



**NOAA P-3 N43RF
Hurricane Research
H. LILI HAIRSIN**



Flight ID: I020930

<u>Sensor or system</u>	<u>Number or Name</u>
INE	1
Accelerometer	1
Temperature Probe	1
Dew Point Probe	3 (Buck Research)
Altitude (for vertical wind)	Radar Altitude (RA-159)
Static Pressure	Rosemount Fuselage
Dynamic Pressure	Rosemount Fuselage
Time Source	Micro 99
Constants File	CO3022.CON

Notes:

There were several time/data gaps related to major data system problems:

175231Z - 175500Z, 181351Z - 181820Z, 182101Z - 182120Z, 194641Z - 195610Z, 221421Z - 222540Z (during eyewall penetration), 222741Z - 225230Z, 234841Z - 234850Z and 235921Z - 000130Z (during eyewall penetration).

The radar altimeter 159, RA159, had numerous spikes during the following time frames: 1741Z - 1744Z, 1938Z - 1942Z, 2023Z - 2025Z, 2029Z - 2034Z, 2034Z - 2044Z, 2054Z - 2100Z, 2103Z - 2112Z, 2305Z - 2309Z, 2312Z - 2314Z, 001031Z - 001500Z, 0042Z - 0052Z, and for 0053Z - 0102Z, RA159 = RA232 + 37. These spikes were removed and patched over using the RA232 (radar altimeter 232) and pressure altitude as references.

The King liquid water probe was not operating for the entire mission.

There were several occurrences during the flight where dewpoint temperature exceeded ambient temperature from heavy precipitation events.

All other instruments worked optimally during the flight.

The aircraft INE positions were renavigated with respect to GPS.

SPECIAL NOTE!!! Locations 80, 81 and 82 of record five on the standard tape contain vertical ground, vertical air and vertical speeds, respectively, computed using Dave Jorgensen's vertical wind algorithm.
It is recommended that these values be used for vertical wind analysis.

	Takeoff	Landing
Aircraft Static Pressure	1015.4 mb	1015.2 mb
Corrected Tower Pressure	1015.8 mb	1015.4 mb
Flight Director:	A. Barry Damiano	(813) 828-3310 ext. 3073

Flt ID: D020930	From: KMCF	To: KMCF
Flt No.: 02-39	Blk In: 0148	ATA: 0139Z
ETD: 1700Z	Blk Out: 1707Z	ATD: 1716Z
ETE:	Blk Time: 8:41 (8.7)	Flt Time: 8:23 (8.4)
Sponsor Org: NRD	Program: HURRICANE RESEARCH	Purpose: HAZ BILT SST CHG IN STORM

AOC Personnel

AC: TENNESEN ✓	Sys Eng: SMITH ✓
CP: HALVERSON / STRONG ✓	Data Sys: LYNCH
Nav: ADLER ✓	Radar:
FE: CURRY / FLOYD ✓	GPS/BT: TONG ✓
Avionics: SANS SOURCE ✓	Cld Phys:
FD: DAMIANO ✓	

Participating Scientists/Visitors/AOC

Name (Last, First)	Activity on Aircraft	Affiliation
CIONE, J. ✓	Pf	HRD
UHLIORN, E. ✓	AXBT / KEMR	S
GAMACHE, J. ✓	RADAR	
COOK, T. ✓	AXCP	RSMAS
GUHN, S. ✓	AXCP	RSMAS
WALSH, E. ✓	SAR	NASA

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Proposed/Actual Mission/Remarks	(Recco, Fixes, Storm, PENET, NHOP #)	K7 Forecasts
3001 NO KLU 20122	190214Z AF fix 1414Z fix 21Z	2012 80-3
Bal DWI 1739Z 9 2012 8015	2221Z 1943' 2024 7950'	Teal 74 1730Z
Date System Prod 9 2657Z 2015 8036	9 48 1954 1741Z 8018 984m	Teal 75 2330Z
1820Z 9 00Z 2354Z		

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AOCWF2

Flt ID: *D020930*Time Off: *1716Z*Time On: *0139Z*

	A/C (Take Off)	Wx Stn (Take Off)	A/C (Land)	Wx Stn (Land)
Pressure	<i>1015.4</i>	<i>30.01/1015.8</i>	<i>1015.2</i>	<i>29.99/1015.4</i>

	Number	Data Disposition/Date/Quality
Slow/Fast Flt Lvl Tapes	<i>4</i>	
Radar Tapes	<i>1</i>	
Cloud Physics Tapes		
Video Tapes	<i>3</i>	
AXBT	<i>31</i>	<i>5 left in externally</i>
AXCP	<i>6</i>	
AXCTD		
Dropsondes	<i>18</i>	<i>12 messages sent; no winds</i>

Video					Remarks
	Forward	Left Side	Right Side	Down	
Time On					
Time Off					
Rate					

Remarks

874

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Time	Lat	Long	Trk	Hdg	Wind Dir	Wind Spd	T _e	T _s	Press. Alt	Geo. Alt	Slc Press.	Press. Slc	Dyn. Press	Remarks
173100	2705	8212	158	153	87	20	8.0	5.0	3347	3545	1012.8	670.9	87.0	BTW CLD
175200	2536	8131	155	153	78	19	9.7	-6.3	3341	3534				
181000	2417	8110	190	187	87	24	9.1	1.6	3339	3523	1010.3	671.4	93.9	ADV SET CL
183600	2213	8128	185	182	63	26	8.6	5.5	3363	3513	1006.1	669.4	91.4	BTW CLD
184500	2141	8157	212	211	63	25	9.3	5.3	3214	3359	1007.4	682.1	102.0	CLW CLD
190000	2104	8258	265	271	81	26	10.2	4.0	3202	3341	1006.4	684.7	85.5	CLR
191558	2106	8402	109	106	28	17	19.1	12.5	1466	1507	1008.6	849.0	64.7	DEAP (13)
191735	2058	8356	109	106	25	17	19.2	12.4	1467	1507	1008.3	848.0	61.9	DEAP (12)
193700	2035	8245	111	108	4	17	18.2	14.3	1498	1529	1007.2	844.9	68.9	RW
194645	2023	8210			system down									GO W/CLD
200212	2005	8110												DEAP/R/L
201119	2004	8036									EYEWALL			DEAP/R/L
201435	2007	8021									EYEWALL			DEAP/R/L
202249	2022	7952			164	68								BT 16
202833	2046	7952			148	65					at Turn 4			BT 16
203551	2054	8027			115	58					1002.5			BT 16
204350	2057	8102			81	46					TURN 5			BT 16
204910	2039	8054												BT 16
205432	2022	8043			56	41					EYEWALL			BT 16
2057	2015	8036									EYE			BT 16
210405	2019	8052			18	47					EYEWALL			BT 16
211432	2037	8128			39	40					1001.8			BT 16
211917	2019	8139			7	24								BT 16
212426	2000	8150			333	23								BT 16
212928	1941	8200			314	23								BT 16
213417	1924	8209			303	28								BT 16
213937	1906	8219			306	20								BT 16
214704	1846	8233			294	18								BT 16
220555	1935	8136			286	28								BT 16
2233														BT 16
2233	2024	8048								980.8	7.2			BT 16
230148	1943	8045			235	48								BT 16
231421	1910	8043			232	32								BT 16
232247	1902	8007			206	53								BT 16
232721	1920	7958			205	34								BT 16
233145	1938	7948			176	40								BT 16
233623	1957	7938			170	51								BT 16
2341	2018	7933			161	48								BT 16

Flight ID: 1020930

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Time	Lat	Long	Trk	Hdg	Wind Dir	Wind Spd	T _a	T _s	Press. Alt.	Geo. Alt.	Slc Press.	Press. Slc	Dyn. Press	Remarks
234739	2023	11958			176	63								BT 12
235438	2028	12030			178	63								BT 16
235703	2029	12035			180	63								Sonde
235921	2033	12050												Sonde/Sonde
235928	2032	12050												Sonde
0001														BT 12
0002100	2157	8125	4	13	88	38	-3.5	-5.2	5511	5797	1001.0	5044	82.6	—
010400	2538	8134	349	355	92	27	-3.8	-16.3	5510	5845	1009.2	5044	91.8	—

17 SoB

3052402

REMARKS

2013.5
08035.6

TIME	FUEL	FF	CALC FF	SLIPK	WIND
1710	50.3	/	5.2	8+55	
1810	50.5	5.2	5.8	7+00	0110
2010	40.2	4.8	10.2 5.1	6+00	0210
2210	30.5	4.8	9.7 4.9	4+10	0210
2310	25.0	4.8	5.5	2+10	0150

INS 1 INS 2

1430

0

0139

1700

8739

INS 1 INS 2

-48

127

2

6

123 08304.8

REMARKS

14142

17418

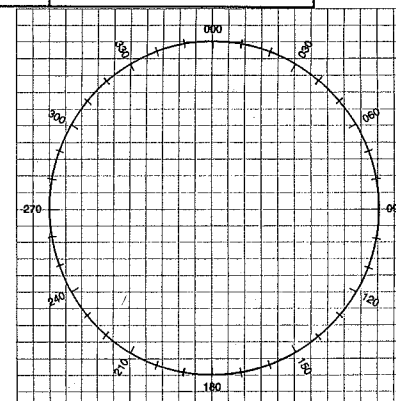
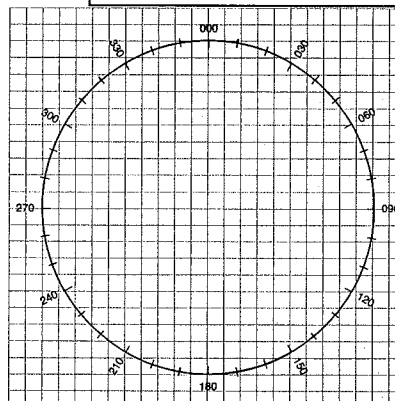
7 20 12 8031

20 0750

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MISSION LOG

PAGE OF



POSITION REPORT

1. POSITION
2. TIME
3. ALTITUDE
4. NEXT POSITION
5. ETA
6. NEXT POSITION

TRANSMIT
FREQUEN
ANY OF TH

UHF/VOI
243.0

MAYDAY
THIS IS P

- POSITION

- HEADIN

- AT _____

- FLIGHT
- WE ARE

- NATUR

- ASSIST

- PILOT I
- WE HA'

[illegible]