



**NOAA P-3 N42RF
Ocean Winds 2005
FLIGHT #5**

Flight ID: H050207

Sensor or system

Number or Name

INE.....	1
Accelerometer.....	1
Temperature Probe.....	1
Dew Point Probe.....	1
Altimeter (for vertical wind).....	RA-159
Static Pressure.....	Rosemount (fuselage)
Dynamic Pressure.....	Rosemount (fuselage)
Time Source.....	Micro 99
Constants File.....	CO2051.con

CYYT 071100Z 04005KT 6SM BKN005 BKN200 M03/M03 A3036 (not current)

Take off: 1443Z

Land: 0004Z

The RA-232 was substituted for the RA-159 during take off and landing due to spiking (155001 - 144332 T.O.; 234341 - 000700 Land).

****Note**** Total Temperature #2 (not used for final data) has questionable values from approximately 175200 - 184400.

Both dew pointers had bad or questionable data from take off until 145509. Neither dew pointer was corrected since there were no other values to correct them to.

PDAR (not used in any calculations) inoperative 175229 - 184817. PDSR (not used in any calculations) was inoperative 175225 - 184448. This was due to freezing of the unheated sensor.

There were data gaps noted. 143320 - 143403; "numerous (43) 2 second data gaps occurred between 222729 and 223501. (****NOTE**** These data gaps were noted using 'ncplot' on the acquired netCDF file after the flight. The final processing uses different algorithms for detection of missing data. These gaps may or may not be included in the final processed file.)

There were times during heavy precipitation events when the dew point exceeded ambient temperature and yielded a RH of greater than 100%. This is probably due to a wet bulb effect on the total temperature probe and/or the dew pointer over heating while trying to remove excess moisture. In these instances, no corrections were attempted.

The aircraft INE positions were re-navigated with respect to GPS.

SPECIAL NOTE: Locations 80, 81, and 82 of record 5 in the standard data contain vertical ground speed, vertical air speed, and vertical wind speed computed using Dr. Dave Jorgensen's vertical wind algorithm. It is recommended that these values be used for vertical wind analysis.

	Take off	Land
Aircraft Static Pressure	1012.4 mb	1019.5 mb
Corrected Tower Pressure	1028.1 mb	1020.0 mb

Flight Director: Tom Shepherd
813-828-3310 x3053

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Flight ID: 050207H Time Off: 1443 Time On: 0004

	A/C - Takeoff	Wx Station - Takeoff	A/C - Land	Wx Station - Land
Pressure	<u>1012.4</u>	<u>30.36</u> <u>1028.1</u>	<u>1019.5</u>	<u>30.12</u> <u>1020.0</u>

	Number	Data Disposition / Date / Quality
Flight Level Tapes	<u>2</u>	
Radar Tapes	<u>1</u>	
Cloud Physics Tapes / CDs	<u>2</u>	
Video Tapes	<u>4</u>	
Dropsondes	<u>8</u>	Good: <u>7</u> Bad: <u>1</u> <u>1st drop - no winds</u>
AXBT	<u>14</u>	<u>14 good</u>
AXCP		
AXCTD		

Remarks:

LAT LON
45 53
44
43
4336
42
41
40
39 53

LAT LON
36-25 72
36-14 73
36-04 74
35-53 75
35-53 75 30

2364
1443
921

2373
1433
940

@T.O. Wingtip pressures T.U.
1451 Bal DP1

071400Z 300 20G30 V5 -DE 0100VC 0/M4
A 3036

uu

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Flt ID: 050207H	From: CYT	To: K MCF
Flt. No: 05-10	Blk In: 0013Z	Time On: 0004Z
ETD: 1400Z	Blk Out: 1433Z	Time Off: 1443Z
ETE: +	Blk Time: 9+40 9.7 Hrs	Flt Time: 9+21 9.4 Hrs
Sponsoring Org: NOAA/NESDIS	Program: OCEAN WINDS	Purpose: FERRY - MISSION

AOC Flight Crew

Aircraft Commander: KENNEDY, P	Data System: M ^E MILLAN, S
Co-Pilot: SILAH, M	AVAPS: BARR, J
Navigator: BRAKOB, D	System Eng:
Flight Eng: KLIPPEL, J WADE, S	A A: M ^C FADDEN, J
Flight Director: SHEPHERD, T	A A:
Avionics: ROGERS, M	Crew Chief: BAST, G

Participating Scientists / Visitors

Name (Last, First)	Activity on Aircraft	Affiliation
CHANG, P	PI	NESDIS
ESTEBAN, D	CO PI	I
ASUZU, P	SFMR	UMASS

Remarks (Storm Name, Mission ID, Recco Times, Fix Times)	Recco Times	Fix # Fix Time
Storm Name: _____		
Mission ID: _____		

050207H	LAT	LON	TA	TD	Hdg	TK	RA	WD	WS	WZ	Comments
133737	47.37.20	-52.44.40	1.2	-2.2	84.2	232.2	6601.	84.0	1.3	0.0	test
143239	47.37.20	-52.44.40	2.7	-2.4	262.4	228.3	6.	270.1	1.1	0.0	Block out
144231	47.37.20	-52.45.60	-2.9	-4.0	267.2	265.7	-4.	74.9	4.5	0.0	Take off
145925	46.43.80	-53.00.00	6.9	1.8	175.7	178.7	1347.	87.2	6.1	0.0	4500 RA clr abv, ovc blo
151709	45.39.60	-53.00.00	8.3	7.0	174.9	177.6	1325.	120.5	7.3	0.0	Depressurizing
152004	45.28.80	-53.00.00	8.5	7.5	179.0	181.8	1325.	112.9	7.2	0.0	Descend to 25 RA
152804	45.00.00	-53.00.00	10.5	11.1	176.9	180.2	752.	64.7	8.1	0.0	BT1 ch 12
152923	44.55.20	-53.00.00	11.2	12.0	177.1	181.3	750.	82.5	9.4	0.0	In cld; lite precip
153831	44.22.80	-52.59.40	12.4	11.1	180.0	180.7	743.	149.1	4.1	0.0	Out of precip; ovc blo, clr abv
154502	44.00.00	-53.00.00	12.5	11.4	177.0	178.3	738.	142.2	5.8	0.0	BT2 ch 16; D1
155421	43.27.60	-53.00.00	12.7	12.2	177.8	179.4	734.	121.4	4.6	0.0	BT3 ch12; D2
160210	42.00.00	-53.00.00	13.1	11.4	177.9	179.3	733.	124.4	4.2	0.0	BT4 ch16; D3
161914	42.00.00	-53.00.00	13.4	10.9	177.6	180.7	720.	104.8	6.9	0.0	BT5 ch 12
163733	41.00.00	-52.42.00	13.7	11.0	147.1	150.8	747.	94.7	9.5	0.0	BT6 ch 16; D4; deviated to left to hit wx
165506	40.00.00	-52.40.20	14.3	14.5	182.7	188.5	747.	108.1	12.0	0.0	BT7 ch 12
170856	39.13.20	-52.49.80	14.7	14.6	182.8	185.7	739.	145.2	9.4	0.0	BT8 ch 16; D5
173754	39.19.20	-54.44.40	14.5	14.7	280.6	281.0	793.	99.9	15.0	0.0	Just went thru hvy precip for Dani; turn to trk 264
174526	39.17.40	-55.24.00	-2.4	-13.4	262.5	264.9	3813.	116.4	12.4	0.0	In a climb to FL165
180419	39.60.00	-57.15.60	-12.2	-13.2	259.5	259.3	5141.	97.5	4.1	0.0	FL165; in cld
184203	38.42.60	-61.3.60	-14.8	-34.3	263.5	259.4	5778.	38.4	14.5	0.0	Now at FL185; clr abv, ovc blo
191807	38.60.00	-64.47.40	-14.5	-37.4	263.3	256.4	5799.	15.6	24.5	0.0	Plugin' along; making 307 GS
194948	37.48.60	-67.40.80	-15.1	-38.4	84.2	91.2	5826.	35.7	18.2	0.0	Have tuned around for comms
195640	37.39.00	-67.55.20	-15.0	-40.6	259.1	252.8	5834.	22.1	19.9	0.0	Now back on trk
201012	37.19.20	-69.19.20	-14.1	-36.6	259.3	252.7	5840.	34.2	25.1	0.0	Beginning descent to 2500 RA
203034	36.55.80	-71.00.00	10.1	-4.0	256.7	251.4	756.	45.8	19.1	0.0	BT 9 ch 12
204521	36.39.60	-72.00.00	10.7	-25.1	256.9	250.1	761.	34.3	17.3	0.0	BT 10 ch 16
210016	36.24.00	-73.00.00	12.2	-16.0	256.8	251.0	766.	33.2	14.1	0.0	BT 11 ch 12; D6
211505	36.8.40	-74.00.00	12.1	-25.6	254.1	249.1	769.	38.3	14.9	0.0	BT12 ch16; D7
212939	35.54.00	-75.00.00	11.6	-21.8	276.6	269.8	775.	44.0	15.4	0.0	BT13 ch 12; D8
213641	35.54.00	-75.30.00	11.5	-18.6	272.1	266.7	872.	49.3	14.4	0.0	BT14 ch 16
213727	35.54.00	-75.33.60	11.2	-18.5	272.9	267.6	935.	49.2	13.2	0.0	Beginning climb
215244	35.45.60	-76.43.80	-15.2	-29.0	225.5	223.4	6334.	357.2	6.9	0.0	
215253	35.45.00	-76.44.40	-15.3	-29.1	225.6	223.5	6340.	.1	7.0	0.0	FL200; clr direct Charleston
221708	34.19.80	-78.25.20	-14.1	-30.9	227.7	224.0	6341.	323.0	9.8	0.0	Cruzin'.....
224902	32.20.40	-80.25.80	-12.4	-41.8	214.6	210.7	6376.	328.6	11.2	0.0	Still plugin' along....
231453	30.31.20	-81.42.60	-12.4	-41.4	215.6	211.6	6389.	323.2	11.3	0.0	Ovr Florida now
232920	29.26.40	-82.13.80	-5.7	-42.1	190.7	186.9	5432.	319.9	13.5	0.0	Descending into Tampa
000349	27.50.40	-82.31.80	18.8	-1.8	39.8	44.4	-7.	355.7	7.3	0.0	Land
001247	27.51.00	-82.29.40	19.9	-1.0	136.4	197.0	4.	27.1	6.9	0.0	Block in

(G) - GPS (I) - INS (R) RADIO (V) VISUAL (C) - CELESTIAL (D) - DR

11309

[illegible]

11
35
46

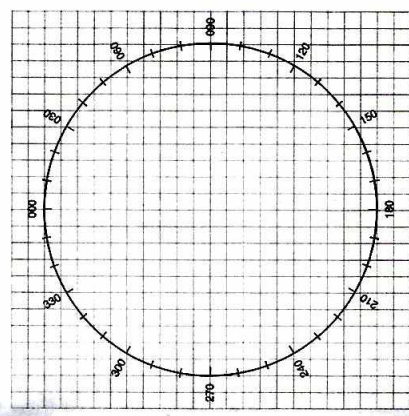
ENROUTE FUEL	
ENROUTE TIME	9+00
ENROUTE FUEL (6K SK 4.5K RULE)	46K
RESERVE AT DESTINATION	10K
REQUIRED RAMP	56K
ACTUAL RAMP FUEL	57.0

TACTICAL (OFFSTA TO DESTINATION)	
DISTANCE (OFFSTA TO DEST)	
ENROUTE TIME (OFFSTA TO DEST)	
BURN RATE (LBS/HR)	4500
ENROUTE FUEL REQUIRED	5500
RESERVE AT DESTINATION	
FUEL AT OFFSTA	

POINT OF SAFE RETURN	
ETP DISTANCE (TO DEPARTURE)	
ENROUTE TIME (TO DEPARTURE)	
BURN RATE (LBS/HR)	4500
FUEL REQUIRED	5500
RESERVE AT DEPARTURE	
PSR FUEL	

CEX - TRUE BEARING METHOD				CEX SIGHT	
COMPASS TYPE	INS1	INS2	WET	GMT	
MCH (READING)				GHA	
- MTH (SEXTANT)				CORR	
CE				GHA	
-VAR				LONG +W -E	
DEV				EXACT LHA	
				LAT	
				BODY	
				DEC	
				HC/D	
				CORR	
				HC	
				Z	
				ZN	

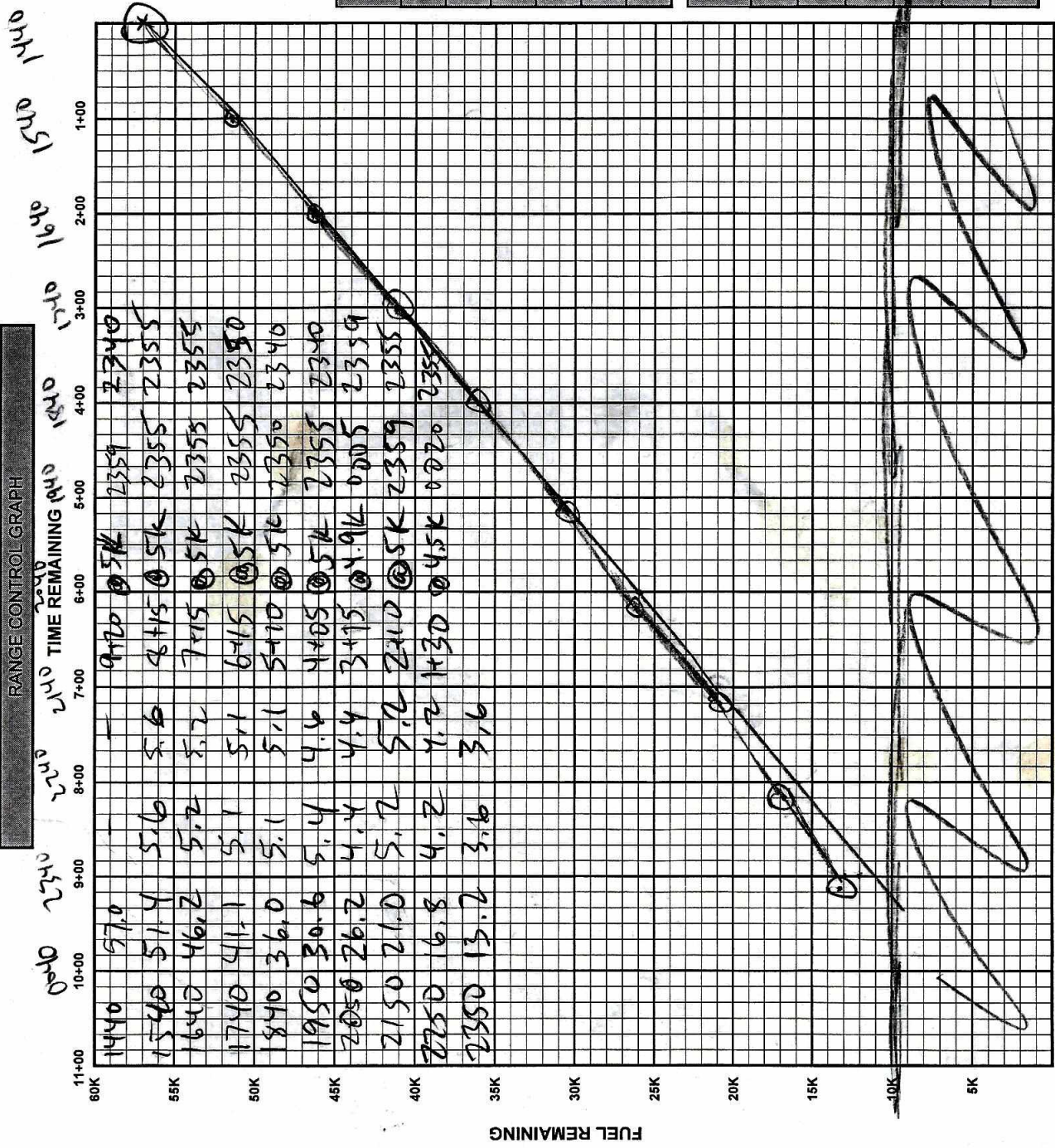
CEX - ERB METHOD			
COMPASS TYPE	INS1	INS2	WET
MERB (DIAL 000)			
+ZN			
= MTH			
MCH (READING)			
CE			
-VAR			
= DEV			



PRESS ALT	200	250	300	350
10,000	1.0	1.0	.99	.99
20,000	.99	.98	.97	.97
30,000	.97	.96	.95	.94
40,000	.96	.94	.92	.90

WIND FACTOR		
WINDSPEED	HEADWIND	TAILWIND
10	1.03	.97
20	1.06	.94
30	1.10	.92
40	1.14	.89
50	1.18	.87
60	1.22	.85

TRUE AIRSPEED CROSS-CHECK					
TIME	IAS	PRESS ALT	"F" FACTOR	EAS	TAS
1842	219	185	X	292	254



DISTANCE REMAINING

ETP = .5(TOTAL DISTANCE x OUTBOUND WIND FACTOR)

2062

V189

TAKEAWAY