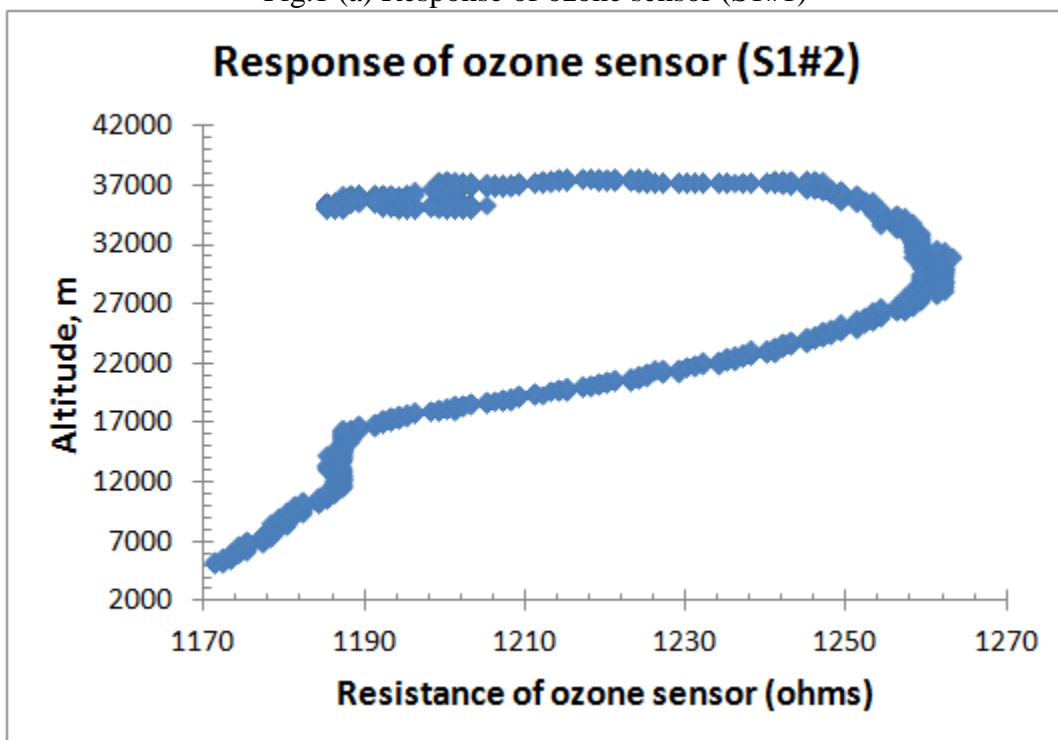


Fig.1 (b) Response of ozone sensor (S1#2)

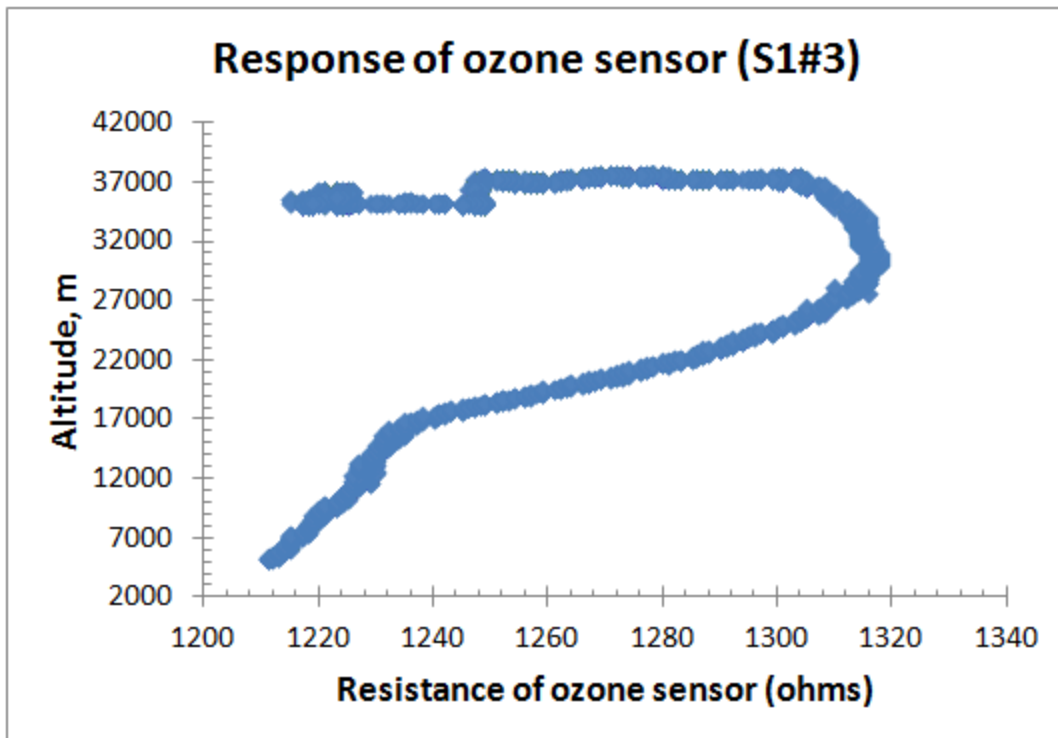


Fig.1 (c) Response of ozone sensor (S1#3)

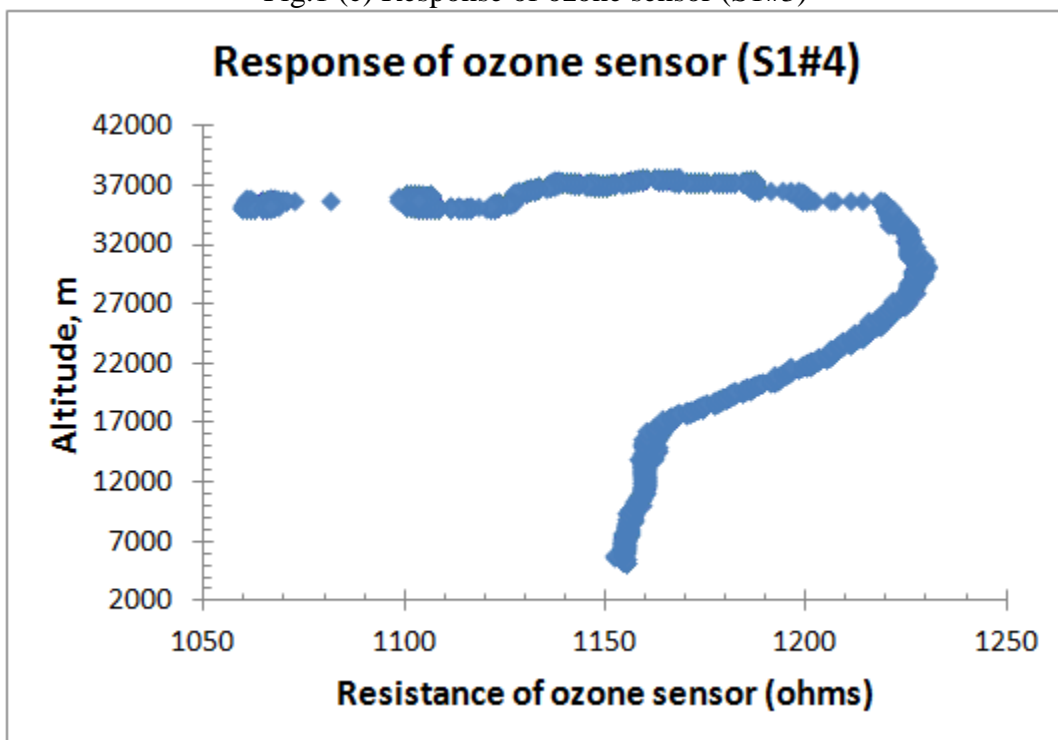


Fig.1 (d) Response of ozone sensor (S1#4)

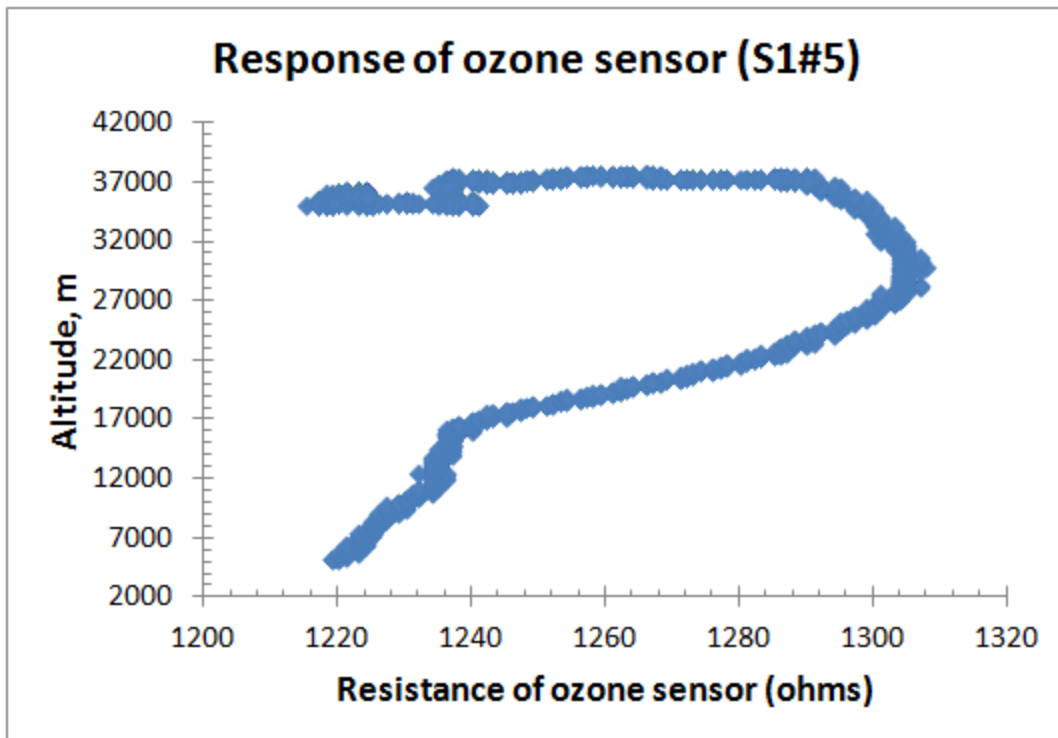


Fig.1 (e) Response of ozone sensor (S1#5)

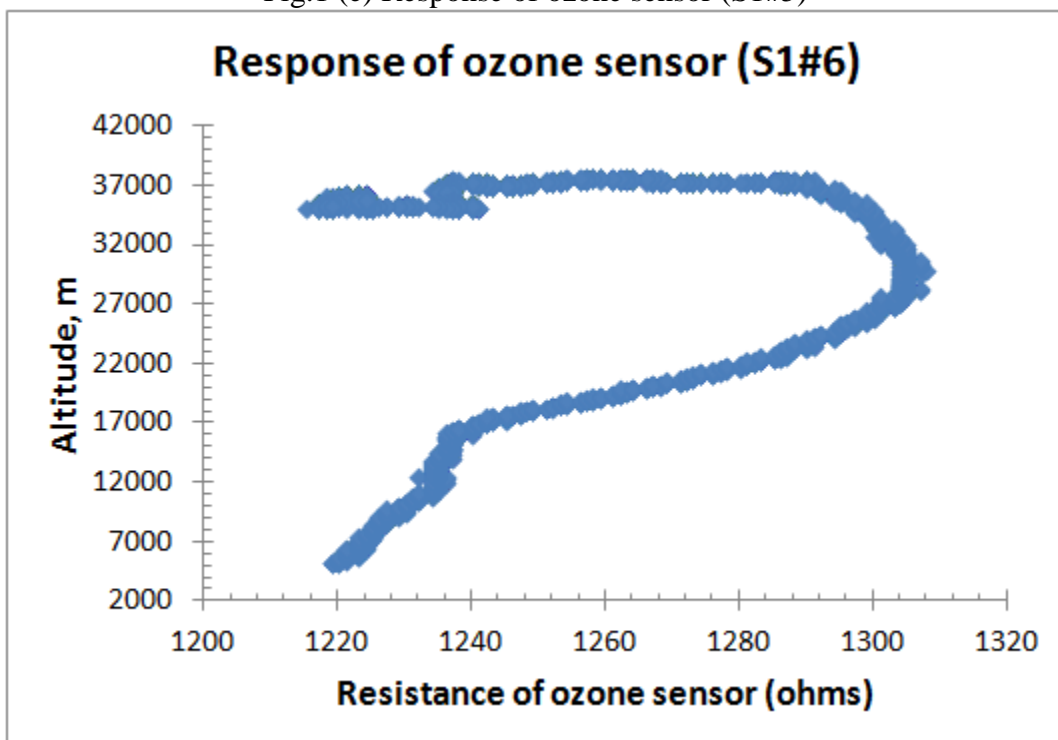


Fig.1 (f) Response of ozone sensor (S1#6)

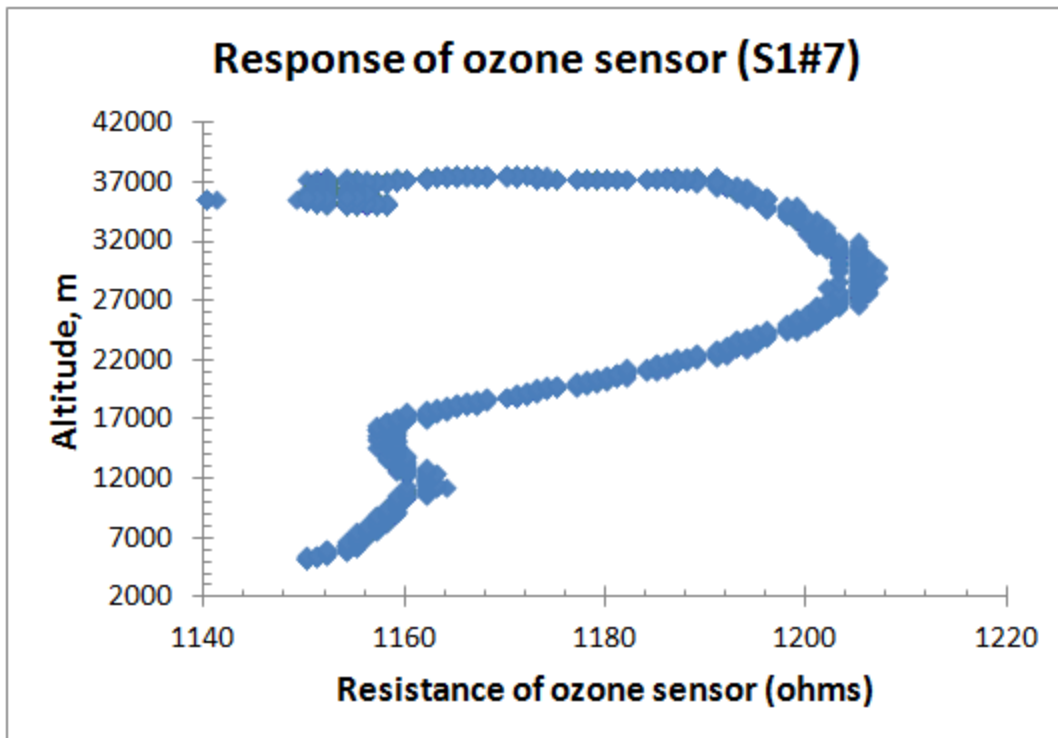


Fig.1 (g) Response of ozone sensor (S1#7)

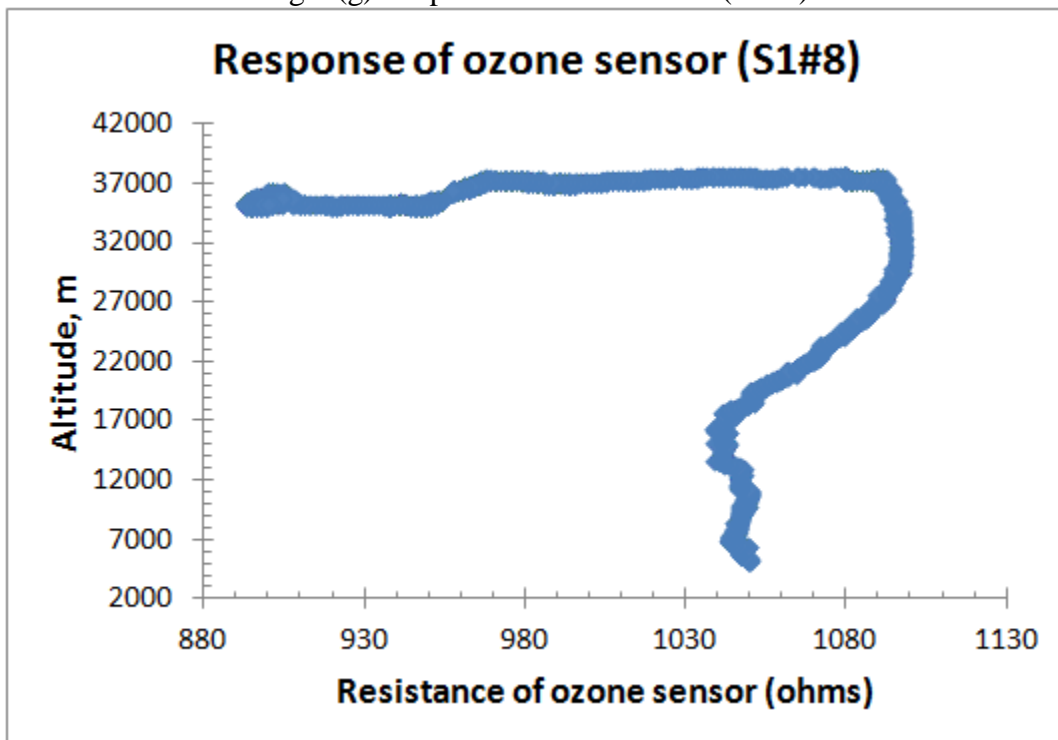


Fig.1 (h) Response of ozone sensor (S1#8)

The flight data of ozone sensor box#3 were analyzed. **Box #3** sensors are nanocomposite of ZnO and ITO thin films deposited on glass. Fig.2 (a) to (h) shows the response of all 8 sensors of box#3. All sensors were responded with ozone gas in the startosphere.

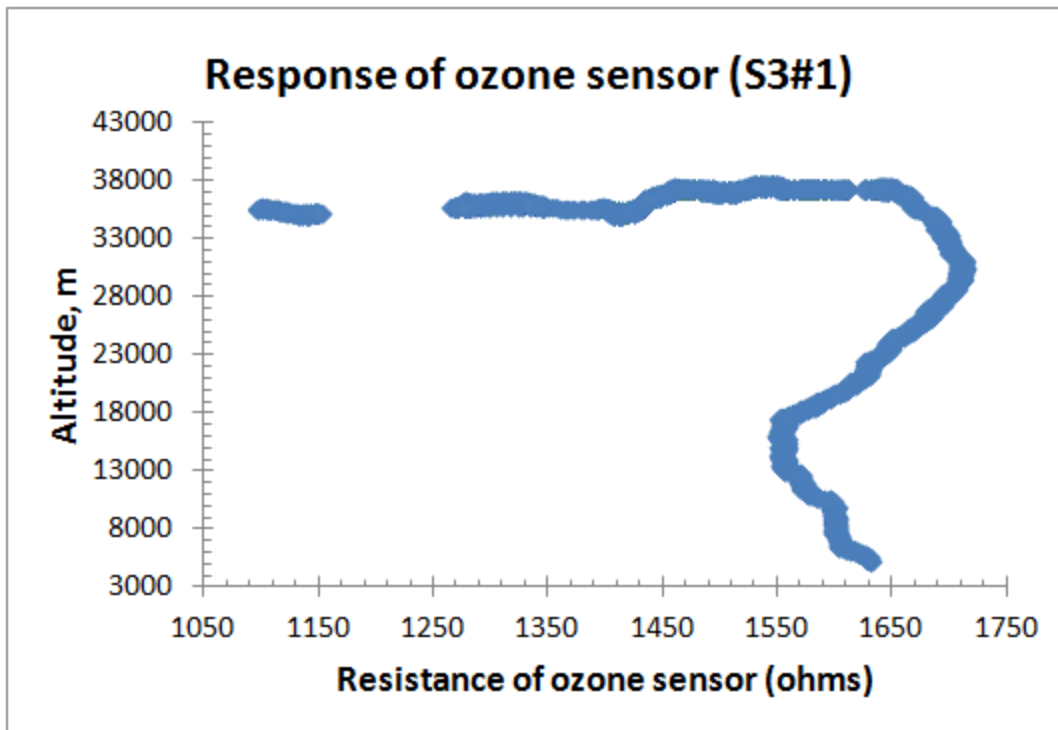


Fig.2 (a) Response of ozone sensor (S3#1)

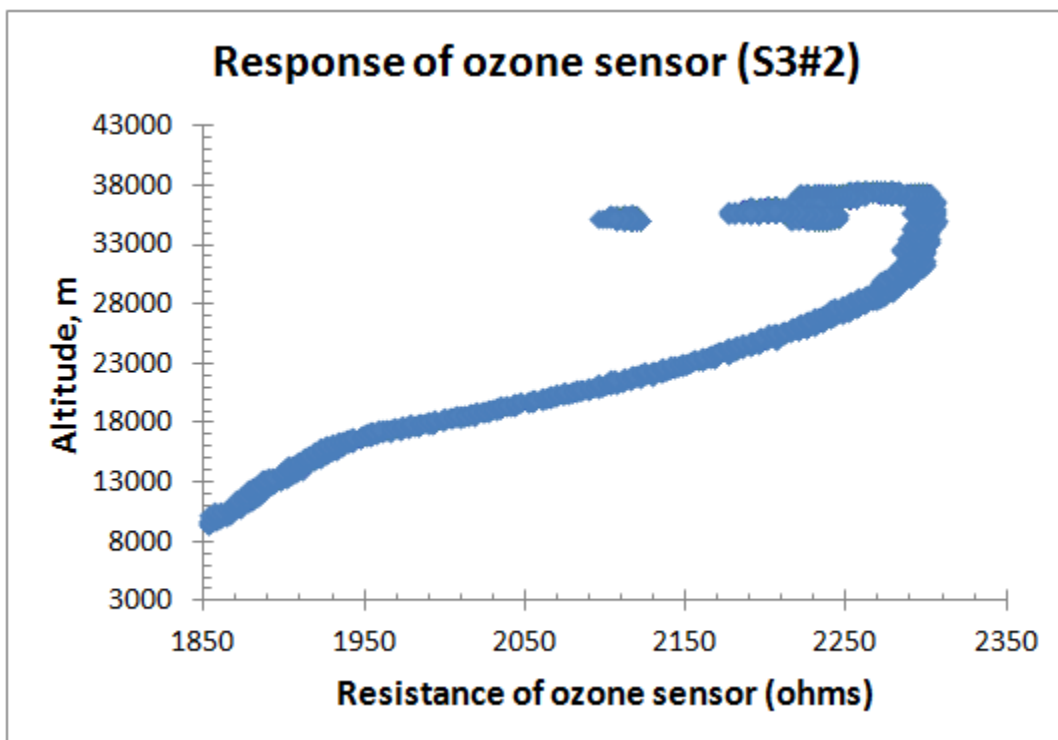


Fig.2 (b) Response of ozone sensor (S3#2)

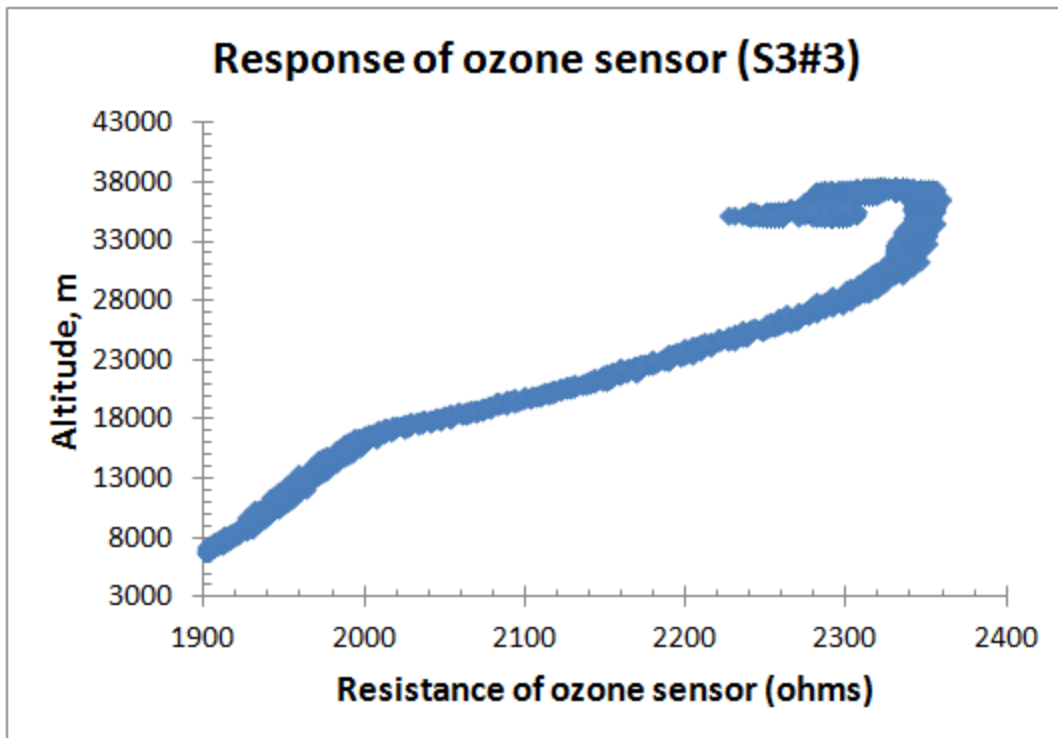


Fig.2 (c) Response of ozone sensor (S3#3)

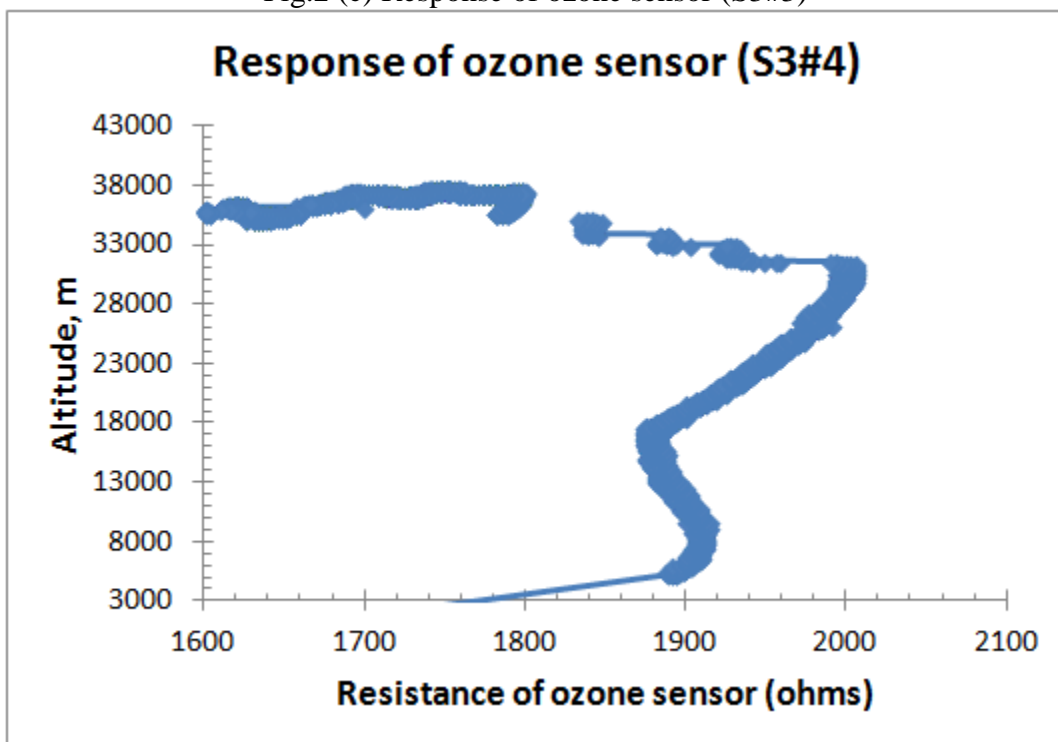


Fig.2 (d) Response of ozone sensor (S3#4)

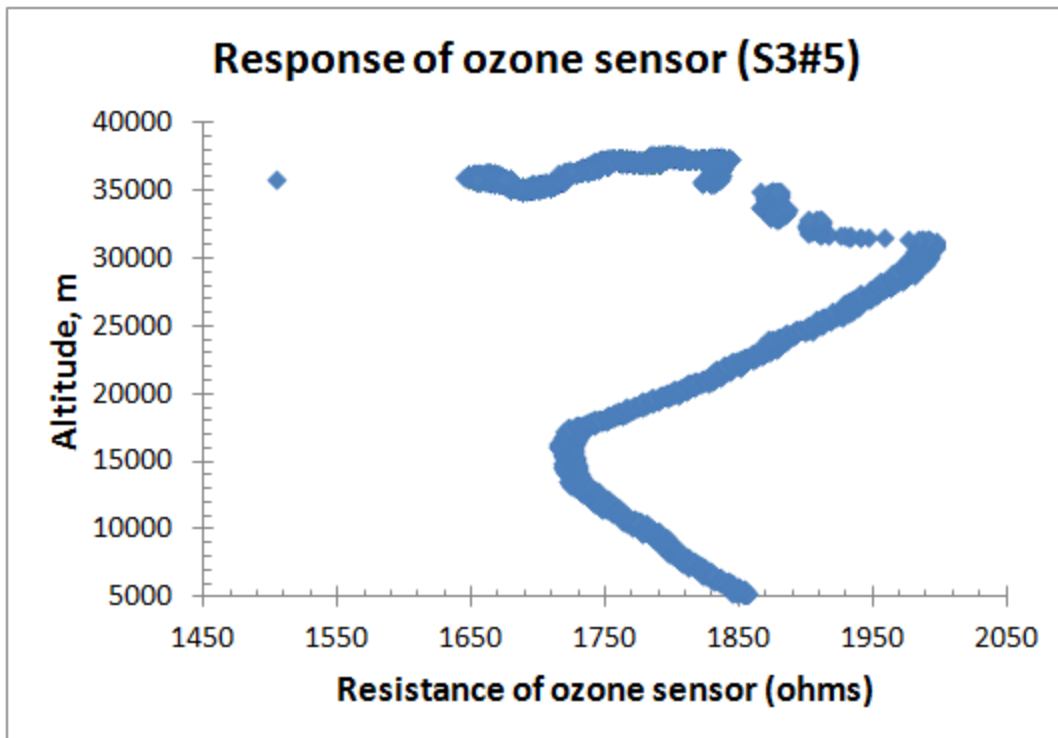


Fig.2 (e) Response of ozone sensor (S3#5)

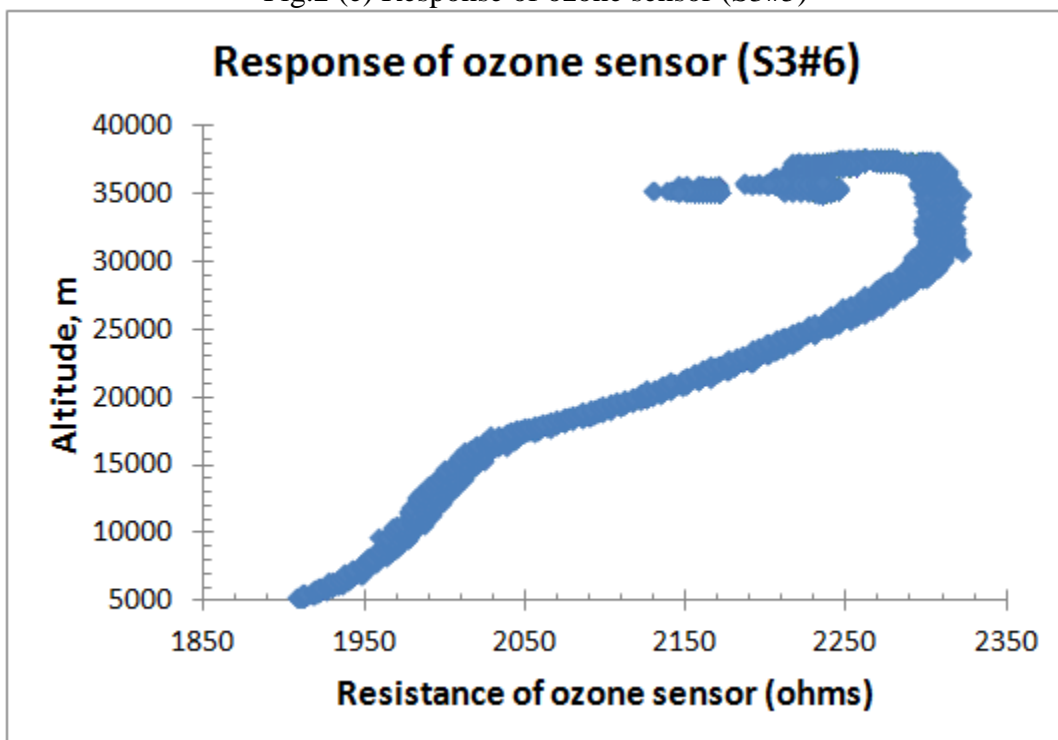


Fig.2 (f) Response of ozone sensor (S3#6)

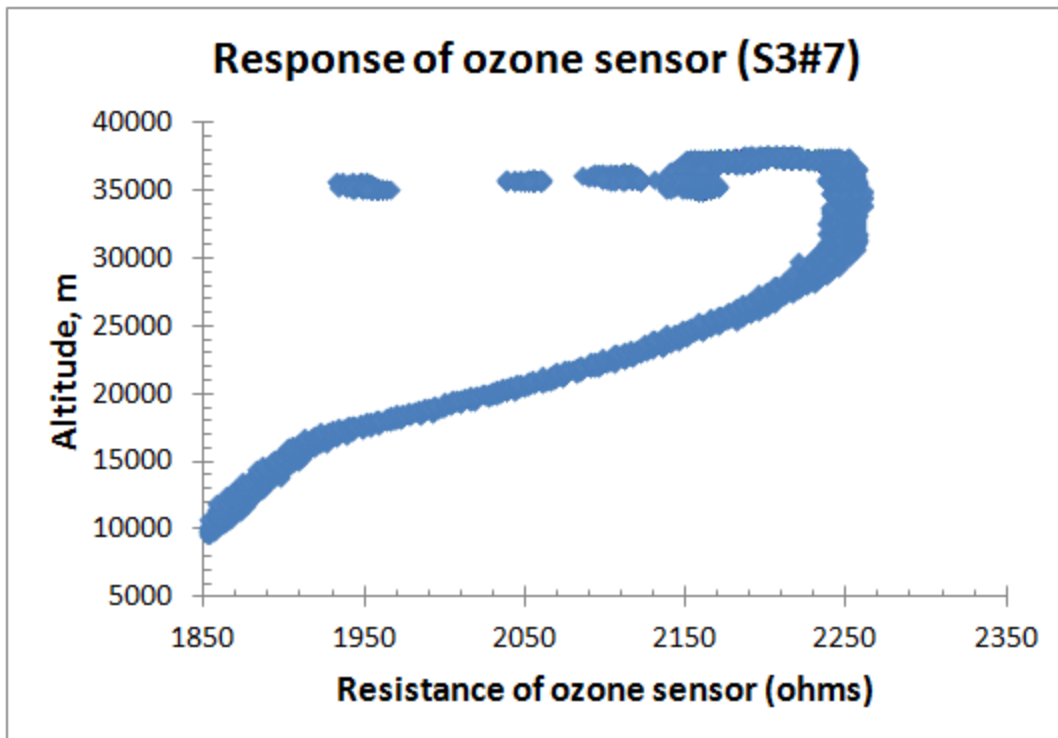


Fig.2 (g) Response of ozone sensor (S3#7)

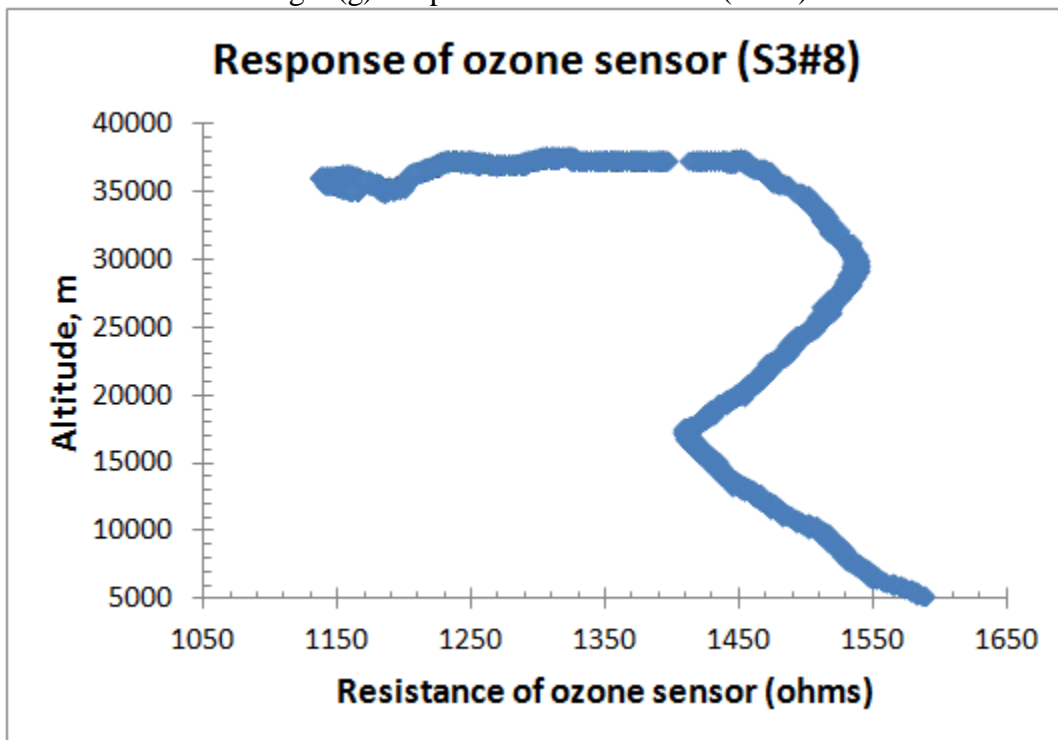


Fig.2 (h) Response of ozone sensor (S3#8)

The conversion of change in resistance of sensor into the concentration of ozone gas using the calibration of sensors and trendline equations are going on and will be reported in the next month.