



NOAA P-3 N43RF
SALLJEX 2003
FLT # 8



Flight ID: I030128

Sensor or system

INE
Accelerometer
Temperature Probe
Dew Point Probe
Altitude (for vertical wind)
Static Pressure
Dynamic Pressure
Time Source
Constants File

Number or Name

2
2
1
2
Pressure Altitude
Rosemount Fuselage
Rosemount Fuselage
Micro 99
CO3031.CON

Take off: 1157Z

Land: 2044Z

Notes:

The RA-159 altimeter was substituted with the RA-232 from 115401 - 120300 (take off) and 203730 - 204700 (landing) due to spiking.

There were several times (between 152501 - 174500) when the dew point temperature exceeded the ambient temperature resulting in a RH > 100%. During this time frame, we also saw sharp increases in the Johnson-Williams Liquid Water sensor. This happened while flying through clouds over the ocean, and were likely due to a wet-bulb effect on the total temperature sensor and/or an artificial warming of the dew point sensor as it tried to burn off excess moisture. No corrections were made during these events.

The APN-159 was used for surface pressure calculations.

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	968.6 mb	962.8 mb
Corrected Tower Pressure	1010.8 mb	1006.1 mb

Flight Director:
Phone #:

Paul Flaherty
(813) 828-3310 ext. 3094

Flt ID: 030128I	From: SLVR	To: SLVR
Flt No: 03-029	Blk In: 2049	ATA: 2044
ETD: 1200	Blk Out: 1145	ATD: 1157
ETE: 9+00	Blk Time: 9.1	Flt Time: 8.8
Sponsor Org: NOAA/NSSL	Program:	Purpose:

AOC Personnel

AC: TE BEEST, R ✓ / TAGGART, B ✓	Sys Eng: LYNCH, T ✓
CP: STRONG, T	Data Sys: TONG, R ✓
Nav: BRAKOB, D ✓ / NEWMAN, C ✓	Radar: HALL, P ✓
FE: FLOYD, D ✓ / TORREY, R ✓	GPS/BT:
FD: SHEPHERD, T ✓	Cld Phys:
Avionics: SANS SOUCL, D ✓	AA: MC FADDEN, J ✓

Participating Scientists / Visitors / AOC

Name (Last, First)	Activity on Aircraft	Affiliation
DOUGLAS, M ✓	PI	NOAA/NSSL
ZIPSER, E ✓	Co PI	U of Utah
MEITIN, J ✓	OBS	NOAA/NSSL
VARELA, A. M. ✓	↓	NOAA/OGP
CAVALCANTI, IRACEMA ✓	↓	CPTEC, BRAZIL
BAEZ, JULIAN ✓	↓	DINAC, BRAZIL
CASCAND, CARLOS ✓	MEDIA	RED P.A.T. BOLIVIA
GUTIERREZ, DAVID ✓	↓	↓

Proposed/Actual Mission Remarks (Recco, Fixes, Storm, PENET, NHOP #)

1230 Bal DPI
1236 Bal DP3

104
57
47

U.S. Dept. of Commerce / NOAA / Aircraft Operations Center

AOCW-2

Flight ID:

030128I

Time Off:

1157

Time On:

2044

	A/C (Take Off)	Wx Station (Take Off)	A/C (Land)	Wx Station (Land)
Pressure	968.6	29.85	962.8	29.71

	Number	Data Disposition / Date / Quality
Flt Lvl Tapes	2	
Radar Tapes	1	
Cloud Physics Tapes	0	
Video Tapes	4	
AXBT		
AXCP		
AXCTD		
Dropsondes		

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

Remarks

Time	S Lat	Long	Trk	Hdg	Wind Dir	Wind Spd	T _a	T _d	Press. Alt.	Geo. Alt.	Sfc Press.	Press. Sfc	Dyn. Press	Remarks
121335	1744	6409	266	263	151	20.2	0.3	-3.5	4318	2909	833.6	587.9	64.6	Climbing to FL180
123855	1754	6621	267	264	141	25.4	-4.8	-25.8	5516	2013	640.2	503.9	85.8	FL180 SCRIBO
125430	1759	6748												BEGIN ↓ to 1000'
125940	1810	6756	153	153	39	7.8	6.5	1.9	3927	308	645.8	622.1	68.5	
131030	1832	6719	146	145	78	8.9	7.6	2.9	3760	283	658.1	635.8	59.5	1000 AGL
132440	1910	6721	245	246	13	3.6	7.8	2.2	3829	289	652.4	629.1	66.2	1000 AGL
135100	1950	6806	171	172	175	5.3	8.8	1.7	3725	274	660.3	638.7	66.8	1000 AGL
140813	2021	6726												500 AGL
140415	2023	6722	123	124	61	4.5	7.9	-2.2	3740	293	660.5	640.5	76.7	1000 AGL
140650	2029	6713	121	122	90	5.5	8.9	-5.2	3735	288	660.5	638.1	75.5	1000 AGL
141610	2051	6643	207	207	54	2.2	9.0	-2.3	3827	265	653.8	629.6	65.5	1000 AGL
142205	2114	6635												16000 PA
142530	2126	6702	214	216	41	10.5	9.1	-3.7	3881	295	648.2	625.6	71.3	1000 AGL
143750	2145	6745	287	288	127	4.2	-6.5	-10.9	5648	1273	580.0	495.0	72.3	FL184
145210	2217	6840	224	225	190	3.8	-4.2	17.4	5528	3311	753.6	503.4	74.5	FL180
154040	2107	7044												500' RA
154135	2106	7047	287	289	54	2.6	19.3	12.0	280	295	1013.4	978.7	63.1	1000' RA
154930	2058	7117	290	291	90	3.4	19.2	12.6	289	298	1013.4	978.8	65.0	1000' RA
155900	2044	7152	291	291	233	6.2	18.8	13.2	281	292	1013.6	979.9	68.9	1000' RA
160515	2035	7216					18.5	-23.7						7500' RA
161130	2028	7242	284	283	224	6.7	20.4	13.7						500' RA
161735	2027	7246	284	283	218	8.0	18.6	13.6	297	310	1014.0	977.7	72.8	1000' RA
162350	2011	7330	293	291	184	10.0	18.9	15.1	274	287	1014.0	980.9	63.4	1000 RA
163945	1945	7329	067	069	147	8.0	20.6	14.2						500' RA
164150	1943	7324	66	69	156	6.0	18.7	13.5	327	342	1014.0	974.5	78.5	1000' RA
164610	1935	7304	67	67	146	11.6	19.1	-14.8						6000 RA
165045	1928	7247	064	067	172	8.8	19.7	12.8	269	281	1013.6	981.1	76.0	1000 RA
170115	1910	7209	64	66	183	6.1	21.5	14.1						500' RA
170240	1908	7203	64	66	181	5.9	19.9	13.6	303	309	1013.0	977.7	76.7	1000' RA
170730	1900	7146	065	066	159	3.1	18.9	-6.0						6000 RA
171208	1852	7128	065	066	198	4.9	20.4	13.9	289	292	1012.8	979.2	82.6	1000' RA
171710	1844	7110	065	067	204	3.3	19.7	-18.6						6000 RA
172220	1835	7051	066	067	291	5.3	21.1	15.9						500' RA
172320	1834	7049	066	066	292	3.3	19.8	14.7	300	302	1012.3	978.0	80.4	1000 RA

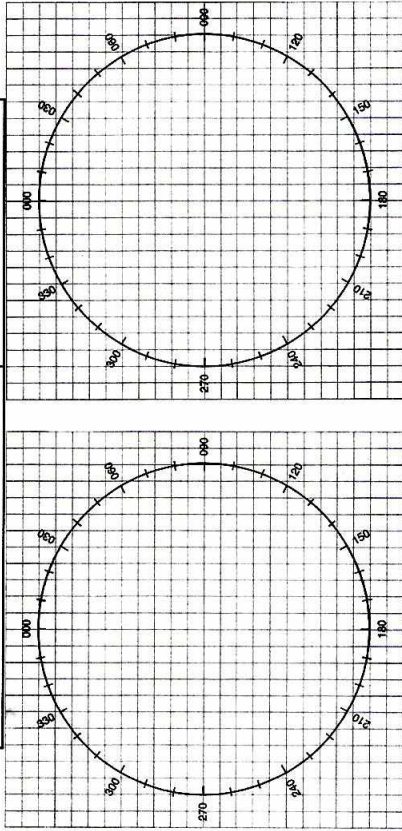
29.85 1743

CLEARANCES			
FREQ	ALT	HDG	OTHER
123.7		174170	270
118.3			
125.9			
121.9			
122.7			
149.9			
128.2	1440		

128.2

MISSION LOG

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

EMERGENCY MESSAGE

TRANSMIT THE FOLLOWING MESSAGE TO ANY AGENCY ON THE AIR-GROUND FREQUENCY IN USE. IF UNABLE TO ESTABLISH COMMS, ATTEMPT CONTACT ON ANY OF THE FOLLOWING EMERGENCY FREQUENCIES:

UHF/VOICE VHF/VOICE MF/VOICE HF/CW MF/CW
243.0 121.5 2182 KHZ 8364 KHZ 500 KHZ

MAYDAY, MAYDAY, MAYDAY

THIS IS NOAA, NOAA, NOAA 43

- POSITION N/S E/W AT Z
- HEADING TRUE/MAG
- AT KTS TRUE/INDICATED
- FLIGHT LEVEL OR ALTITUDE 21
- WE ARE A P-3 AIRCRAFT WITH SOULS ON BOARD
- NATURE OF EMERGENCY
- ASSISTANCE DESIRED
- PILOT INTENTIONS
- WE HAVE ENDURANCE REMAINING

TIME	FIX TYPE	POSITION	INS 1 POSITION	KERR	INS 2 POSITION	KERR	VAR +E=>	TH	DR +R=>	TRK	GS	WD	WS	ALT	TAS	NEXT PT	DIST	TIME	ETA	REMARKS
1141	ENVO																			
1145	TAXI																			
1145	BLAKE																			
1157	T/O																			
1207	XV	17-41.5 63-43.3	17-41.5 63-43.3	0	17-41.5 63-43.3	0							20	11K	224					V1R 260/34 ✓
1246	AG	17-56.3 67-03.3	17-56.3 67-03.3	+1	17-56.3 67-03.3	+1							12	18K	297					
1330	AG	19-19.4 67-40.4	19-19.4 67-40.5	-1	19-19.6 67-40.8	-2							6	15.3K	239					
1415	AG	20-51.1 66-47.9	20-51.3 66-47.9	-2	20-50.2 66-47.2	-4							4	12.6K	242					
1505	AG	22-00.1 69-26.2	22-01.1 69-26.1	-1	21-59.2 69-26.2	-9							11	18K	273					
1530	AG	20-55.2 71-18.3	20-56.4 71-18.5	-2	20-54.6 71-18.9	-6							6	1K	213					
1640	AG	19-45.4 73-29.2	19-46.8 73-27.5	-1	19-43.8 73-28.0	-6							13	1K	231					
1725	AG	18-52.0 70-42.3	18-54.4 70-41.6	-2	18-51.0 70-43.0	-7							7	2K	233					
1810	AG	18-24.1 67-41.8	18-26.6 67-40.3	-2	18-21.9 67-41.6	-2							9	15K	240					
1900	AG	20-29.6 67-51.3	20-32.1 67-49.8	-3	20-27.2 67-54.6	-8							15	12.0K	249					
1950	AG	20-18.8 66-03.2	20-22.2 66-01.1	-3	20-16.5 66-03.4	-3							8	18K	276					
2044	LAND	11-58.6 63-08.2	11-58.6 63-08.2	-4	11-58.6 63-07.9	-4														

120 55 65

8992

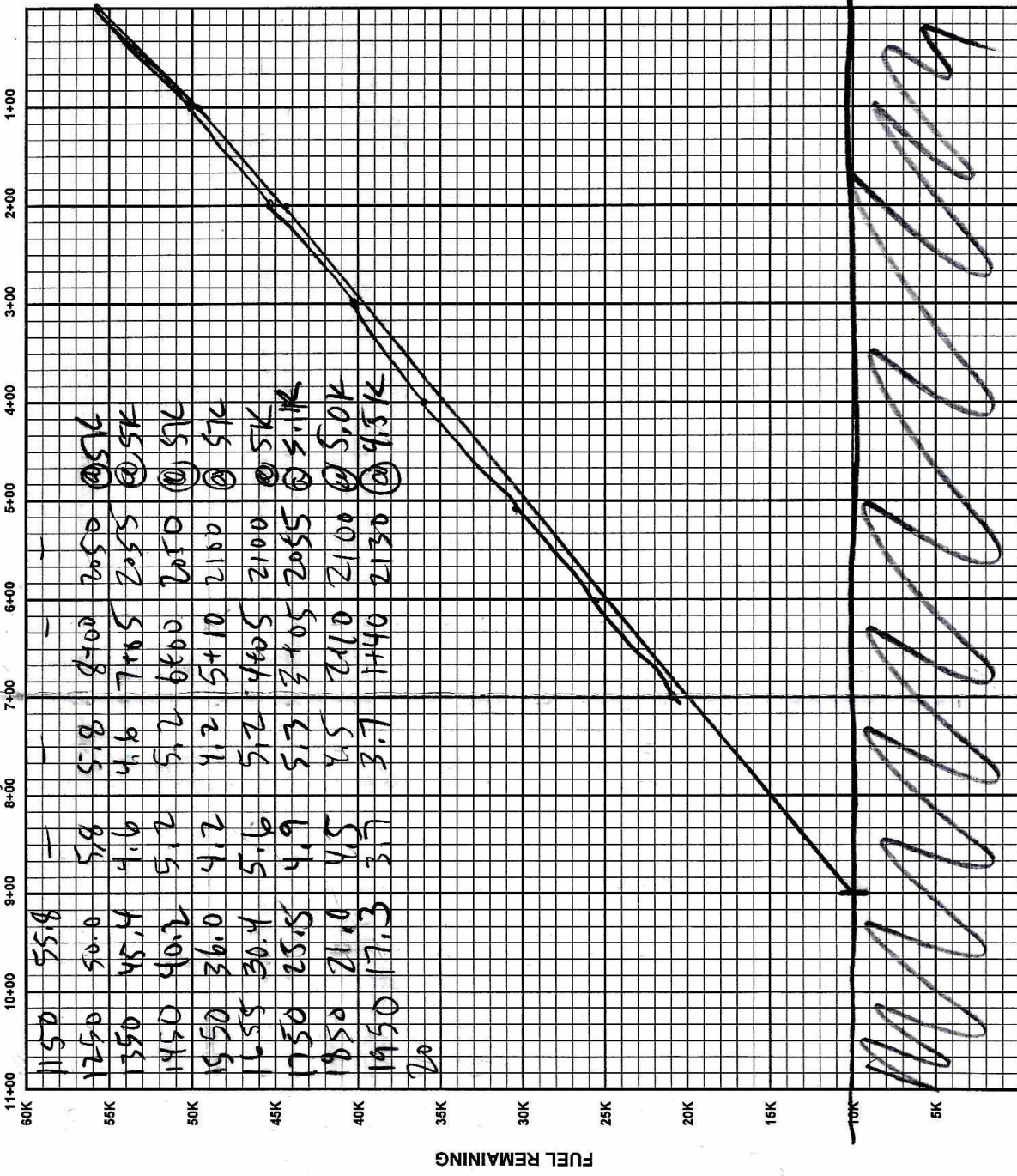
4444

127.3 07 10024
IQQ

1150 1250 1350 1450 1550

RANGE CONTROL GRAPH

TIME REMAINING 1650 1550



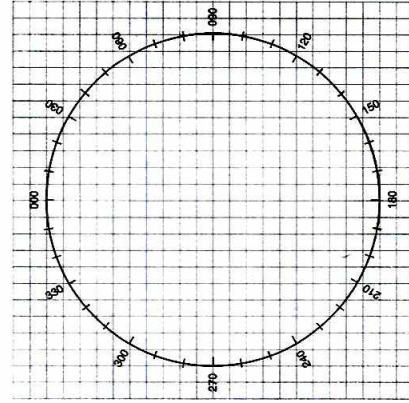
ENROUTE FUEL	
ENROUTE TIME	
ENROUTE FUEL (6K-5K4.5K RULE)	
RESERVE AT DESTINATION	
REQUIRED RAMP	
ACTUAL RAMP FUEL	

TACTICAL (OFFSTA TO DESTINATION)	
	4 ENG 3 ENG
DISTANCE (OFFSTA TO DEST)	
ENROUTE TIME (OFFSTA TO DEST)	
BURN RATE (LBS/HR)	4500 5500
ENROUTE FUEL REQUIRED	
RESERVE AT DESTINATION	
FUEL AT OFFSTA	

POINT OF SAFE RETURN	
	4 ENG 3 ENG
ETP DISTANCE (TO DEPARTURE)	
ENROUTE TIME (TO DEPARTURE)	
BURN RATE (LBS/HR)	4500 5500
FUEL REQUIRED	
RESERVE AT DEPARTURE	
PSR FUEL	

CEX - TRUE BEARING METHOD				CEX SIGHT	
COMPASS TYPE	INS1	INS2	WET	GNT	
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			



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

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

TRUE AIRSPEED CROSS-CHECK						
TIME	IAS	PRESS ALT	"F" FACTOR	EAS	OAT	ITAS
1248	225	18.0	X	X	+5	302
						298

DISTANCE REMAINING

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

2040 1102

MISSION PREFLIGHT LOG										NAVIGATOR		AIRCRAFT COMMANDER		FLIGHT DIRECTOR		SCHEDULED / ACTUAL TAKEOFF Z		DATE OF TAKEOFF													
DESTINATION		MISSION		VAR		TH		DR		TRK		GS		WD		WS		ALT		TAS		LEG / TOT DIST		LEG / TOT TIME		PROP ETA		ATA		REMARKS	
WP	LAT / LON	RTE	MH	E-->	E-->	E-->	E-->	E-->	E-->	E-->	E-->	E-->	E-->	E-->	E-->	E-->	E-->	E-->	E-->	E-->	E-->	E-->	E-->	E-->	E-->	E-->	E-->	E-->	E-->	E-->	
9	5 17-38.7		270	SW	265																										
1	18-00		163	SW	158																										
2	18-21		114	SW	108																										
3	18-30		152	SW	146																										
4	19-00		247	SW	243																										
5	19-36		154	SW	149																										
6	20-00		128	SW	123																										
7	20-48		210	SW	205																										
1	21-24		220	SW	216																										
2	21-51		281	SW	277																										
3	21-55.4		227	SW	224																										
4	22-30		315	SW	313																										
5	21-17.3		290	SW	290																										
6	20-00		069	SW	066																										
7	18-22.2		079	SW	075																										
1	18-04		072	SW	067																										
2	17-51		109	SW	104																										
3	18-00		163	SW	158																										
4	18-21		114	SW	108																										
5	19-30		152	SW	146																										
6	19-00		247	SW	243																										
7	19-36		159	SW	149																										

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

[illegible]

15.7
 15.9
 15.9
 13.5
 17.7
 17.7
 14.0
 14.5
 19.0
 20.7
 20.7
 15.6
 —
 7.2
 21.2
 21.2
 18.7
 15.9
 15.9
 13.7
 17.7
 17.7
 17.7

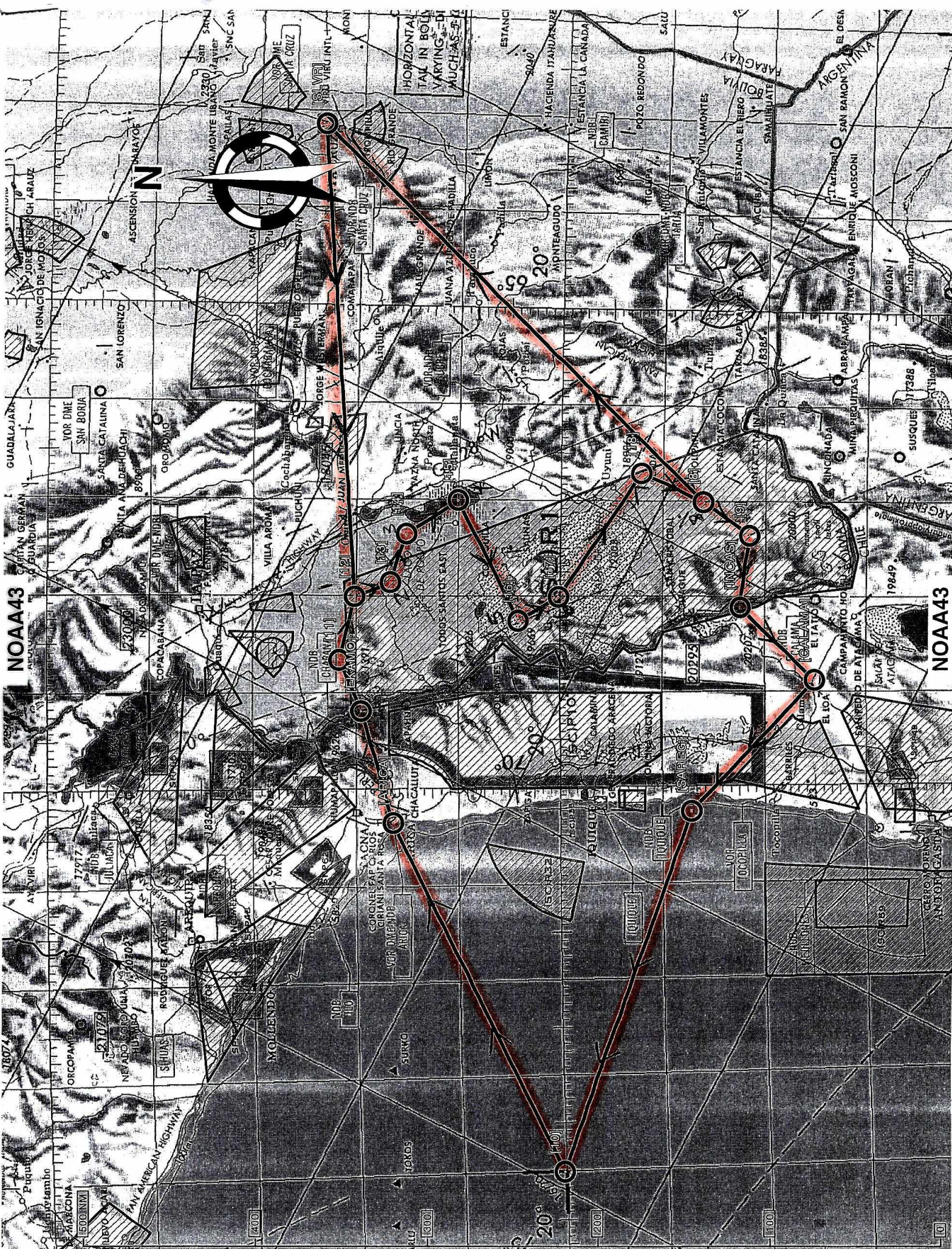
DTD	Description	Latitude	Longitude	MV	FF	MC	TC	Clock Time	Total Dist
1	ST	SLVR/A	S 17 38.69	1224F	+13C	156	147	00:00:00	0.0
M	SLVR	VIRU VIRU INTL	W063 08.12	9.2W	0	156	147	12:00:00	0.0
2			S 17 38.69	unk	-5C	274	265	00:08:47	51.2
M			W063 01.54	3.8W	1000	274	265	2:05:47	51.2
3			S 18 00.00	unk	-5C	274	265	00:54:44	228.1
M 1			W068 00.00	5.1W	1000	274	265	13:03:31	279.3
4			S 18 21.00	unk	-5C	183	153	00:05:26	22.6
M 2			W067 51.00	5.2W	1000	183	153	13:03:57	351.9
5			S 18 30.00	unk	-5C	113	103	00:07:11	29.9
M 3			W067 21.00	5.5W	1000	113	103	13:13:08	331.8
6			S 19 00.00	unk	-5C	162	143	00:03:43	32.9
M 4			W067 00.00	5.7W	1000	162	143	13:24:45	365.7
7			S 19 36.00	unk	-5C	249	243	00:19:06	79.5
M 5			W068 15.00	4.4W	1000	249	243	13:43:50	447.2
8			S 20 00.00	unk	-5C	162	143	00:06:40	27.8
M 6			W068 00.00	4.5W	1000	162	143	13:56:50	474.8
9			S 20 48.00	unk	-5C	123	123	00:21:40	37.5
M 7			W066 42.00	5.3W	1000	123	123	14:11:30	562.4
10			S 21 24.00	unk	-5C	205	205	00:09:43	39.6
M 8			W067 00.00	4.9W	1000	205	205	14:21:01	602.2
11			S 21 51.00	unk	-5C	221	216	00:07:45	38.3
M 9			W067 21.00	4.4W	1000	221	216	14:29:00	635.3
12		INCAS	S 21 45.44	unk	-5C	232	227	00:10:43	41.6
M INCAS	INCAS		W068 06.35	6.3W	1000	232	227	14:39:13	672.9
13		LOAE	S 22 30.02	7.92F	-5C	227	224	00:14:45	61.8
M CALAM	CALAMA		W068 52.62	2.6W	1000	227	224	14:54:09	739.7
14		SAFEG	S 21 17.32	unk	-5C	316	316	00:25:20	102.3
M SAFEG	SAFEG T. ORR		W070 15.18	1.5W	1000	316	316	15:13:23	845.2
15			S 19 59.58	unk	-5C	291	290	00:53:55	224.6
M 10			W074 00.00	0.6E	1000	291	290	16:13:18	1039.9
16		ARCA	S 13 22.17	8.57F	-5C	065	066	00:54:53	22.9
M ARCA	ARCA		W070 20.78	2.9W	1000	065	066	17:06:16	1231.9
17		ERAMO	S 18 04.00	unk	-5C	073	073	00:16:31	68.8
M ERAMO			W069 11.00	4.1W	1000	073	073	17:24:47	1367.8
18			S 17 31.00	unk	-5C	071	067	00:07:57	35.1
M 11			W069 49.00	4.6W	1000	071	067	17:32:44	1400.9
19			S 18 00.00	unk	-5C	108	104	00:09:11	38.3
M 12			W068 00.00	5.1W	1000	108	104	17:41:55	1439.1
20			S 18 21.00	unk	-5C	166	146	00:08:26	23.6
M 13			W067 51.00	5.2W	1000	166	146	17:57:20	1471.6
21			S 18 30.00	unk	-5C	113	103	00:10:11	29.9
M 14			W067 21.00	5.5W	1000	113	103	17:54:32	1491.7
22			S 19 00.00	unk	-5C	152	143	00:10:19	37.9
M 15			W068 00.00	5.7W	1000	152	143	18:03:09	1527.6
23			S 19 36.00	unk	-5C	249	243	00:19:06	79.5
M 16			W068 15.00	4.4W	1000	249	243	18:22:14	1607.1
24			S 20 00.00	unk	-5C	162	148	00:06:40	27.8
M 17			W068 00.00	4.5W	1000	162	148	18:43:54	1631.6
25			S 20 48.00	unk	-5C	123	123	00:21:40	37.5
M 18			W066 42.00	5.3W	1000	123	123	18:49:54	1722.6

SLLF → SCF2

SCF2 → SLLF

15.2
 18.7

Turn Pt	Type	Fix/Point	Latitude	Elev	Temp	MH	TH	Lag Time	Lag Dist
DTD	Description	Longitude	MV	FF	MC	TC	Clock Time	Total Dist	
25		S 17 38.69	unk	-5C	210	205	18:00:31	891.6	
26		W067 00.00	2.9W	1000	210	205	18:52:27	1762.0	
27		S 17 38.69	1224F	-5C	060	043	01:15:15	313.6	
28	M SLVR	VIRU VIRU INTL	W063 08.12	9.2W	1000	060	043	20:14:40	2675.5



NOAA43

NOAA43