

SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - PLEASANTON, TEXAS

SEEDING REPORT - JULY 30, 2009

SYNOPTIC/MESOSCALE CONDITIONS:

Diffluent flow at 250mb over south Texas; broad trough at 500mb across eastern 2/3 of country with axis NW Ontario to N TX; shortwave at 500mb moving through central Texas with associated MCS; moisture gradient across target area, with PW 1.48" at CRP and 1.94" at DRT; moderate to strong instability, with CAPE values in excess of 3000 J/kg and LI values to -9; seabreeze front moving inland.

LIFTING MECHANISM:

Intense surface heating; lift from passing shortwave; convergence resulting from outflow boundary/seabreeze collision.

DISCUSSION:

During the morning hours an MCS was moving southeast through west-central Texas, helped along by a mid-level shortwave moving across the state. By early afternoon the edge of the MCS entered the northwestern target area and a flight was launched to investigate the activity. Seeding of the leading edge and along the outflow boundary commenced and continued for nearly two hours as it trekked southeast across the target area. The outflow boundary outran convection over the north/northeastern target area and subsequently choked the inflow region, resulting in the demise of convection over Bexar/Wilson counties. Further south and west, activity continued to develop and was seeded. The pilot ran out of flares and had to make a landing at 2R9 (Kenedy) as the MCS was affecting Pleasanton. A second flight to continue seeding in the central/southern target area was eventually cancelled as the pilot reported great difficulty in controlling the plane in the vicinity of the outflow boundary, which extended upward much higher than normal. The outflow from the MCS eventually ran into the inland-bound seabreeze front, with rapid development of convection across Live Oak, Karnes and Bee counties during the evening.

WATCHES/WARNINGS/LIMITATIONS:

Nil.

The pyrotechnics were 40g AgI flares. 53 AgI flares were burned in Medina (23), Frio (11) and Atascosa (19) counties, totaling 2120g of AgI.