

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 checklists as supplied in the cloud physics operator's kit.

ONLY DOWN LOOKING FIELD MILL INSTALLED

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 Operate instruments as specified in the cloud physics operator's kit and as directed by the HRD/CPS unless superseded by directions from the on-board LPS.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

Cloud Physics Project Scientist Operational Checklist

DATE 15 Aug 85 AIRCRAFT 42RF FLIGHT 850815H1

A. INSTRUMENT STATUS AND PERFORMANCE

System	Preflight	Inflight	Down time	#Tapes/data units
Johnson-Williams (JW)				
PMS probes				
2D-P	✓	Very poor		
2D-C	✓	Very poor		
FSSP	✓			
DAS	✓			20 TAPES
Display(s)				
Formvar	NOT INSTALLED			
Nimbiometer	—			
Lyman-Alpha	—			
U.V.	—			
Dew Point	—			
CO ₂ Radiometer	✓			
Microwave Radiometer				
Ice Particle Counter	—			
Mee	—			
ERT	—			
Aerosol				
Filters	—			
Bulk-Water	—			
INC	—			
CCN	—			

B. REMARKS

- 1) OVERLOAD % looks low ?? malten?
- 2) CLOUD PROBE CLEAR UPDATING SOME
- 3) CLOUD PROBE FIRST BYTE SHIFTED SOMETIMES
- 4) FSSP looked inactive late in flight

DATE 8/15/85

FLIGHT 850815H1

OPERATOR Willis

2-D Knollenberg Data Tape Log

Tape #	EOF #	Time On	Time Off	Comments
#1	1 pause	0403/00	0550/39	restart 0532/00
#2		0550/39	0606/30	
#3		0606/30	0638/54	
#4		0638/54	0715/08	
#5		0715/08	0738/34	
#6		0738/34	0800/02	
#7		0800/02	0807/22	
#8		0809/26	0821/16	
#9		0821/26	0850/16	
#10		0850/16	0908/19	
#11		0910/15 0908/19	0912/27	RELOUND PREMATURELY TWICE
#12		0912/27	0948/55	
#13		0949/03	1011/25	
#14		1011/25	1042/35	
#15		1042/35	1102/00	
#16		1102/00	1118/35	↑ Best Eyeall Pass
#17		1118/35	1136/54	1130/55 STARTED CLIMB
18		1136/54	1142/48	
19		1142/48	1148/24	
20		1148/26	1155/56	