

19890915J1 - 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 Operate instruments as specified in the cloud physics operator's kit and as directed by the HRD/CPS, unless superseded by directions from the on-board LPS.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.

Cloud Physics Project Scientist Operational Check List

Date 890915I Aircraft NOAA-43 Flight ID 890915I

A. Instrument Status and Performance:

System	Pre-Flight	In-Flight	Downtime	# of Tapes
Johnson-Williams	UP	UP		
PMS probes:	"			9
2D-P	"	WEAK LASER		
2D-C	"	V. GOOD		
FSSP	"	50 50		
Data System		OK		
Displays	UP	OK		
Formvar	—	—		
Nimbiometer	—	—		
CO ₂ Radiometer	UP			
Q-PROBE	OK			1 FAST TAPE

B. Remarks:

FST. ON 175700 approaching eyewall
FAST TAPE off 185530
Superb electric field data. Can't say how
the Q-probe performed.

2-D Knollenberg Data Tape Log

Date 890915 Flight 890915 I Operator R. BLACK

[illegible]

small  a real beauty

Formvar Log

Date _____ Flight _____ Operator _____

[illegible]

DATE 9/15/89

FLIGHT HUGO

OPERATOR _____

Formvar Log

ROLL #	TIME ON	TIME OFF	FRAME COUNT AT START	COMMENTS
#1	252	240	182	13 9.5 N 58/30.2
2	270	160	182 14.40 54.6	14 24.0 57/21.1
3	288	240		15 38.1 58/33.0
4	306	160		16 1.0 57 2.4
5	324	240	182 14.45 54.8	17 41.1 57 16.0
6	342	160		16 59.1 55 39.4
7	360	240		18 30.0 55 0.0
8	18	160	202 14.50 55.0	17 2.1 54 8.2
9	36	240		17 44.1 52 31.5
10	54	160		16 7.0 52 57.2
11	72	240	212 14.50 55.2	15 47.1 51 14.5
12	90	160		14. 33.0 52 26.4
13	108	240		13 21.5 51 29.2
14	126	160	222 14.60 55.4	13 1.6 53 11.1
15	144	240		11 21.5 53 0.1
16	162	160		12 6.5 54 45.3
17	180	240	232 14.65 55.6	10 39.0 55 36.0
18	198	160		12 6.5 56 26.3
19	216	240		11 27.5 58 11.6
20	234	160	242 14.70 55.8	13 7.6 58 0.6
21	252	240		13 27.5 59 42.4

DATE _____ FLIGHT _____ OPERATOR _____

Formvar Log

ROLL #	TIME ON	TIME OFF	FRAME COUNT AT START	COMMENTS
1	252	240		13/9.5 N 58/30.2
2	270	160	182	14/24.0 57/21.1
3	288	240		15/38.1 58/33.0
4	306	160		16 1.0 57 2.4
5	324	240	192 ^{14.45} 54.8	17 41.1 57 16.0
6	342	160		16 59.1 55 39.4
7	360	240		18 30.0 55 0.0
8	18	160	202 ^{14.50} 55.0	17 2.1 54 8.2
9	36	240		17 44.1 52 31.5
10	54	160		16 7.0 52 57.2
11	72	240	212 ^{14.00} 55.2	15 47.1 51 14.5
12	90	160		14. 33.0 52 26.4
13	108	240		13 21.5 51 29.2
14	126	160	222 ^{14.60} 55.4	13 1.6 53 11.1
15	144	240		11 21.5 53 0.1
16	162	160		12 6.5 54 45.3
17	180	240	232 ^{14.65} 55.4	10 39.0 55 36.0
18	198	160		12 6.5 56 26.3
19	216	240		11 27.5 58 11.6
20	234	160	242 ^{14.70} 55.8	13 7.6 58 0.6
21	252	240		13 27.5 59 42.4