PELTI Flight Report for RF01, 6 July 2000

This was our ferry from Miami to St. Croix. It was our first opportunity to run the LTI at sea level (the performance should be better at higher altitudes), so it was spent varying parameters for the LTI in the MBL.

1500	Takeoff from MIA
1515	Level at 450 m. Data system problems. Ran multiple **tests of LTI performance** – turbulent, laminar, etc.
1554	Speed runs. CAI wake evident when attack >2 deg.
1808 – 1846	**Teflon filter sample** at 450 m
1858	Climb to pass over Puerto Rico
1932	Landed at STX

Notes

To keep the LTI out of the CAI strut wake, we had to fly at 220 knots IAS. The usual MBL research speed of 200 knots raised the nose too much and transmitted the CAI Strut wake into the LTI.

There is a problem with the calculation of LFE flows in the DU computer: they don't agree at all with the LTI sample flow derived from the UH thermal mass flowmeters.

This was our first opportunity to test the LTI at low altitudes. We did find that the sample flow for laminar behavior was smaller at the surface. We can maintain 120 lpm or slightly more and stay laminar, whereas we can achieve 200 lpm or more at higher altitudes.

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1 Aug 2000