

19890919 II - CLDPHY

E.3 Cloud Physics Scientist (On-Board)

The on-board cloud physics scientist (CPS) is responsible for cloud physics data collection on his/her assigned aircraft. Detailed operational procedures are contained in the cloud physics kit supplied for each aircraft. General procedures follow. (Check off and initial).

E.3.1 Preflight

- ☒ 1. Determine status of cloud physics instrumentation systems and report to the on-board lead project scientist (LPS).
- ☒ 2. Confirm mission and pattern selection from the on-board LPS.
- ☒ 3. Select mode of instrument operation as determined by the HRD/CPS.
- ☒ 4. Complete appropriate instrumentation preflight check lists as supplied in the cloud physics operator's kit.

E.3.2 In-Flight

- ☒ 1. Operate instruments as specified in the cloud physics operator's kit and as directed by the HRD/CPS, unless superseded by directions from the on-board LPS.

E.3.3 Postflight

- ☒ 1. Complete summary check list forms and all other appropriate forms.
- ☒ 2. Brief the on-board LPS on equipment status and turn in completed check sheets to the LPS.
- ☒ 3. Take cloud physics data tapes and other data forms and turn these data sets in to the OAO flight director, who will arrange delivery as follows:
 - a. Outside of Miami - to the HRD operations center (FGOC).
 - b. In Miami - to OAO/Science and Program Division. [Note: all data removed from the aircraft by HRD personnel should be cleared with the OAO flight director.]
- ☒ 4. Debrief as necessary at the appropriate operations center (i.e., FGOC or MGOC).
- ☒ 5. Determine the status of future missions and notify the appropriate operations center (FGOC or MGOC) as to where you can be contacted.

YH9GJD -11P1P098P1

cloud physics clock 1 second ahead of the
flight-level data system clock. the two clocks
agreed after the lightning strike

Cloud Physics Project Scientist Operational Check List

Date 19 SEPT 89

Aircraft NOAA 43

Flight ID 890919I

A. Instrument Status and Performance:

System	Pre-Flight	In-Flight	Downtime	# of Tapes
Johnson-Williams				
PMS probes:			see *	4
2D-P	✓	✓		
2D-C	✓	✓		
FSSP	✓	✓		
Data System	✓	✓		
Displays	✓	✓		
Formvar				
Nimbiometer				
CO ₂ Radiometer	✓			

B. Remarks:

1st pass into the eye - eye wall poorly formed data recorded on slow rate
about 1 min at max rate on south side of eye,

very little convection, mostly stratiform

temperature in stratiform - 9 to -11°C

* system down for 3-4 mins following lightning strike
at 2122

some data also collected for charge probe

2-D Knollenberg Data Tape Log

Date 19 Sept. 1989 Flight 890919 I/ Operator Burpee/Carnegie

lightning strike 2/22 system down
charge probe also went down
after lightning strike

Formvar Log

Date _____

Flight _____

Operator _____

[illegible]