May 8 Mission Science Report

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The ER-2 flew a land surface mission today to support algorithm studies related to land surface emissivity. The pattern was flown perfectly and all of the instruments collected data (Radiometer channels working: 10 H/V, 19 H/V, 37 V, 50, 52, 85 H, 89 H/V, 165 H/V/ 183 +/- 1, 3, 7 GHz), and HIWRAP Ka/Ku. For future reference- AMPR 37 V can go about 2.75 hours before it starts to saturate. Attaching the CoSMIR cross-track image as an example- please see the AMPR Instrument Scientist report for those images.

The weather was very cooperative with virtually no cloud, as desired by the PMM land-surface working group folks. The dry-line stretched across western OK- and the extreme western side of the pattern. Soundings were collected at 3 hourly intervals from 1130 UTC to 2330 UTC. Satellite overpasses of for Aqua, NOAA 18 and NOAA 19 all occurred during the sampling between 1930 and 2010 when the pattern was finished.

It got very warm today (> 100 F) in western OK on the western side of the dry line (which edged east with time), and to be ready for a very slight chance for some isolated cells we kept the Citation on alert. However, nothing really fired in terms of convection. We kept the Citation on alert till 2200 UTC as the dry line meandered nearly over the KVNX radar and until the peak in diurnal heating passed. We were essentially waiting to see if cells would start to develop along the line close enough to SGP radars to sample in support of any possible Citation flights (shoot for aerosols then either DSD, or ice profiling in the anvil- the latter far more likely). Note: OU Prime is down so sampling had to be confined to CF area. In our neighborhood the convection just didn't' punch through all that dry air aloft (even though the CAPE was obnoxiously large).

Tomorrow afternoon may provide a better opportunity for some precipitation sampling (though still not anywhere close to slam dunk)- and in fact forecasters suggest Tuesday may now also be possible (when before it looked like a null). Next best shot at broader event seems like Tuesday night and into Wednesday- if atmosphere cooperates. It is far from a certainty however.

Walt Petersen / Larry Carey

Attachment	Size
CoSMIR_CrossTrack_TB20110508.pdf	209.6 KB
AquaOP.gif	11.34 KB
NOAA18_OP.gif	12.77 KB