



# N42RF ERROR SUMMARY RVP8 LOWER FUSELAGE RADAR TEST



**Flight ID: 20140929H1**

<u>Sensor or system</u>	<u>Number or Name</u>
INE (for wind derivation)	INE1
Accelerometer	AccZfilterI-GPS.1
Temperature Probe	TTM.1X
Dew Point Probe	TDM.1X
Static Pressure	PSM.2
Dynamic Pressure	PQM.2
Vert. Wind	ALTGPS.3 (Novatel)
Project Directory	/acdata/2014/MET/20140929H1

## Notes:

There were no data gaps.

Dewpoint sensor #1 (TDM.1, Buck) experienced a couple of periods of erroneous output when compared to the LICOR H2O and TDM.2 (EdgeTech) output during the following time periods: 185931Z – 185942Z and 203245Z – 204545Z. For the first time period, erroneous values were removed manually and patched using statistical techniques and dewpoint sensor #2 (TDM.2) as a reference.

For the second time period, values from dewpoint sensor #2 (TDM.2) directly replaced dewpoint sensor #1 (TDM.1) values,

$$\text{TDM.1} = \text{TDM.2}$$

There were times during the flight when heavy precipitation events caused dewpoint temperature to be greater than derived ambient temperature.

All other AOC instruments worked optimally.

The wingtip pressure probe was the new five port pitot.

**SPECIAL NOTE:** The variable names GSZ\_DPJ, ASZ\_DPJ and WSZ\_DPJ in the netCDF file represent vertical ground speeds vertical air speeds and vertical wind speeds, respectively, computed using Dave Jorgensen's vertical wind algorithm. It is recommended that these values be used for vertical wind analysis.

PSM.2 is fuselage static pressure from the CAM analog. PSM.12 is fuselage static pressure from the A--> AD. Output from the wingtip static pressure sources (PSM.1 and PSM.11) were 3 - 4 mb lower at takeoff and 1 – 3 mb lower at landing when compared to the fuselage static pressure outputs.

Takeoff (1808Z)

Landing (2037Z)

Aircraft Static Pressure

PSM.2 1012.1 mb; PSM.12 1011.1 mb

PSM.2 1010.4 mb; PSM.12 1010.3 mb

Tower Pressure (corrected) 1011.0 mb

1010.1 mb

PCAB at AVAPS Station 1011.1 mb

1010.1 mb

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