19890903HI-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 Operate instruments as specified in the cloud physics operator's kit and as directed by the HRD/CPS, unless superseded by directions from the on-board LPS.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.

YHRDJ.IHSOPOPEPI

Form E-3
Page 1 of 3

Cloud Physics Project Scientist Operational Check List

Date SEP 3 1989 Aircraft 42 RF Flight ID 890903H

A. Instrument Status and Performance:

System	Pre-Flight	In-Flight	Downtime	# of Tapes
Johnson-Williams	✓			
PMS probes:	✓			12
2D-P	✓			
2D-C	✓			
FSSP	✓	???	TOTAL	
Data System	✓			
Displays	✓			
Formvar	—			
Nimbiometer	—			
CO_2 Radiometer	ok			

B. Remarks:

TO 160730 173600 - T_a ~ -2.5, but have liquid water on window ⇒ T_a is wrong. (too cold) 1743-44 more liq. water, T_a ~ -1.5, no FSSP display ⇒ not working.

2-D Knollenberg Data Tape Log

Date SEP 3 1989 Flight 8909031H Operator R. A. BLACK

Tape #	EOF #	Time On	Time Off	Comments
1	1	174125	175820	NO FSSP display
2	1	180200	181050	#1 start at beginning of descent
3		181050	182000	in eye 181900 1500'
4	failed	184609	185256	recorder failed. re-cycled 5000'
5		185315	185930	after we got out of turbulence
6		185930	190514	PMS TIME = AC TIME - 1 MINUTE
7	11	190514	191355	TAPES 1-7
8	1	195030	195837	SE-NW @ 2900 m in eye 195800
9		195916	200509	outbound NE ~3000 m
10		200509	201125	finished in a turn
11		231930	232604	started on climb out at T ~ 5°C
12		232604	~233200	melting level 232320
				columns, plates at 232507
	LAST	TAPES		

" EOF marks recorded in clear air "

Formvar Log

Date _____ Flight _____ Operator _____

Roll #	Time On	Time Off	Frame Count at Start	Comments