

SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - PLEASANTON, TEXAS

SEEDING REPORT - JUNE 3, 2009

SYNOPTIC/MESOSCALE CONDITIONS:

Weak trough at 250mb over the area; shortwave at 500mb moving east across central Texas with associated cool pocket affecting northern target area; decent moisture quality at 700mb (Td's 0 to 4°C) and 850mb (Td's 12 to 14°C); surface cold front slowly moving through northern and central target area with outflow boundary from overnight MCS sitting over southern target area; moderate to strong instability, with CAPE values to 3500 J/kg and LI's to -7; PW values 1.35"-1.70".

LIFTING MECHANISM:

Strong surface heating; lift from passing shortwave; convergence along outflow boundary over southern target area; convergence along cold front over northern target area.

DISCUSSION:

The combination of good moisture availability, a passing shortwave, approaching cold front and strong heating led to the development of convection across much of the target area during the afternoon hours. Convection initiated in Bexar and Medina counties early in the afternoon and a flight was launched to investigate. The randomization protocol could not be enacted, and operational seeding of this activity commenced. More convection developed in McMullen County and the plane was sent to this area, where more seeding took place. A second plane was launched to look at developing clouds in SE Atascosa County, with seeding taking place. The convection continued to increase in size and areal coverage, with multiple clouds being seeded mainly in the central and western target area. Severe T-storm warnings temporarily suspended operations at times. All activity was moving south and southeast, except for the Bexar County storm which moved against the mean flow, heading west along US 90. Additional storms developed in the evening across the southeastern target area, but the issuance of Severe T-storm warnings precluded another seeding flight.

WATCHES/WARNINGS/LIMITATIONS:

Severe T-storm - NW Atascosa/S Bexar/SE Medina Cos.: 2004-2030 UTC.
Severe T-storm - SE Medina Co.: 2051-2115 UTC.
Severe T-storm - W-cent. Atascosa/E-cent. Frio Cos.: 2113-2200 UTC.
Severe T-storm - N-cent. Frio/SE Medina Cos.: 2114-2200 UTC.
Severe T-storm - Cent. McMullen Co.: 2211-2300 UTC.
Severe T-storm - Cent. Live Oak Co.: 2222-2245 UTC.
Flood Advisory - McMullen Co.: 2304-0100 UTC.
Severe T-storm - SE Live Oak Co.: 2306-2330 UTC.
Severe T-storm - S-cent. Bee Co.: 0122-0200 UTC.
Severe T-storm - SE Bee Co.: 0155-0230 UTC.
Severe T-storm - Bee Co.: 0215-0300 UTC.

The pyrotechnics were 40g flares. 47 flares were burned in Bexar (8), McMullen (16), Live Oak (13) and Atascosa (10) counties, totaling 1880g of AgI.