

## Middle Latitude Cirrus Cloud Properties Experiment (MACPEX) Flight 2 Summary Report (3 April 2011).

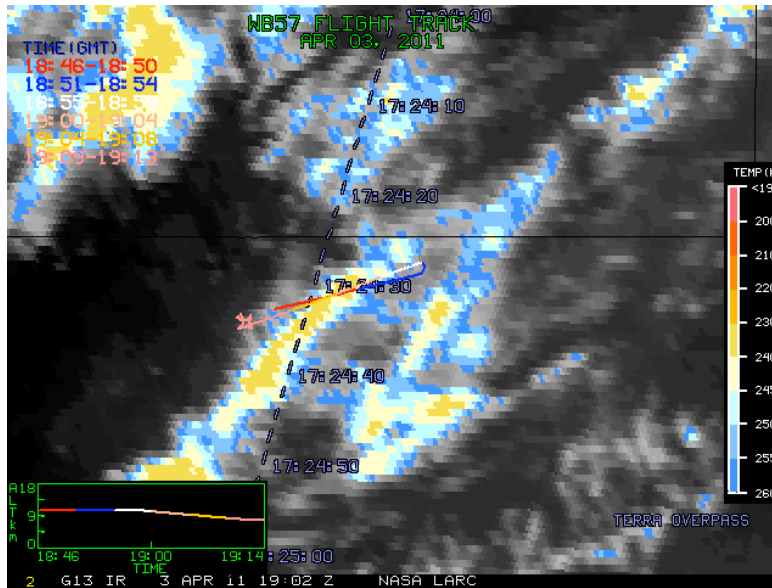


Figure 1. Flight Track overlaid on IR satellite image. Dashed line is Cloudsat track. Images Courtesy of Minnis Group.

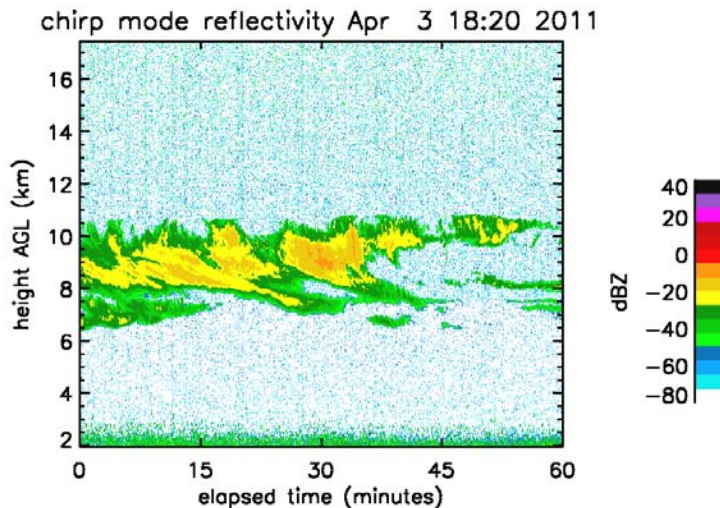


Figure 2. Ka Band Zenith Radar (KAZR) reflectivity collected from 18:20 until 19:20 UTC corresponding with the flight track shown above.

### 1. Purpose of Mission:

Primary Mission:  
Sample cirrus clouds over the SGP ARM site.

### Secondary Objective:

Compare measurements of stratospheric water vapor.

### 2. Flight Summary

The WB57F (926NA) sampled fast moving cirrus in the vicinity of the Southern Great Plains ARM site that were embedded in a strong southwesterly jet stream. The flight profile included level legs and a spiral descent over the SGP site. In addition, measurements of stratospheric water vapor at several altitudes were collected for comparison among water vapor instruments.



4. Preliminary Instrument/Data Status for this flight:

SID3	Worked Well
VIPS	Worked Well
2DS	Instrument ran. Quality unknown.
FCDP	Unknown
HVPS	Worked Well
CPI	Worked Well
CIN	Instrument Defunct
NMASS	Instrument ran. Issues.
FCAS	Worked Well
PALMS	Major Problems
MMS	Worked Well
ALIAS	Aircraft Problems. Instrument not Flown
CLH	Aircraft Problems. Instrument not Flown
JLH	Worked Well
ULH	Aircraft Problems. Instrument not Flown.
DLH	Aircraft Problems. Instrument not Flown.
Harvard Water Vapor	Worked but Issues Noted
Harvard TDL	Unknown
Harvard Total Water	Not Ready For flight
Harvard Halogen	Not Flown
FISH	Worked Well
CIMS	Worked but Some Issues Noted
O3	Worked Well
O3Lite	Worked Well



Figure 2. Images of cirrus over cumulus taken from WB57. Timestamp on image is MDT.