6. OBSERVATIONAL GOALS

A. TWIN OTTER FLIGHT TRACKS

- Detail with High-Rate Thermodynamic, Microphysics, and Radiation Measurements the Region within +/- 50 m of Sc Top
- Estimate w_e with Conditional Sampling, Flux-Jump, and Satellite Methods
- Measure Surface and Incloud Heat and Water Fluxes
- Determine CCN, and Droplet/Drizzle Spectra

B. SUPPORTING MEASUREMENTS

- Determine Surface Temperature, Wind, and Subsidence Fields in POST Box
- Provide satellite images, τ and r_e in POST Box
- Meteorology (NCEP)

PORPOISING

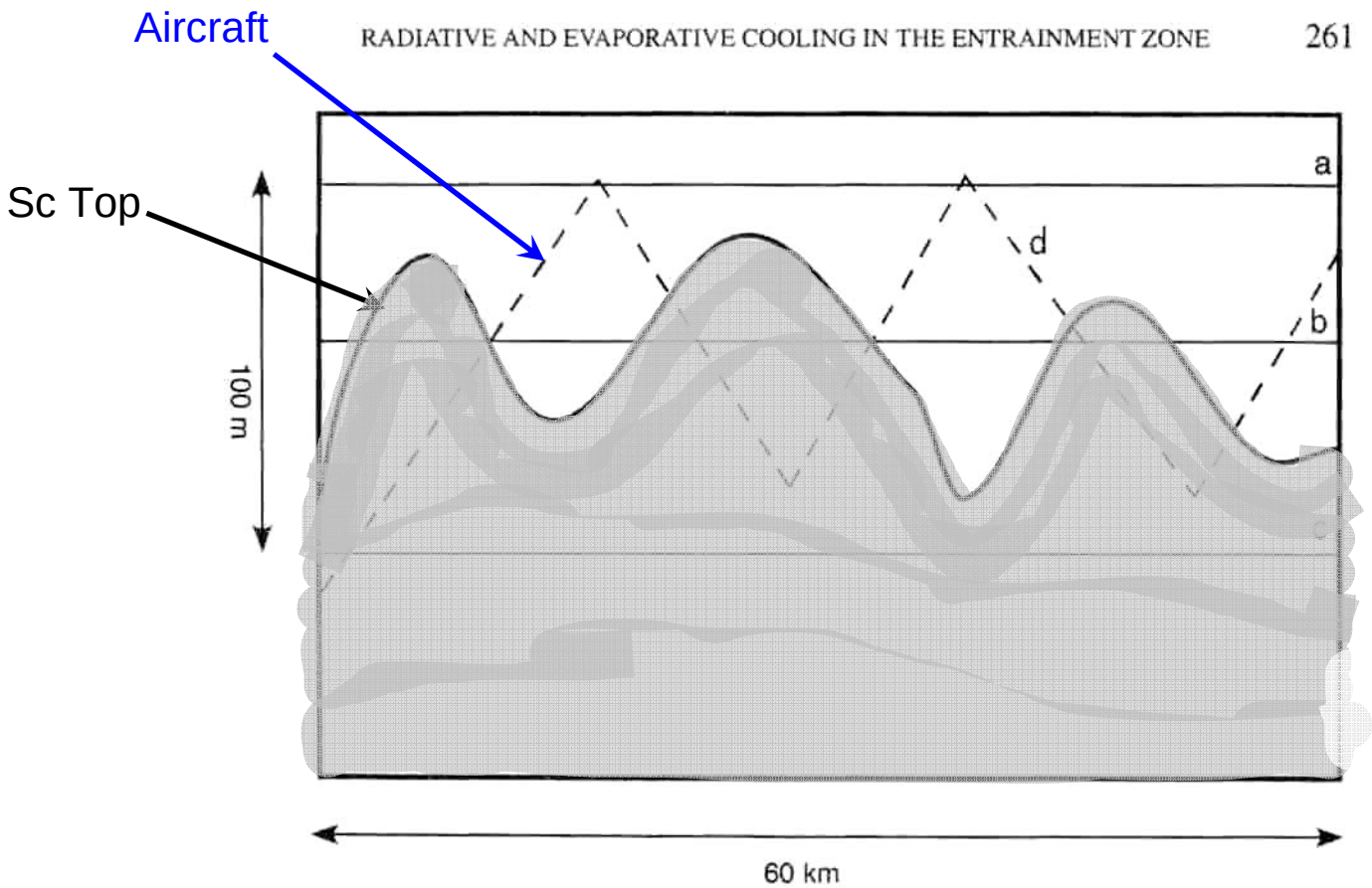
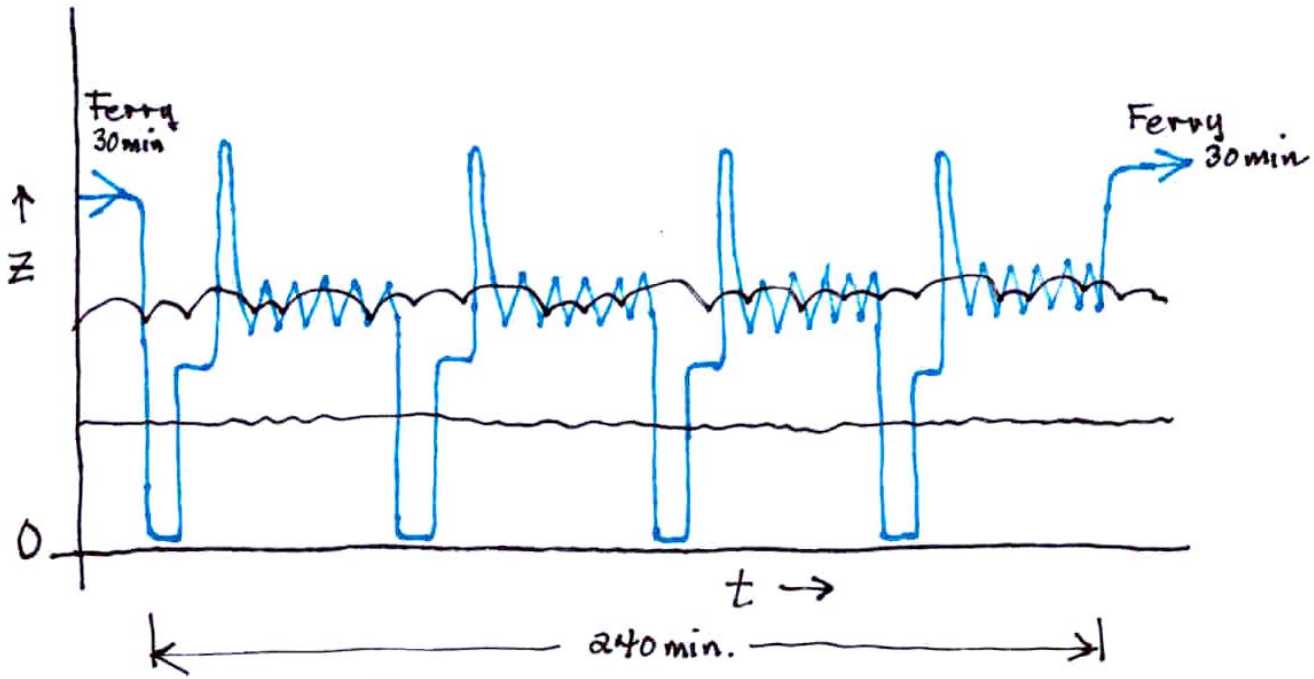
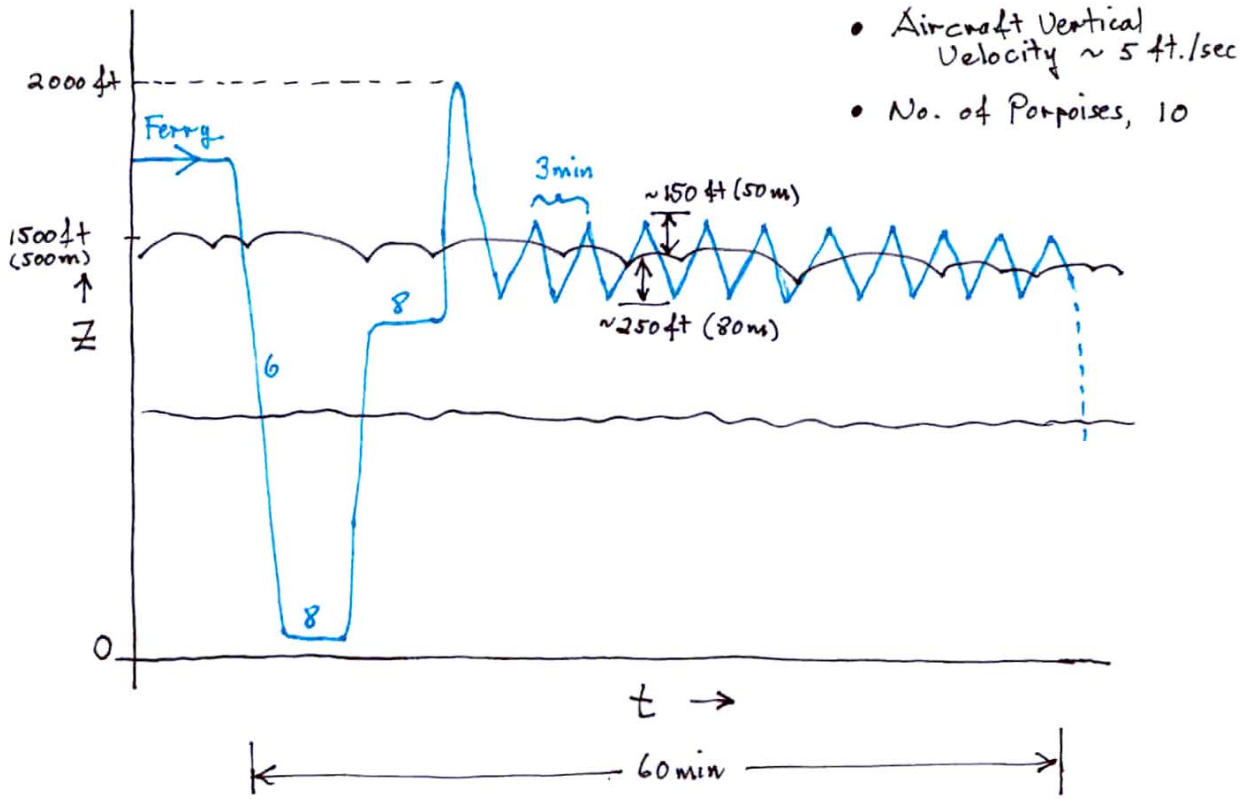


Figure 3. Flight strategy for the inversion flight legs of A609 and A610. With (a), (b) and (c) the horizontal level runs of A609 just above, through and just below the cloud top and with (d) the sawtooth pattern used during A610. Note that the vertical extent in the schematic picture is very large compared to the horizontal distance

(VanZanten, M.C., and P.G. Duynkerke, 2002: Radiative and evaporative cooling in the entrainment zone of stratocumulus …….*Boundary-Layer Meteorol.,***102**, 253-280.)


Ferry
30 min
Ferry
30 min
N
0
t
240 min.


• Aircraft Vertical Velocity ~ 5 ft./sec
• No. of Porpoises, 10
2000 ft
Ferry
3 min
~150 ft (50 m)
1500 ft (500 m)
Z
8
6
~250 ft (80 m)
8
0
t →
60 min

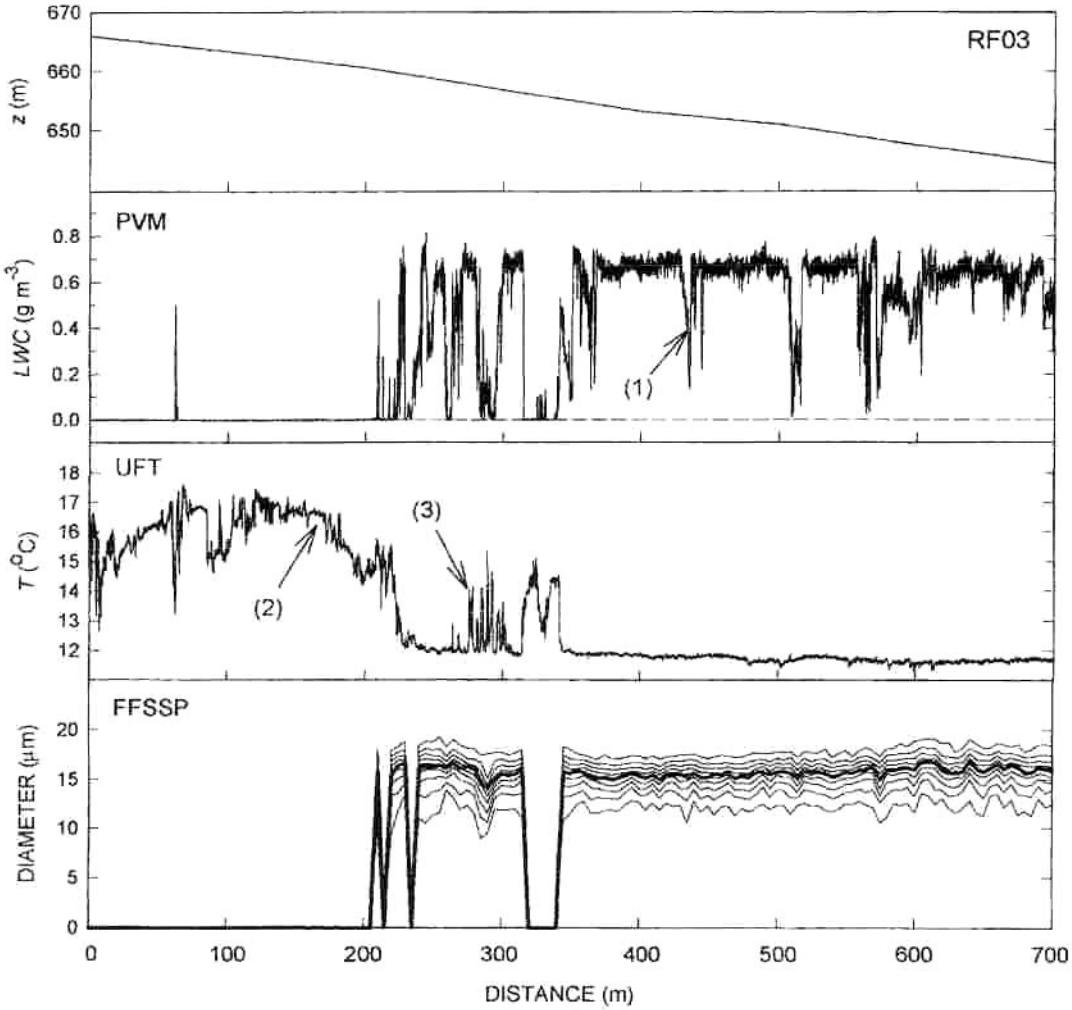
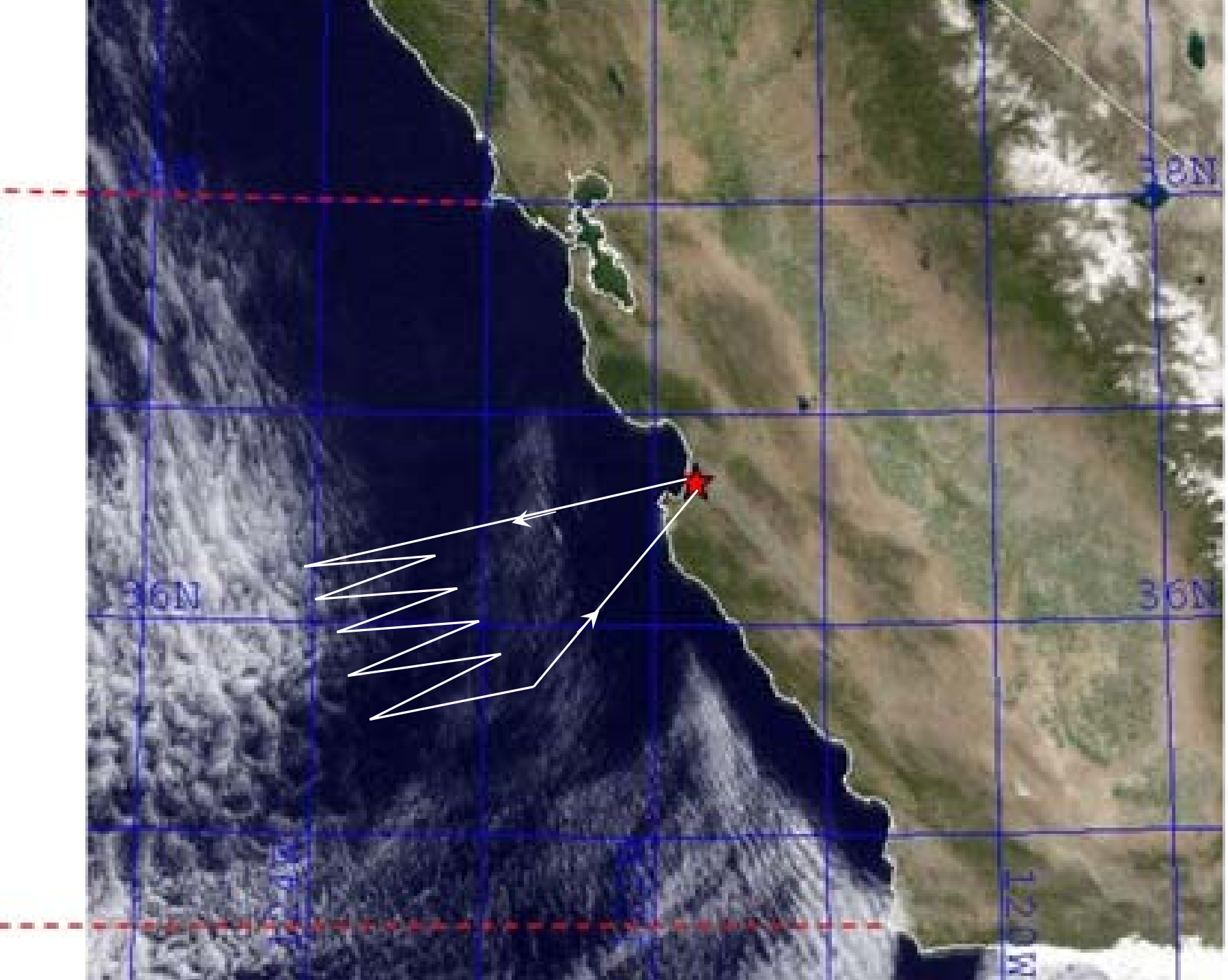


FIG. 16. (top) Gradual descent of the aircraft into cloud top during RF03 showing 1000 Hz (~10 cm spatial resolution) PVM and UFT and 50-Hz FFSSP (~2 m resolution) measurements. The thin lines in the FFSSP data are 10% percentiles of the droplet concentration, and the thick line gives the mass median diameter. One of the holes with depleted LWC' is indicated by "(1)"; temperatures in the entrainment interface layer by "(2)"; and a region with finescale mixing by "(3)" [from Gerber et al. (2002) with changes].


38N
36N
36N
121°

6. OBSERVATIONAL GOALS

A. TWIN OTTER FLIGHT TRACKS

- Detail with High-Rate Thermodynamic and Microphysics Data, And Radiation the Region within +/- 50 m of Sc Top
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- Measure Surface and Incloud Heat and Water Fluxes
- Determine CCN, and Droplet/Drizzle Spectra

B. SUPPORTING MEASUREMENTS

- Determine Surface Temperature, Wind, and Subsidence Fields in POST Box
- Provide satellite images, τ and r_e in POST Box
- Synoptic Meteorology (TBD)