

Ground-Based TODWL Operations: Clouds and Boundary Layer Winds

G.D. Emmitt, C. O'Handley and S.A. Wood

Ground-based TODWL Operations, for which the 2-micron DWL was removed from the aircraft, was used to measure cloud and PBL winds from a trailer. A new DWL has been purchased and will be installed permanently on the plane this Fall. In the meantime a "lidarfest" with dual Doppler instruments is being planned. The Series I experiments were conducted on June 9/10 2003 to achieve co-alignment and wind comparison with the VALIDAR instrument at LaRC. Vertical staring and a 7-point, 180 degree VAD section were performed, and anemometers used to validate. Future plans are to compare with HARLIE and other instruments, perhaps a mobile GroundWinds or BalloonWinds system. Cloud and PBL coupling experiments, backscatter and winds correlation, and cloud/chemical lifecycle studies are planned, using the RAPCD facility at Huntsville, AL for the chemical studies.