

Notes for 01028 flight.

1746-1900

Ci and Ac

Crew: Bush, Vali, Haimov

Low center to S of Colorado brought high clouds already yesterday. Flow essentially from S -> N at all levels. This morning's DEN sndg shows saturation to tropopause. Satellite images show deep cloud mass drifting N. Coldest tops in NE Colorado and SE Wyoming.

Called for 11 am takeoff (needed time for radiometers to warm up) and this missed the Ns near LAR by about an hour. Cloud mass began to separate into large MCS's with tiny Cb's at their S ends appearing as initiators. By 11am (18Z) Laramie area was in large break between MCS to E and to S. System to E was probably decaying already and was too far, the one to the S was in central CO. Wave clouds over the MB started to form under the Ci shield. Decided to focus on these.

Started with spiral climb to 20 kft to produce moisture sounding for radiometer comparison. Then, headed W and climbed through Ci. With tops at -22°C, these consisted of ice only and produced striated echoes.

By 1820Z, descended into As/Ac over MB range. These topped at -10°C, and were all liquid. LWC to 0.4 g m^{-3} and drop concentrations to 100 cm^{-3} . Cellular structure, much like some coastal St. Did a number of passes roughly along the wind direction (from the South).

Stopped sampling at 1855 and entered landing pattern.