TC4 ER-2 Science Flight: July 31, 2007
Tentative Flight Plan

Flight Scientists: S. Platnick, P. Newman
Sortie: 07-TBD
Pilot: Dave Wright

Takeoff (MROC): 1300 UTC (7:00 AM local)
Landing (MROC): 1800 UTC (12:00 PM local)

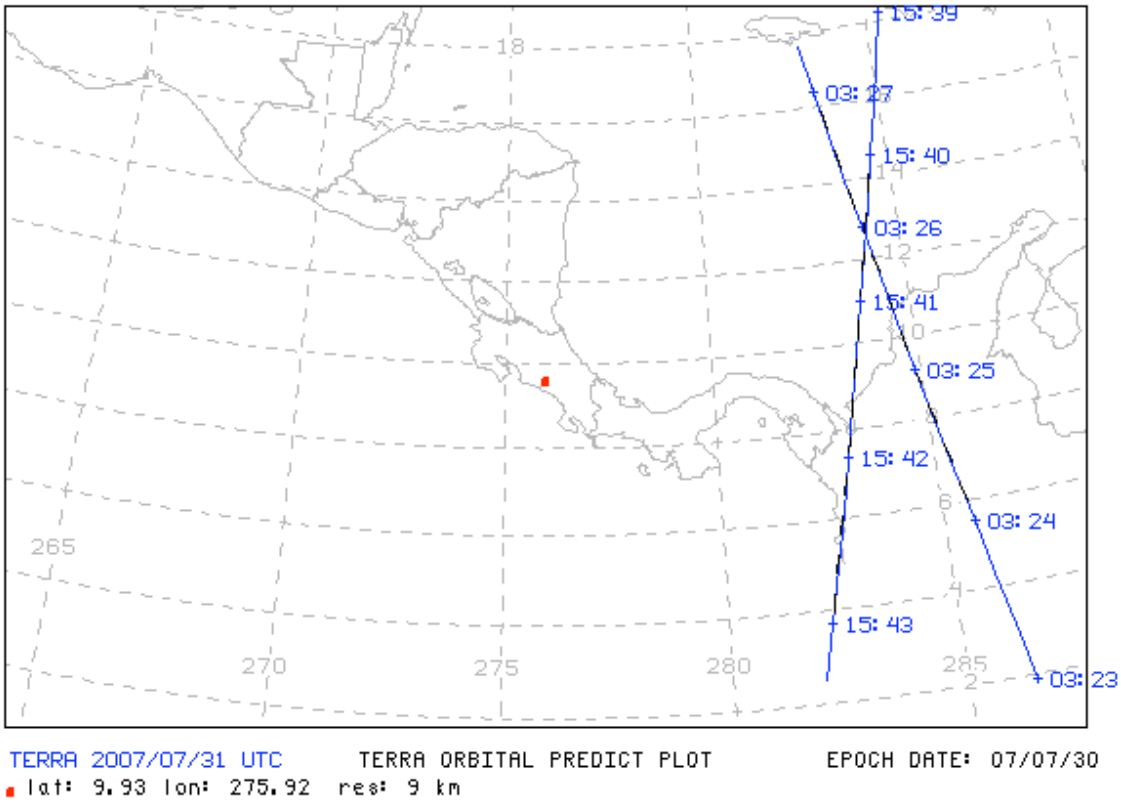
Duration: 5:00

Objectives:

- To provide coordinated overflights of cirrus outflow with the DC-8 for and microphysical retrievals and radiative closure.

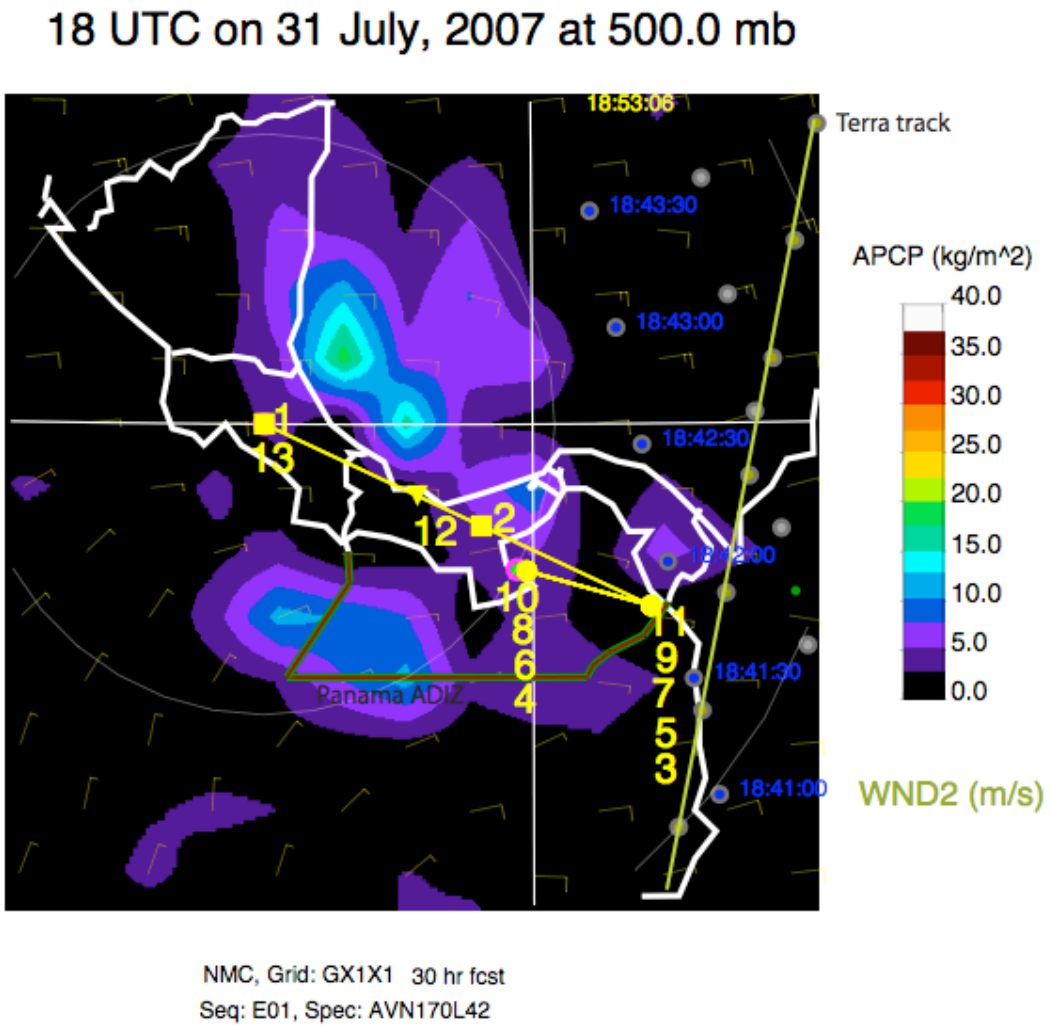
Satellite Coordination:

No direct satellite coordination planned, though Terra overpass in flight region. At 1542 UTC.



Flight Plan Summary (see map):

Takeoff at 1300 UT (7 am local time). The ER-2 initially flies SE toward the Panama Bight for coordination with the DC-8. A racetrack pattern will be flown starting at waypoint 3 (see map below, courtesy of Leslie Lait). Four complete tracks will be flown with maximum coordination with the DC-8. Each leg is 200 km in length with an offset between parallel legs of 20 km (13 nm). The DC-8 will leave 30 min earlier than the ER-2 and head towards the northern end of the racetrack and profile up to cirrus level along the eastern racetrack leg arriving at the southern end of the racetrack (i.e., waypoint 3) at 1400 UTC to rendezvous with the ER-2. The ER-2 will then fly home along the racetrack western leg.



yellow line = ER-2 flight track
color image: accumulated three hour precipitation
wind barbs (m/s): near surface wind
Terra: gray point, dark yellow line

Aqua: blue point
CloudSat/CALIPSO: gray points

Expected Cloud Conditions during flight:

The racetrack legs are set up in the Panama bight to catch anvil outflow. The upper troposphere forecast shows light winds.

Proposed Waypoints:

WP	Lat	Lon	ETA
MROC	10° 00'N	84° 13'W	13:00
3, 5, …	7° 10'N	78° 10'W	
4, 6, …	8° 00'N	80° 00'W	

ER-2 Science Instrument Payload and Status:

Instrument	Status	Notes
CPL Cloud Physics Lidar		
CRS Cloud Radar System		
EDOP ER-2 Doppler Radar		
AMPR Advanced Microwave Precipitation Radiometer		
CoSSIR Compact Scanning Sub-mm wave Imaging Radiometer		
MASTER MODIS/ASTER Simulator		
S-HIS Scanning High Resolution Interferometer		
IR Radiometer Broadband flux radiometer (nadir & zenith)		
SSFR Solar Spectral Flux Radiometer (nadir & zenith)		
MVIS video camera		
MTP Microwave Temperature Profiler		

G = good; P = partial data collected; F = failure, no data