

SOUTH TEXAS WEATHER MODIFICATION ASSOCIATION - PLEASANTON, TEXAS

SEEDING REPORT - AUGUST 28, 2009

SYNOPTIC/MESOSCALE CONDITIONS:

Positively-tilted trough at 250mb from west Texas to Great Lakes moving SE; 500mb high centered over western U.S. with associated high-amplitude ridge extending up into western Canada; 500mb trough over eastern U.S. with southwestern edge across central/eastern Texas; stationary boundary across north-central target area; sufficient moisture, with PW values ranging from 1.65" at DRT to 1.93" at CRP; moderate instability, with LI's to -5 and CAPE values to 2500 J/kg; seabreeze front pushing inland late in the afternoon.

LIFTING MECHANISM:

Strong surface heating; subtle lift from upper trough; convergence along stationary boundary; convergence along seabreeze front.

DISCUSSION:

Strong heating, a stationary boundary in the vicinity, sufficient moisture and an approaching upper level trough all combined to produce a favorable environment for convection. Initiation took place just after 1800 UTC over the northern target area. A flight was dispatched to investigate activity approaching Bandera County, but before the plane reached the area, additional convection began forming in southern Medina County in the vicinity of the stationary boundary. Inspection by the pilot revealed decent inflow and a good cloud structure, with crisp edges, a flat rain-free base and sufficient height. Seeding of this cloud took place before the pilot moved on to other activity developing/moving into Bandera County, where more seeding took place. The plane headed south into northern Medina County with more clouds receiving treatment. The plane returned to Pleasanton to refuel and then launched for a second flight as additional convection developed in Medina County. One cloud was seeded along the Medina/Frio County line. The pilot headed to the eastern target area where another cell developed near the Kenedy airport. No inflow was located, so the pilot landed and the mission was terminated.

WATCHES/WARNINGS/LIMITATIONS:

Nil.

The pyrotechnics were 40g AgI flares. 24 AgI flares were burned in Frio (10), Bandera (4), Medina (9) and Atascosa (1) counties, totaling 960g of AgI.