

Flight Notes – 31 May 2002 – Margaret A. LeMone

Boundary Layer Heterogeneity Mission – Central Track

	Time1	Time2	Height msl	Remarks
1	174436E	175834	200' agl	No clouds; hazy. W~13 g/kg 175439: Water in field
2	180130W	181401	200' agl	No clouds, hazy. Start slightly high.
3	181950E	183309	4100' msl	Larry says that we are 1000' below bl top, therefore the BL top is 3600' agl.
4	183649W	185023	200' agl	Clear but hazy. Relationship between NDVI and sfc temperature looks like a right triangle with points at Tsfc, NDVi = (35,0.35), (35,0.9), (50, 0.35), with some surface temperatures reaching 55 C.
5	185216E	190640	200' agl	BL top 4700' agl <b>Photo of ground.</b>
6	191400W	192728	4300' msl	2000' below uniform top of BL. Appears that we are in haze. Can't see horizon. At 192544 the BL top is 1800 feet above us. Skies clear, with some cirrus. W 11 g/kg.
7	193000E	1944	200' agl	
8	194622W	195940	200' agl	NDVI-Tsfc triangle similar but Tsfc reaches 55 C.
9	200530E	201836	4300'	Decided to abandon the WCR leg, thus we will have two fewer legs in mission. Display of theta vs height suggests we did a good job of identifying 0.7h. Sighted station 5.
10	202118W	203500	200' agl	Boundary layer appears to be weakening. This track 1 mi to N. 020531 bump over bare field. See 1 cu at 203125.

Soundings

	Time1	Time2	H agl	Remarks
1	170300		2500	Few cumulus
2	181400	181950	3500	
3	190640W	191400		1000' range in h
4	195940E	200530	3600' 4300'	Lower h on up sounding, upper h for descent.
5	203500W		4500'	At 6900 ft msl we are still in haze.

Comments

1. BL less distinct the last 2-3 legs. Probably the surface was starting to cool.
2. 204507 – Isolated cumulus shows a double structure of the haze layer. **(Photo)**.
3. BL top dried gradually.