



N49RF ERROR SUMMARY

TS COLIN KMCF - KMCF

5 June 2016



Flight ID: 20160605N1

| <u>Sensor or system</u> | <u>Number or Name</u> |
|--------------------------------------|----------------------------|
| Static Pressure Probe | PSM.1 |
| Dynamic Pressure Probe | PQM.1 |
| Total Temperature Probe | TTM.1 |
| Dewpoint Temp. Probe | TDM.1 |
| Vertical Accelerometer | AccZfilterI.1 |
| Altimeter | AltGPS.3 |
| INE Selection | 1 |
| Differential Attack Pressure Probe | PDALPHA.2 |
| Differential Sideslip Pressure Probe | PDBETA.1 |
| Dynamic Attack Pressure Probe | PQALPHA.2 |
| Dynamic Sideslip Pressure Probe | PQBETA.1 |
| Flight Directory | acdata/2016/MET/20160605N1 |

| <u>Local Met Data:</u> | <u>Takeoff - 1934Z</u> | <u>Landing - 0250Z</u> |
|----------------------------|------------------------|------------------------|
| Aircraft Static Pressure | 1013.0 mb | 1011.9mb |
| Tower Pressure (corrected) | 1012.7 mb | 1013.7 mb |

Notes:

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

TDM.1 and TDM.2 are not rated for use under -50 deg C, so neither can be considered reliable for dew points colder than -50C. While normally reliable at lower altitudes, both dew point sensors displayed anomalously low values and abnormal oscillations during takeoff climb and descent to landing. Therefore, all flight level humidity data for this mission should be considered suspect.

AltGPS.3 was used as the source for absolute altitude. AltRa.1 displayed an interval of intermittent missing data points (NaNs) during climb after takeoff and anomalous down-spiking periodically at mission cruise but was not used for any derived meteorological parameters.

Both static pressure measurements, PSM.1 and PSM.2, displayed an unusually large spread and deviated from normal measurements at FL altitudes. PSM.1 was selected as default as it was closer in relation to Pressure Altitude, but should still be considered suspect.

| Expendable Type | Number deployed | Number good | Number of messages transmitted |
|-------------------|-----------------|-------------|--------------------------------|
| GPS dropwindsonde | 16 | 16 | 16 |

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