METEOROLOGICAL MEASUREMENT SYSTEMS NASA AMES RESEARCH CENTER

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System Description:

The MMS provides high-resolution and accurate meteorological parameters (pressure, temperature, turbulence index, and the 3-dimensional wind vector). The MMS consists of three major systems: (1) an air motion sensing system to measure the air velocity with respect to the aircraft, (2) an aircraft motion sensing system to measure the aircraft velocity with respect to the earth, and (3) a data acquisition system to sample, process and record the measured quantities.

Past Missions: STEP, AAOE, AASE I, AASE II, SPADE, ASHOE/MAESA, SUCCESS, STRAT, SONEX, POLARIS, SOLVE, CAMEX-3/4, CRYSTAL-FACE, MidCix, AURA Validation Experiment, NAMMA, TC4, NOVICE, GloPac, GRIP, ATTREX, MACPEX, SEAC4RS, ATOM, POSIDON, HIWC, FIREX-AQ, DCOTSS, ACCLIP, SABRE, AEROMMA

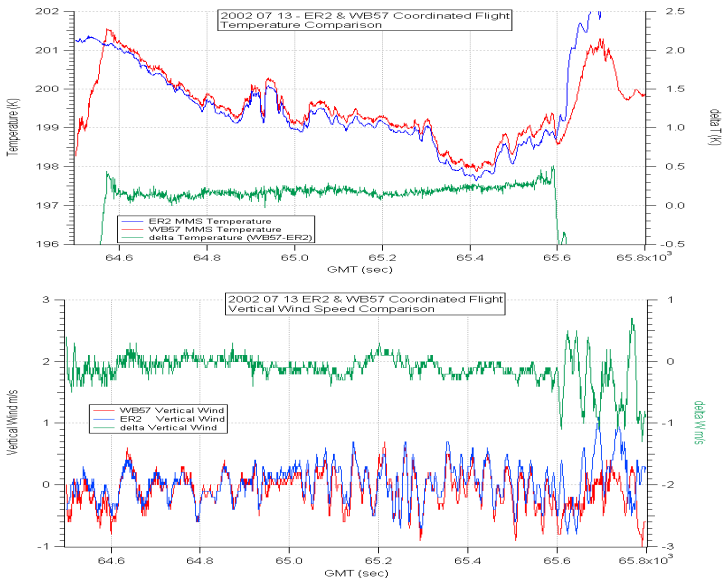
Primary Products:

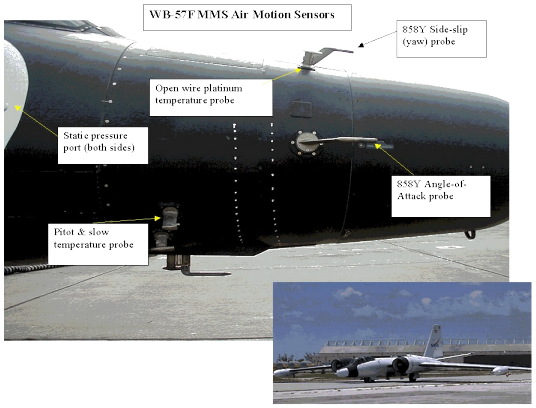
	Typical value	Precision	Accuracy
Pressure	~ 60 mb	± 0.003 mb	± 0.3mb ~ 0.5%
Temperature	~180 K	± 0.05 K	± 0.3 K ~ 0.2%
H Wind	~30 ms^{-1}	± 0.1 ms^{-1}	± 1 ms^{-1} ~ 3.3%
V Wind	< 1 ms^{-1}	± 0.05 ms^{-1}	± 0.3 ms^{-1}

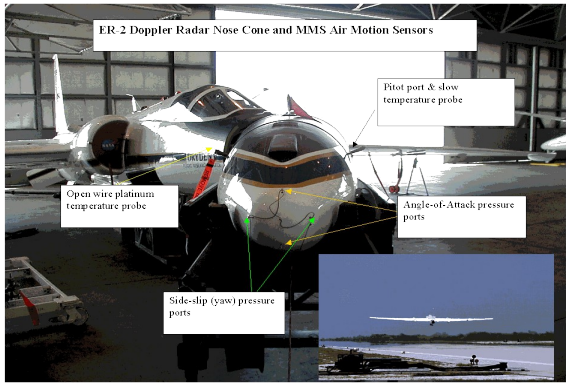
Other Products:

potential temperature, true-air-speed, turbulence, GPS positions, velocities, accelerations, pitch, roll, heading, Angle-of-Attack, Angle-of-Sideslip, dynamic & total pressures, total temperatures.

Sample Data:







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