

NOAA G-IV N49RF ERROR SUMMARY
WINTER STORMS 2011
2 Feb 2011 Modified TRACK74 (13WSW)
NCEP (PWT) RJTY →RJTY

Flight ID: 20110202N1

<u>Sensor or system</u>	<u>Number or Name</u>
Accelerometer	AccZI.1
Altitude	AltGPS.3
Attack Angle	AA.2
Dew Point Probe	TD.2
Dynamic Pressure	PQF.2
Geopotential Altitude	AltGPS.3
Inertial Selected	INE1
Static Pressure	PSF.2
Slip Angle	SA.1
Temperature Probe	TTM.3
True Airspeed	TASF.3
Constants File	49cal102
Flight Directory	acdata/2011/MET/20110202N1

Local Met Data	Takeoff (0739z)	Landing (1528z)
Aircraft Static Pressure	1003.6 mb	1005.3 mb
Tower Pressure (corrected)	1003.9 mb	1004.6 mb

Notes:

The only data gaps were in AltRa.1 from the APN-232 radar altimeter:

7:54:28 – 7:55:44z (multiple gaps during this interval)

8:18:04z

9:59:32z

10:35:26z

13:53:05z

14:50:15z

14:52:07z

15:03:31-15:03:36z (multiple gaps during this interval)

The ALTPA.1 (NACA Pressure Altitude) runs about 40-45 meters lower than a tight clustering of Air Data Computer and ADC Baro Corrected sources during cruise at 41K and 90-100 meters lower at 45K.

Angle of Attack sources: AaADDU.1 (from the Air Data Computer) was consistently about 0.5 degrees higher than either AA.1 or AA.2, or AaADDU.2. Spike in AA.1 prior to takeoff at 7:39:02z. Similar AA.1 spike after landing at 15:28:54z. In creation of higher MET parameters, PDAphaF.2 was selected (under Attack Pressure Probe Selection choices) to utilize AA.2.

GDIFF check: Mean of 1051 meters of drift for INE #1 (with respect to the Novatel) 1611 meters for INE#2. In creation of higher MET parameters, INE #1 selected.

The Left Dew Point sensor (TD.1) again read far too high through the entire flight. TD.2 did a reasonably good job but is also too high during the cruise portion of flight at or above 41,000 feet (where sondes suggest an RH near 5% and the dew points generated by TD.2 yield an RH around 25%).

Vertical Winds showed a small low bias during the cruise portion of flight (with a UWZ.1 mean of -0.16) but then, as expected, show a significant high bias during descent prior to landing.

All other flight level instruments worked optimally during the flight.

- 19 drop points assigned by NCEP
- 19 AVAPS II dropsondes deployed
- All 19 were good and all 19 coded surface winds.

Flight Directors: Richard Henning and Jessica Williams (813) 828-3310 ext. 3086

U.S. Dep't. of Commerce / NMAO / NOAA / Aircraft Operations Center				
FLT ID: 20110202N1		From: RJTY		To: RJTY
FLT #: 11-31		Blk In: 1531 Z		Lnd Time(on): 1528 Z
ETD: 0800 Z		Blk Out: 0735 Z		T/O Time (off): 0739 Z
ETE: 8+00		Total Blk: (7.9)		Total Flt: (7.8)
Sponsoring Org: NCEP		Program: PWT (WSR11)		Purpose: 02/12Z TRACK 74
AOC Flight Crew				
Aircraft Commander: HAGAN			Data System: DEFEED ROLES	
Co-Pilot: TWINING			Avaps: RICHARDS	
Navigator: /			System Engineer:	
Flight Eng: /			AA:	
Flt Director: WILLIAMS HENNING			AA: /	
Avionics:			Crew Chief:	
Participating Scientists, Visitors, & Add'l Aircrew on back.				# of people listed on back:
	A/C - Takeoff	Wx Station - Takeoff	A/C - Land	Wx Station - Land
Pressure	PS 1003.6	30.13 STA 1003.9		30.15 STA 1004.6
ATIS - Takeoff				
ATIS - Land				
Data Source	Number	Data Disposition / Date / Quality / File Name(s)		
Flight Level Tapes				
Radar Tapes				
Dropsondes	19	Good: 19	Bad: \emptyset	Sent: 19
AXBT				
Remarks (Storm Name, Mission ID, Recco Times, Fix Times)		Recco Times:	Fix #	Fix Time
Storm Name: _____				
Mission ID: NOAA9 13WSW TRACK 74				

19 drops. Drop#10 42.6N 172.3E CP

N49RF AOC GPS Dropwindsonde Log

Flg ID: 20110202N1 Flight Director: HENNING Pg of
 Missle ID: NOAA913WSWTRK74 Storm/Track: TRACK 74 drop pts modified

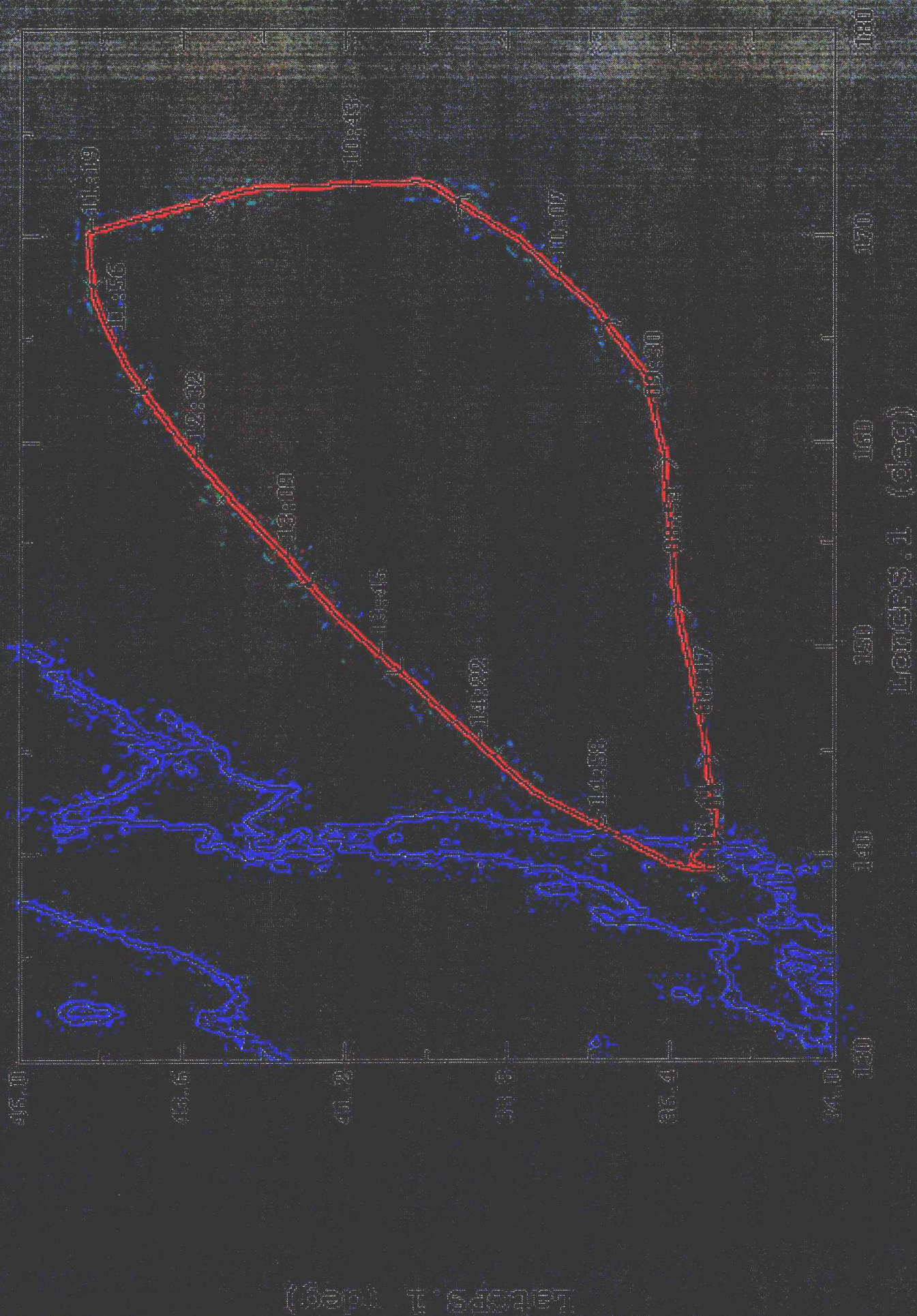
Drop #	Index	Index ID	Drop Time (UT)	Lat (°N)	Lon (°E)	Wx Cond.	L5/R5?	SFC Prs (mb)	Last Wind Alt (m)	Comments	Ch #	SatComm failures	KWBC #
1	1	5042	081715	35.9	145.8		RS	1022.7 SFC		015/5	1		084118
2	2	5032	083218	36.1	149.0		RS	1021.6 SFC		330/13	2		085311
3	3	5016	084618	36.3	152.0		RS	1019.5 SFC		345/29	3	092637	090733
4	4	5044	090318	36.4	155.6		RS	1015.6 SFC		305/30	4		092312
5	5	5047	092200	36.5	159.5		RS	1011.2 SFC		295/29	1		094804
6	6	5043	094054	36.8	163.3		RS	1004.4 SFC		295/35	2		100350
7	7	5036	095805	37.5	166.5		RS	999.7 SFC		290/24	3		102133
8	8	5142	101648	38.6	169.8		RS	994.0 SFC		275/35	4		103752
9	9	5081	103859	40	172.7		RS	989.8 SFC		145/17	1		110158
10	10	5053	105544	42.6	172.3		RS	992.2 SFC		105/24	2		111833
11	11	5050	120135	43	170.1		RS	998.7 SFC		060/18	3		114759
12	12	5045	114027	44.9	167		RS	998.5 SFC		080/17	4		120904
13	13	5240	120254	44.9	163.6		RS	1000.3 SFC		360/23	1		122621
14	14	5026	122424	43.7	160.45		RS	1005.7 SFC		340/27	2		124752
15	15	5244	124606	42.9	157.4		RS	1008.0 SFC		330/24	3		131102
16	16	5183	130718	42.1	154.6		RS	1015.6 SFC		315/17	4		132819
17	17	5151	133031	41.3	151.6		RS	1018.9 SFC		300/16	1		135748
18	18	5077	135503	40.2	148.6		RS	1020.7 SFC		280/12	2		141926
19	19	5127	141810	39.3	145.8		RS	1021.7 SFC		240/9	3		144210
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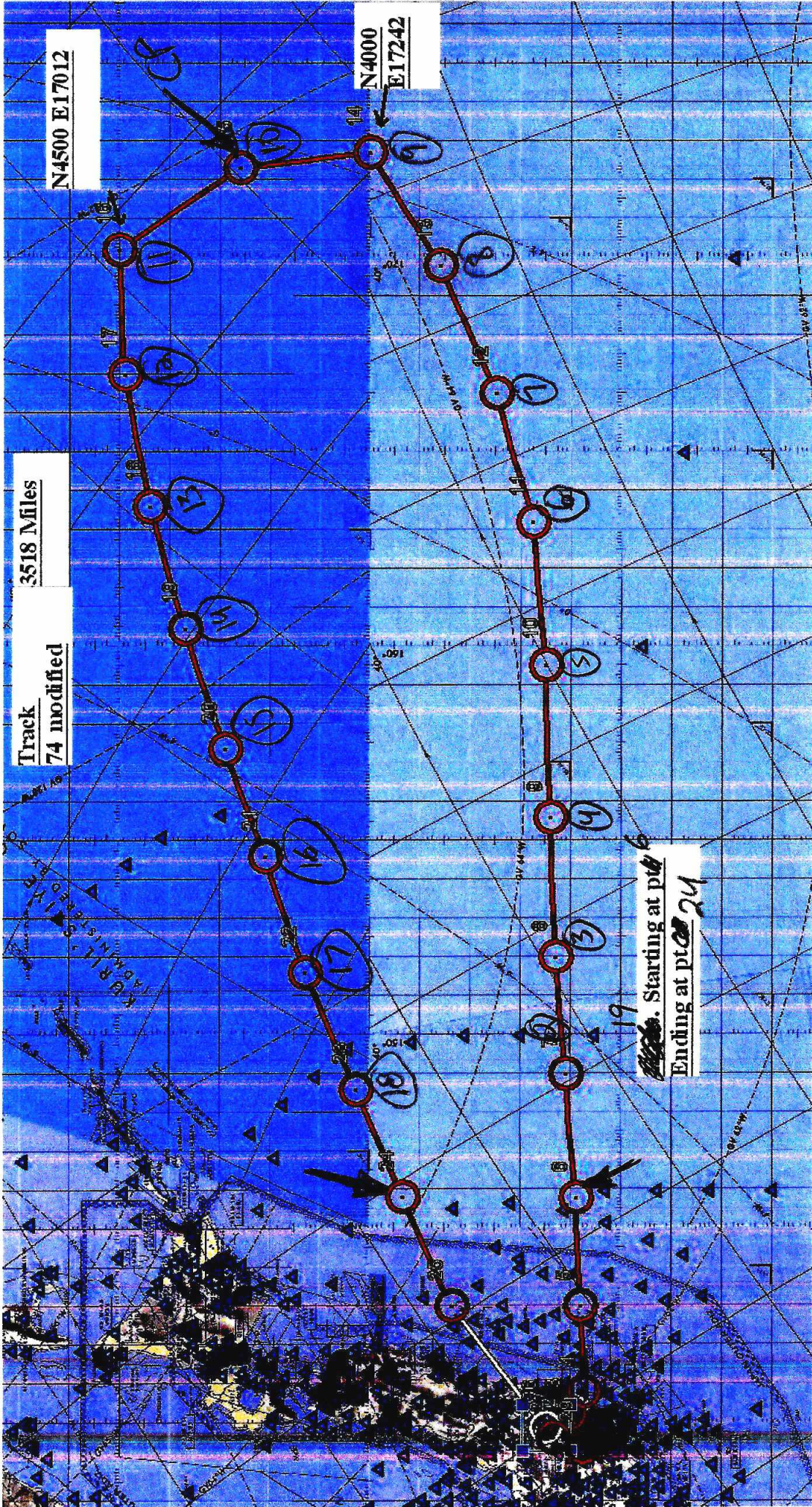
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drops pts.txt

1	35	54	145	48
2	36	06	149	00
3	36	18	152	00
4	36	24	155	36
5	36	30	159	30
6	36	45	163	12
7	37	30	166	30
8	38	36	169	48
9	40	00	172	42
10	42	36	172	18
11	45	00	170	12
12	44	54	167	00
13	44	24	163	36
14	43	42	160	27
15	42	54	157	22
16	42	06	154	36
17	41	18	151	36
18	40	16	148	36
19	39	20	145	49

02/02/2011, 07:04:58-15:34:57





Track
74 modified

3518 Miles

N4500 E17012

N4000
E17242

Starting at pt 6
Ending at pt 24