

T-28 Pilot Report

Flight: 658
Date: 05171995
Flight Time: 15:44 – 17:17 CDT
Pilot: Charlie Summers
Controller: Dennis Musil
Location: Norman, OK
Mission: Research flight

Computer Time	Video Time	Comments
15:05		Decide to launch on cell to N. No CG lightning yet. >55 dBZ at low levels with high Zdr
15:15		Tops on cells to N are 13+ km. Still no CG lightning.
15:25		2 +CG's from biggest cell to N.
15:44:30		Take-off.
15:47:21		Field mill test on for 1 min.
15:54:35		J-W went negative. Pick up new vector 360°/25 nmi off IRW
15:56:50		Field mill test on (forgot and left on for 3+ min); outboard de-ice on
15:59		Charlie heading for cells N of Cimarron radar
16:03		Cleared for 17 kft. Charlie sees 3 storms to N. On radar there is a whole line of cells extending westward from these eastern-most cells.
16:08		Lines up on low-reflectivity feeders S of main echoes. Going on high blower; hdng 350°
16:11:46		In-cloud Pen 1; hdng 100°; 17 kft alt.; ice on windshield
		¼" clear and rime ice mix on wings; turn to 060° hdng
16:13:48		Out of younger cell and heading for older one to E
16:16:07		Hdng 110°; alt 17300 kft; IAS 140 kts
16:16:25		In cloud, Pen 2; ice on windshield
		Lgt icing; mdt turb; mdt ltng; hdng 120°, alt 17 kft; ltng every 10 sec, including 16:16:50 & 16:16:57
16:17:55		Out on E side. Turning to W.
16:19:39		In-cloud Pen 3; hdng 260°, alt. 17200 ft; then 260°, alt 16800 ft. Ltng 16:20:30. Hvy turb, lgt hail, lgt icing
		2500 ft/min up; more hail; hail on tape; then 2000 ft/min down
16:22:06		Out-of-cloud on E side
16:24:11		2 nd storm at 12 o'clock
16:24:15		In-cloud Pen 4; 270° hdng, alt 17000 ft. Hitting cell that was the first one penetrated.
		260° hdng; lgt icing/riming; a lot of downdrafts
16:25:57		Out-of-cloud on W side; Hdng 250°, alt. 16300 ft; going W towards another cell about 10 nmi distant
16:31:23		In-cloud Pen 5; hdng 320°, alt 17000 ft; lgt turb in clear air before entry
		Mdt turb; light hail
16:31:55		Ltng
16:32:09		Change to hdng 270°; lightning every 5-10 sec; hail and updraft (can hear hail on tape)
		Updrafts kick aircraft to 18500 ft. Hvy turb.
16:33:30		Out-of-cloud; hdng 270°; alt 17000 ft
		Do 90°/270° turn for re-entry; light turb in clear before entering cloud
16:36:15		In-cloud Pen 6; hdng 90°, alt 17000 ft
		Turn to 150°
		Lgt icing on canopy & wings
		Ltng 16:36:35; ltng every 10 sec

16:38:29		J-W negative
16:39:03		Out-of-cloud
		Heading for middle storm to SE; ends up going a little further S than intended
16:46:37		In-cloud Pen 7; 150° hdng; 17000 ft alt; cloud top 25-30000 ft
		Mdt turb then to hvy turb [Charlie said later that the transition to heavy turbulence was sharp, like hitting a wall
16:48:08		Out-of-cloud; hdng 160°; alt 15500 ft. Will return-to-base
17:00		Original main storm produced 14 cloud-to-ground lightning events so far, all lowering positive charge.
		This is the storm the VORTEX armada is working; still producing +CG's.
17:17		landed

NOTES

Weather

Later afternoon convection anticipated due to early-morning pattern showing intersection of a cold front and dry line in the panhandle region that is anticipated to move E. Strong convection develops NW of OKC around mid-afternoon and moves eastward. SW winds gusting to 30 kts at Westheimer around take-off time.

Maintenance

Operations

Possible operations in early morning scuttled due to radar maintenance activities. A N-S line of storms moved across the OKC area at that time. Later storms were more interesting, but were probably further than optimum from the Cimarron radar for good dual-pol work. Penetrations through same storms included 1 & 4, 2&3, and 5&6. Hail up to pea-size was observed at the ground by the VORTEX armada.