

NOAA G-IV N49RF ERROR SUMMARY
WINTER STORMS 2011
3 Mar 2011 Modified TRACK42 (35WSC)
NCEP (PWT) PHNL →PHNL

Flight ID: 20110303N1

<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	INE2
Static Pressure	PSF.2
Slip Angle	SA.2
Temperature Probe	TTM.1
True Airspeed	TASF.3
Constants File	49cal102
Flight Directory	acdata/2011/MET/20110303N1

Local Met Data	Takeoff (1949z)	Landing (0351z)
Aircraft Static Pressure	1013.1 mb	1009.9 mb
Tower Pressure (corrected)	1014.0 mb	1011.0 mb

Notes:

The only data gaps were three intervals in AltRa.1 from the APN-232 radar altimeter:
20:07:58-20:08:37z (multiple gaps during this interval during climbout)
02:04:22z and 03:29:36z

In creation of higher MET parameters, PDAlphaF.2 was selected (under Attack Pressure Probe Selection choices) to utilize AA.2.

GDIFF check: Mean of 2480 meters of drift for INE #1 (with respect to the Novatel)
2130 meters for INE#2. In creation of higher MET parameters, INE #2 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 between 30 and 40 %).

TTM.3 displayed an oscillation of around 0.4C (with a period of approx 4.5 minutes) during cruise above 41K. TTM.1 is the default.

Vertical Winds showed a larger bias than normal during the cruise portion of flight (with a mean UWZ.1 of +0.29 for the six hour interval from 20:44-02:52z).

All other flight level instruments worked optimally during the flight.

- 43 drop points assigned by NCEP
- 44 AVAPS II dropsondes deployed, 1 Fast Fall (2013z Drop Pt #2) Backup was good
- 43 drops good and transmitted for ingestion into 04/0000z model runs

Flight Director: Jessica Williams (813) 828-3310 ext. 3140 and LCDR Nancy Ash

U.S. Dep't. of Commerce / NMAO / NOAA / Aircraft Operations Center

FLT ID: 20110309 NI	From: PHNL	To: PHNL
FLT #: 11-039	Blk In: 0356 Z	Lnd Time(on): 0351 Z
ETD: 2000 Z	Blk Out: 1929 Z	T/O Time (off): 1949 Z
ETE: 8.5	Total Blk: 8.4	Total Flt: 8.0
Sponsoring Org: NCEP	Program: WSR	Purpose: SURV

AOC Flight Crew

Aircraft Commander: Twining	Data System: Rogers
Co-Pilot: Toth	Avaps: Paul, Smith
Navigator: /	System Engineer: Goldstein
Flight Eng: /	AA:
Flt Director: Williams, Ash	AA:
Avionics:	Crew Chief:

Participating Scientists, Visitors, & Add'l Aircrew on back. 0

of people listed on back: 8

	A/C - Takeoff	Wx Station - Takeoff	A/C - Land	Wx Station - Land
Pressure	10		1009.7	

STA

014.0

011.0

ATIS - Takeoff	031853Z 120116KT 10SM FEW033 SCT041 BKN095 24/20
ATIS - Land	040253Z 16008KT 10SM FEW021 SCT031 SCT038 26/21 A2986 2995

Data Source	Number	Data Disposition / Date / Quality / File Name(s)
Flight Level Tapes		
Radar Tapes		
Dropsondes	44	Good: 43 Bad: 1 Sent: 43
AXBT		

List other data sources on back in Remarks section.

Remarks (Storm Name, Mission ID, Recco Times, Fix Times)	Recco Times:	Fix #	Fix Time
Storm Name: _____			
Mission ID: NOAA9 35WSC TRACK42 (MXD)			

YOKOTA, WX

374oss.weather@yokota.af.mil
PMSV 344.6

003608

AOC GPS Dropwindsonde Log

14032.12

Flight ID: 20110303N

Flight Director: Ash Williams

Pg 1 of 2

Mission ID: NGA9 35WSC

Storm/Track: TRACK-42

Ch. #	Drop #	Sonde ID	Drop Time (UTC)	Lat (°N)	Lon (°W)	Wx Cond.	SFC Pres (mb)	Ob #	L5/R5	Last Winds R5 (ht, ws, wd)	Last Winds L5 (ht, ws, wd)	Sent Time/KW/BC (UTC)
1	01	102135190	2006			ST		01	R5			
2	02	103525124	2013			ST		02	R5	fast fall		
3	03	103525127	2014	23.6	159.1	ST	1013.5	02	R5			203654
4	04	103515249	2021			ST		03	R5			
1	05	103515256	2028	25.0	159.6	ST	1014.8	04	R5			204937
2	06	103525128	2035			ST		05	R5			
3	07	103525122	2043	26.7	160.0	ST	1016.4	06	R5			210612
4	08	103525003	2051			ST		07	R5			
1	09	103515088	2059	28.5	160.4	ST	1017.1	08	R5			212206
2	10	103515243	2107			ST		09	R5			
3	11	103525126	2115	30.3	160.9	ST	1018.9	10	R5			213807
4	12	103525008	2124			ST		11	R5			
1	13	103515248	2133	32.3	161.4	ST	1018.7	12	R5			222513
2	14	103525116	2144			SET CU		13	R5			
3	15	103525116	2219	30.2	163.0	SC CU	1018.2	14	R5			224507
4	16	103515242	2239			ST		15	R5			005855
1	17	103525118	2257	25.6	163.1	OC	1013.9	16	R5			232501
2	18	103515084	2319			OC		17	R5			235603
3	19	103515244	2343	77.9	167.7	SC CU	1015.8	18	R5			001454
4	20	103515247	0003			SET CU		19	R5			
1	21	103525117	0011	28.2	169.1	SC CU	1016.1	20	R5			002958
2	22	102145006	0018			SET CU		21	R5	early launch det		
3	23	094735103	0024	26.9	167.7	SET CU	1014.4	22	R5			004624
4	24	09120053	0030			SET CU		23	R5			
1	25	102135053	0036	25.8	166.4	SET CU	1012.7	24	R5	early launch det		011149
2	26	102335046	0042			SET CU		25	R5			
3	27	100145087	0048	29.5	165.1	SET CU	1011.5	26	R5			011621
4	28	102335042	0054			SET CU		27	R5			
1	29	10045310	0100	23.4	163.8	SET CU	1009.6	28	R5			012221
2	30	094735350	0109			SET CU		29	R5			020014
3	31	102135022	0117	21.9	163.8	SET CU	1008.5	30	R5			013909
4	32	102145022	0123			SET CU		31	R5			

2013

2014

2021

2028

2035

2043

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4473

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Flight ID:

Flight Director:

Mission ID:

Storm/Track:

Pg _____ of _____

[illegible]

Flight ID: 20110303N1

Flight Director:

Ash Williams

Mission ID:

NO449 35 WSC

Storm/Track:

Track 32

Pg 2 of 2

[illegible]

AOC GPS Dropwindsonde Log

13 drops
6.9 minutes

Flight ID: 20110303N1

Flight Director: Ash/Williams

Mission ID: NOAA 9 35WSC

Storm/Track: TRACK 42

Pg. of

Ch. #	Drop #	Sonde ID	Drop Time (UTC)	Lat (°N)	Lon (°W)	Wx Cond.	SFC Pres (mb)	Ob #	L5/R5	Last Winds R5 (ht, ws, wd)	Last Winds L5 (ht, ws, wd)	Sent Time KWBC (UTC)
1	1	103525110	2006	22.6	-158.7	ONC	1013.6	1	R5			202528
2	2	103525124	2013	F	A	ST	F	A	L			
3	3	103525127	2014									
4	4	103525124	2021	24.2	-159.4		1013.7	3	R5			204149
5	5	103525120	2028				1016.1	4				211244
6	6	103525128	2034	25.8	-159.8			5	R5			211858
7	7	103525122	2043				1016.7	6				212958
8	8	103525003	2051	27.6	-160.2			7	R5			214402
9	9	103515008	2059					8				
10	10	103515243	2107	27.4	-160.7		1017.6	9	R5			
11	11	103525126	2115					10				
12	12	103525008	2124	31.3	-161.1		1018.8	11	R5			220016
13	13	103525116	2133	33.6	-161.7		1018.3	12	R5			
14	14	103525116	2144					13				
15	15	103525110	2219					14				
16	16	103525122	2239	27.8	-163.0		1015.8	15	R5			230129
17	17	103525118	2257					16				
18	18	103515084	2319	26.7	-165.3		1014.5	17	R5	GPS Wind Anomaly		234533
19	19	103515244	2343					18				
20	20	103515244	000855	28.9	-169.7		1015.8	19				002848
21	21	103525117	0011					20				
22	22	103525117	0018	27.5	-168.3		1015.4	21		EARLY LNU		005902
23	23	103525103	0024					22				
24	24	103525103	003040	26.3	-166.9		1014.1	23				010107
25	25	103525103	0036					24		EARLY LNU		011411
26	26	103525106	0040	25.2	-165.7		1012.2	25				
27	27	103525107	0049					26				
28	28	103525107	0054	24	-164.4		1010.4	27				011717
29	29	103525107	0100					28				
30	30	07473530	0108	22.6	-163.0		1006.9	29				013828
31	31	10213022	0117					30				
32	32	10213022	012342	21.5	-164.4		1008.2	31				015134

223735

235634

015801

West Coast pepn - low
nrn CA pepn - high
t/o wx: wd:

fast west
coast storm

Track 42 modified
46 drops

2000Z
3/3

ws: (urlb4kt P6sm vosh set025 set040 bkn080)
couds: ^{fm 2000} 17010615kt P6SM vosh set025 bkn 045
turb:

Outbound:

wd: north leg
w/nw 40kts
ws: into jet w 90kts
clouds:
turb:

Inbound:

wd: w 90kt
ws: nw 30kt
clouds:
turb:

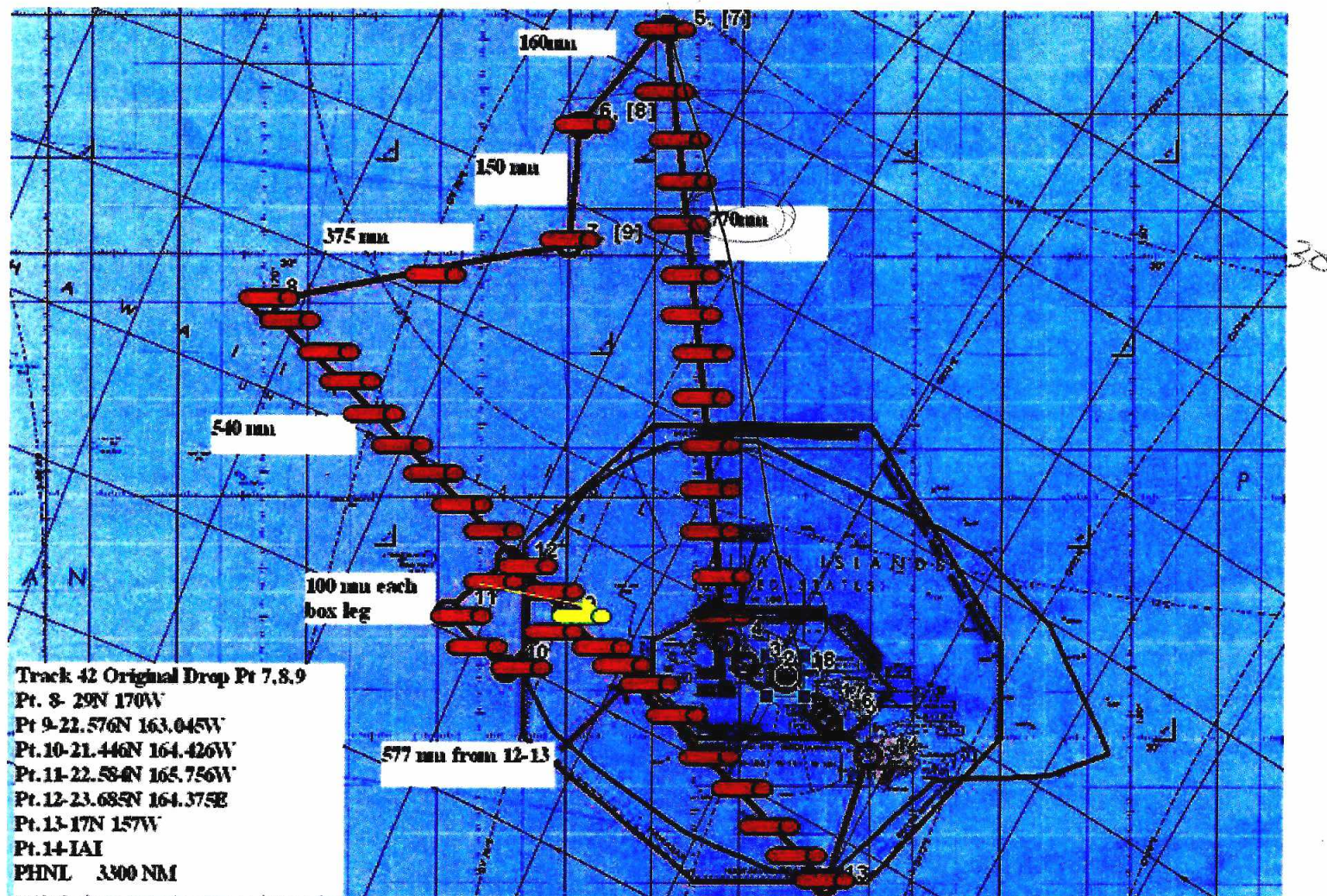
landing wx:

wd: 19014620kt P6sm vosh set025 bkn035
ws:
clouds:
turb:
local conditions:

Sea Salt:

Volcanic Ash:

alternates
pmdy 09009kt P6sm few025 bkn035



Total Sondes = 44

From innder Adiz - WP 5 = 14 Drop Points' ($770\text{nm}/54\text{nm} = 14.3$)

DP15 = Waypoint (WP) 6

DP16 = WP 7

DP17 = Midway between WP7 and WP8

From WP8 - WP9 = 12 DP's ($640\text{nm}/54\text{nm} = 11.85$)

DP30 = Midway between WP9 and WP10

DP31 = WP10

DP32 = Midway between WP10 and WP11

DP33 = WP11

DP34 = Midway between WP11 and WP12

Fly to WP 9

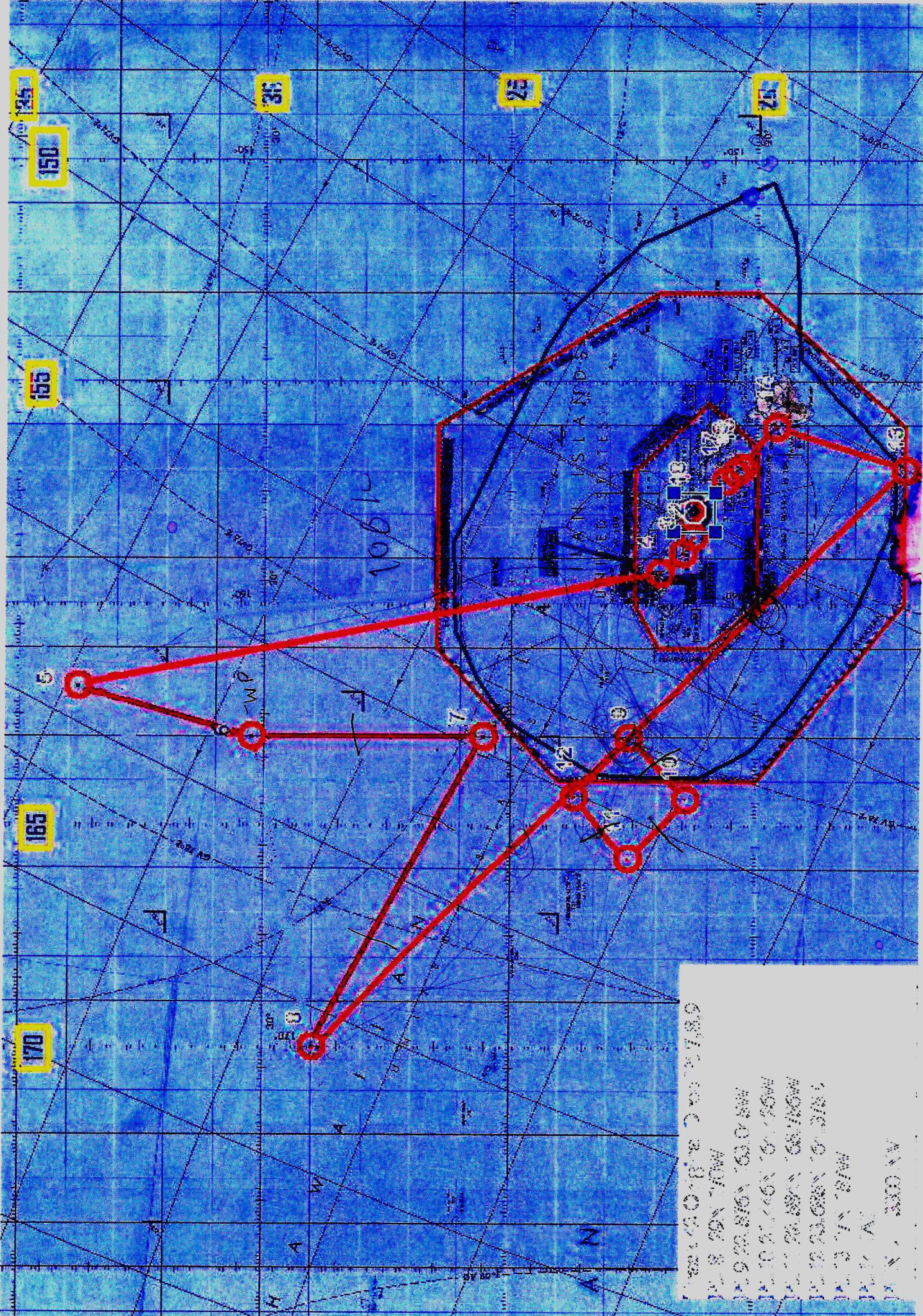
Yellow Sonde is 9. Drop on first pass before entering box and second pass after entering box

From WP9 - WP13 = 10 DP's ($477\text{nm}/54\text{nm} = 10.7$ but 10 drops fits better in the spacing)

26

54nm

690/54



AN 0300 330 NW
M18. 31. 0 30
M04. 00. 1. 08 30
M06. 00. 1. 08 30
M08. 00. 1. 08 30
M10. 00. 1. 08 30
M12. 00. 1. 08 30
M14. 00. 1. 08 30
M16. 00. 1. 08 30
M18. 00. 1. 08 30
M20. 00. 1. 08 30
M22. 00. 1. 08 30
M24. 00. 1. 08 30
M26. 00. 1. 08 30
M28. 00. 1. 08 30
M30. 00. 1. 08 30
M32. 00. 1. 08 30
M34. 00. 1. 08 30
M36. 00. 1. 08 30
M38. 00. 1. 08 30
M40. 00. 1. 08 30
M42. 00. 1. 08 30
M44. 00. 1. 08 30
M46. 00. 1. 08 30
M48. 00. 1. 08 30
M50. 00. 1. 08 30
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M76. 00. 1. 08 30
M78. 00. 1. 08 30
M80. 00. 1. 08 30
M82. 00. 1. 08 30
M84. 00. 1. 08 30
M86. 00. 1. 08 30
M88. 00. 1. 08 30
M90. 00. 1. 08 30
M92. 00. 1. 08 30
M94. 00. 1. 08 30
M96. 00. 1. 08 30
M98. 00. 1. 08 30
M100. 00. 1. 08 30