

19900831H1-CLDPHY

AUG 31 1990

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

RAB

- ☒ 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.
- ☒ 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 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 as follows:
 - a. Outside of Miami - to the HRD operations center (FGOC).
 - b. In Miami - to AOML/HRD. [Note: all data removed from the aircraft by HRD personnel should be cleared with the AOC 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 AUG 31 1990 Aircraft NOAA-42 Flight ID 900831H

A. Instrument Status and Performance: R, A, B.

System	Pre-Flight	In-Flight	Downtime	# of Tapes
Johnson-Williams	DOWN			
PMS probes:				25
2D-P	± ~	OK		
2D-C	± ~	OK		
FSSP	"	OK		
Data System	"	CRAP DISPLAY		
Recorder	(only 1)	see below		
Formvar	—	—		
DRI Charge Probe	—	—		
DRI Field Mills	up + down ✓	OK		
King Probe	—	—		

B. Remarks: *End diode volts on both probes are uneven + low on #1 diode. Image monitor going bad. reset formatter 3 times*

end diodes
#1 #2
C = .32 .43
P = .205 3.00

Formvar Log

Date _____ Flight _____ Operator _____

[illegible]

2-D Knollenberg Data Tape Log

Date AUG 31 1990

Flight 900831H

Operator R. A. BLACK

Tape #	EOF #	Time On	Time Off	Comments
1		163609	164146	START at IP after drop #1
2		164346	165714	~20 nm eye eyewall per. W side. slow rate 164400
3		165937	170518	S eyewall 165630
4		170755	171427	on at turn.
5		172051	173354	rebound. Tape format reset had it on 11 sec rate for a while.
6		173611	175543	slow for out. fast in eyewall start in turn inbound from pt. 4
7		175753	180820	N of eyewall, then westbound
8		181100	182120	westbound
9		182338	182955	southbound NNW of center.
10		183206	183744	southbound SW of center
11		183956	185001	'
12		185216	185755	eastbound SW of center
13		190022	190824	slow in turn toward center
14		191030	193150	stop before end.
15		193506	194049	E eyewall
16		194240	200355	slow in turn E of center
17		200622	202706	Southbound into eyewall
18		203214	210024	westbound out of eye
19		210351	211950	(NE) northbound into eye at start
20		212204	213330	in new NW eyewall

21 213544 214456 outer convection N-NW + W of center

22 2147-- 215256

23 215507 220847 SE eyewall

24 221103 221729

25 221936 2238-- climbout (slow rate), fast near 0°