

TREX06: 20060409a & 20060410a

IOP-11: Flt-1

Flight notes: System Scientist (3rd seat)

Crew:

Pilot: Don Cooksey
Flt Scientist: Larry Armi
System Scientist: Jeff French
4th Seat: Ron Smith

Pre-flight:

Expect rapidly changing system, some cu along just downstream of ridge at takeoff time, cap cloud evident

Weather Conditions at Bishop: scattered, wind: 140 @ 7 gusting 15 kts, T=19C, DewPt=-11C

Flight:

2202: takeoff
up to 2220: sounding, surface to 700 mb very well mixed, dry adiabatic; from 700 to 500 (and above) mostly following moist adiabat. Winds in valley out of the south becoming SSW above ridgetop, increasing from 10 to 35 m s⁻¹ at FL230
2217 begin radar file (dualdown??) looking at clouds over Sierras(??)
222230: on a line at FL250 over Sierra crest, tracking west(?)
2224: end radar file, scope output looks funny though radar display looks OK, off/on scope, looks OK now
2228: begin new radar file (22-27-56) dualdown, look at clouds over Sierras(?)
2235: begin leg 1, FL250, start from west point, tracking east, waves -1.5/+2.0/-1.8/+1.0 m s⁻¹ wavelength ~15 km
2245: end leg and descend to FL200
2248: begin (?) leg 2, FL200, track east, -2.5/+2.4/-2.3 m s⁻¹
2302: end leg, turn and ascend to FL210
2306: on leg 3, FL210, tracking west
2309-2311: (approx.) over rotor/roll cloud, strong echo on the radar!!
2312: turn 180, aim for hole in clouds to duck under rotor/roll cloud
2317: stop radar, switch to uplooking mode, begin new file
2318: under rotor/roll cloud at FL120, radar uplooking, good return
232430: FL110, tracking east cross valley, extend leg to just past crest of Inyos
2332: turn, setup for next leg, tracking west
233320: on track, FL100
2339: end L leg, turn out over valley, descend to FL090
2344: on track, tracking east at FL090
2348: end track on east end, descend
235230: on track, tracking west, FL080

2355: data system crater, reboots itself, restart data collection program, stop radar file

0003: data system back up
001013: begin new radar file, uplooking
0017: hit big bump, G-3.08 according to data system, G-3.2 according to backup (secondary device)
0034: climbing along rotor/roll cloud front, ascend back to FL250, stop radar to load dual down mode
0040: climbing, tracking west to point over Sierras, cap cloud has changed considerably from earlier in flight, 'thinned out' with some weak cumuliform at ridge crest
0043: begin new radar file (uplooking, 00-43-22)
0045: (??) begin leg eastbound, FL250
0052: end leg, descend
005530: begin leg, tracking west, FL210, just above cloud tops
0104: pass over rotor/roll cloud, shows up nicely on radar
0109: end leg, ascend
0110: begin leg, tracking east, FL220
011245: over rotor/roll, shows up on radar, weakening somewhat??
0115: end leg, descend into Owens valley between clouds, setup for x-valley legs
0118: end radarfile
011820: start new radar file, uplooking
0121: FL150, tracking west, cross valley
0131: end track, turn out over valley, descend
0135: on track over Independence, FL120
2536: headed east, descend to FL100

0142: data system craters, mission nearly over, decide to RTB
0200: Touchdown

Post-flight/impressions

Very nice case, good images with radar, case evolved and changed rapidly