



# N49RF ERROR SUMMARY

## *Hurricane Joaquin*

### *30 September 2015*



**Flight ID: 20150930N1**

Sensor or system

Static Pressure Probe  
Dynamic Pressure Probe  
Total Temperature Probe  
Dewpoint Temp. Probe  
Vertical Accelerometer  
Altimeter  
INE Selection  
Differential Attack Pressure Probe  
Differential Sideslip Pressure Probe  
Dynamic Attack Pressure Probe  
Dynamic Sideslip Pressure Probe  
Flight Directory

Number or Name

PSM.2  
PQM.2  
TTM.4  
TDM.1  
AccZfilterI.1  
AltGPS.3  
1  
PDALPHA.1  
PDBETA.1  
PQALPHA.1  
PQBETA.1  
acdata/2015/MET/20150930N1

Local Met Data:

Aircraft Static Pressure  
Tower Pressure (corrected)

Takeoff (1726Z)

1007.2 mb  
1006.7 mb

Landing (0202Z)

1002.6 mb  
1007.9 mb

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Notes:

The Edgetech dewpoint sensor (TDM.1) was the most representative dewpoint sensor throughout and was therefore used as the source. Both dewpoint instruments trended well with each other, but it should be noted that both had unrealistic spikes as we passed through more dense cirrus clouds. PQBeta.1 (Dynamic Sideslip Pressure) recorded unrealistic values for ~10 min at the beginning of our descent (01:28:00Z – 01:38:00Z). AltRA.1 recorded 32 instances of “NAN’s” between 17:46:34Z and 01:37:05Z. All other sensors performed nominally.

Takeoff/Landing data: Data during landing and takeoff are potentially suspect. It is recommended that ground data not be used for scientific analysis.

SPECIAL NOTE!!! The variable names dpj\_wgs, dpj\_was, and dpj\_wz in the netCDF file represent vertical ground, vertical air, 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.

TDM.1 and TDM.2 are both not rated for use under -50 deg C and cannot be considered reliable for dew points colder than -50C. TDM.1 exceeded the ambient temperature for nearly the entire mission during cruise above 41,000 feet. TDM.2 was used for post processing.

Expendable Type	Number deployed	Number good	Number of messages transmitted
GPS dropwindsonde	37	35	35
Test Sondes	0	0	0

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