

FLT ID: N970117 FM: SNN TO: SNN
 FLT NO: 97-30 BLK IN: 1540Z ATA: 1536Z
 ETD: 0900Z BLK OUT: 0844Z ATD: 0855Z
 ETE: BLK TIME: 6:56 FLT TIME: 6:41
 SPONSOR ORG: NSF PROGRAM: FASTEX PURPOSE: FLY POLAR LOW

DAO PERSONNEL

AC	PLAYER	SYS ENG	GOLDSTEIN
CP	MAXSON	DATA SYS	PRADAS-BERGES
NAV		RADAR	
FE	KITSON	BT/ODW	HILL
RADIO		CLD PHYS	
FD	DAMIANO	DOPPLER	

PARTICIPATING SCIENTIST/VISITORS/DAO

LAST, FIRST NAME	ACTIVITY ON A/C	AFFILIATION
SHAPIRO	PI	WPL
GALL	ASST. PI	NCAR
BARTELS	HAPS	NSSL
CAMAS	ASST. PI	FRANCE
LANGLAND	OBS	NCAR
MORAN	OBS	UNIV. WIS.

PROPOSED/ACTUAL MISSION/REMARKS (RECCO, FIXES, STORM, PENET, NHOP #)

3 sec lag between GPS COLLINS and MADS
 093535 MADS stopped
 76 MACH
 358.7 mi

1210Z GPS TRK = 180

MADS TRK = 173

DPL went bad ~ 1100Z

U.S. DEPT. COMM./NOAA/OAO - DATA SECTION WORK FORM NO.2 OAOWF2 FILE

FLT ID: *N970117* TIME OFF: *0855Z* TIME ON: *1536Z*

	A/C T/O	WX STN	A/C LAND	WX STN
PRESSURE	<i>1002.7</i>	<i>1003.0</i>	<i>1004</i>	<i>1004</i>

NO DATA DISPOSITION/DATE/QUALITY

1/SEC FLT LVL TAPES

2

FAST FLT LVL TAPES

RADAR TAPES

DOPPLER TAPES

ODW CASSETTES

HARD COPIES

RXBT

RXCP

~~ODW~~*GPS**35*

PHOTOGRAPHY

	FWD	LS	RS	VERT
ON				
OFF				
RATE				

REMARKS

FASTEX

Flight #03 N970117 (First G4 ops flight)

DATA TYPE

SENSOR or OPTION

INE	VEW_PITR
Accelerometer	ACINS_PITR
Temperature Probe	AT1
Altitude (for vertical wind)	PALT
Static Pressure	PS1M
Dynamic Pressure	QC1M
Dewpoint Probe	DPRC

Notes:

This flight has two (2) tapes due to data system crash. The resulting data/time gap is as follows: 093533Z - 093653Z.

No dynamic corrections were applied to the measured static and dynamic pressures. Thus wind direction and wind speed may not be representative of actual flight level conditions.

Dropsonde data and event switch information ARE NOT on the tape.

Downward spikes in radar altimeter data are a result of overflying land.

Collins GPS derived geopotential altitude (GPGALT) values deviated during the following time periods:

121100Z - 122100Z
144400Z - 144800Z
145400Z - 145600Z

	<u>Takeoff</u>	<u>Landing</u>
Aircraft static pressure	1002.7mb	1004.0mb
Corrected tower pressure	1003.0mb	1004.0mb

Flight Meteorologist: A. Barry Damiano, (813) 828-3310 ext. 3073

N 970117

TIME	LAT	LONG	TRK	WD	WS	TA	TD	PA	GA	PS	PQ			
090700	5224	1019	239	192	28	-48	-52	7938	7590	358	97.5		ABV CLD	
092000	5159	1204	233	221	14	-50.1	-58.1	7938	7571	358.4	103.2		ABV CLD	
093500	5112	1421	231	230	15	-49.8	-56.2	7937	7580	358.5	170.2		ABV CLD	
095000	5039	1851	243	238	30	-49.6	-55.4	7938	7583	358.6	170.6		ABV CLD	
095720	5025	1807	242	213	29	-49.7	-53.3					ALT	TOP OF CLD	
100924	4953	1957	240	184	24	-49.3	-51.5					260		DROP
101736	4900	1948	166	205	35	-48.5	-55	8240	7878	343.1	163.2	270		DROP
102659	4759	1938	166	208	33	-46.5	-54.7	8237	7912	343.1	162.8			DROP
103556	4700	1928	166	214	31	-45.9	-53.6	8238	7938	343.2	162.5			DROP
104449	4600	1918	167	214	25	-45.9	-52.5	8239	7970	343.2	162.8			DROP
105334	4500	1909	167	221	30	-47	-52.4	8239	8000	343.2	163.1			DROP
110203	4411	1914	305	238	40	-47.1		8240	8014	342.9	162.0			DROP
110839	4453	1948	328	236	37	-46.3		8237	7982	343.1	162.4		BAD	DROP
111623	4542	2033	328	229	41	-45.3	-56.3	8238	7933	343.2	163.6			DROP
112456	4636	2124	327	226	47	-43.9	-56.3	8238	7866	343.1	163.7			DROP
113231	4724	2212	327	230	36	-45	-55.8	8236	7822	343.2	160.2		BAD	DROP
114119	4818	2307	327	268	12	-47.4	-56.8	8239	7789	343.1	163.6			DROP
114929	4906	2359	311	351	9	-53.1	-59.2	8240	7809	343.1	163.7			DROP
115659	4950	2451	TURN	160	8	-53.6	-56.8	8241	7821	343.0	163.6			DROP
120433	4900	2500	173	86	15	-53.4	-56.2	8239	7815	343.2	161.1			DROP
121231	4800	2500	173	53	17	-53.2	-56.9	8235	7806	343.3	163.1			DROP
122022	4700	2500	173	32	6	-48.7	-59.4	8237	7803	343.3	164.1		BT 8H	DROP
122828	4600	2500	173	213	13	-43.9	-57.18	8236	7816	343.3	163.4			DROP
123654	4500	2500	173	238	20	-41.8	-55.0	8234	7848	343.4	163.6		PTH	DROP
124440	4406	2500	172	232	40	-42.4	-54.3	8232	7890	343.4	160.4		FAST	DROP
125318	4309	2451	T	240	35	-43.8	-54.8	8239	7832	343.1	163.2			DROP
125916	4348	2417	31	250	39	-44.9	-55.1	8235	7907	343.3	163.8			DROP
130420	4424	2345	22	243	29	-43.0	-54.9	8234	7841	343.3	163.3			DROP
131058	4512	2303	32	237	40	-43.6	-54.7	8232	7891	243.3	160.6	270 (ALT)		DROP
131750	4554	2205	35	228	41	-42.7	-54.5	7933	7576	358.8	169.3	260 (ALT)	BP	DROP
132340	4636	2119	35	225	40	-43.1	-54.7	7936	7563	358.9	170.6			DROP
132936	4718	2034	35	224	41	-43.2	-55.1	7935	7560	358.8	171.6			DROP
133618	4806	1941	36	220	39	-42.7	-54.9	7934	7556	358.8	170.6			DROP
134228	4848	1852	37	219	33	-43.0	-54.9	7934	7581	358.8	171.3		FAST	DROP
134856	4930	1759	37	220	26	-47.5	-56.0	7933	7579	358.8	168.9			DROP
135543			217					INTO WIND						
135845					240	IKS						135730 - 135841		
140100			032			WITH WIND								
140420												140115 - 140226		
140640			215		210	KTS		INTO WIND						
140950												140730 - 140846		
141200			035			WITH WIND						141200 - 141316		
141500														
141620			125			CROSS WIND						141640 - 141751		
141930														
142125			305			CROSS WIND								
142430														
142615			215			INTO WIND	180	KTS			143115	DRIFT 2°	TRK	
142930											143430		035	
142800 - 142916											143220 - 143336			

N970117

FIRST TAPE ENDED at 093530Z

SECOND TAPE STARTED at 093653Z
ENDED at 153800Z

USE DPRC

USE AT1

G-SX ~~NEW~~ - PIR

G-SY ~~VNS~~ - PIR

~~PIR~~

~~PIR~~

~~PIR~~

~~PIR~~

~~PIR~~

PALT

NO ~~CD~~ DYN COR

TO PS or PQ

NO SOUNDING DATA
OR EVENT SWITCH DATA

DO PLOT of GPGALT vs RA23Z

GPGALT Jump

1211Z - 1221Z

1444Z - 1448Z

1454Z - 1456Z

DATA GAT

124030Z

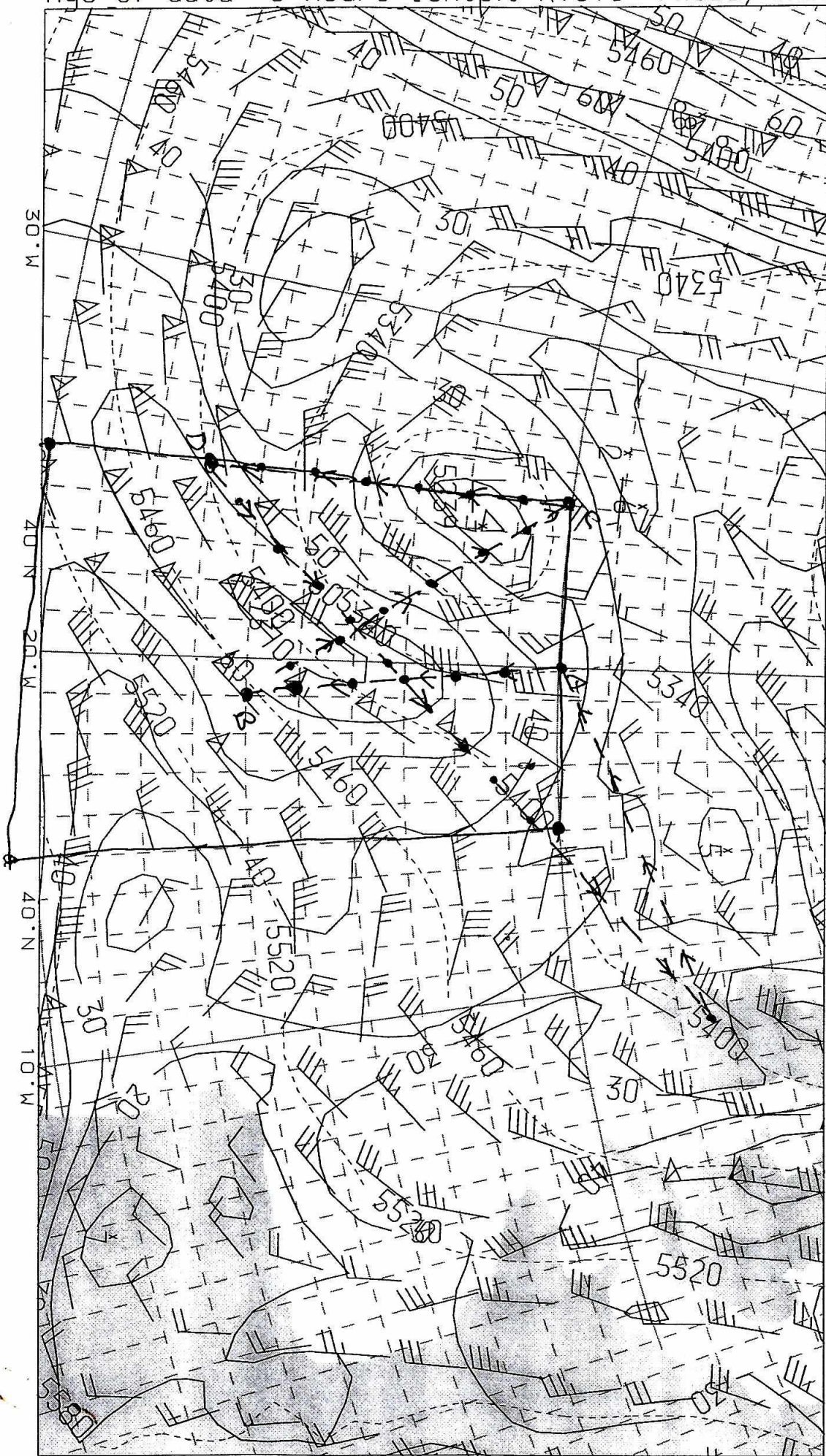
124038Z

Age of data 3-hours [chtplt-N101] Midday Run

----- Hirlam 24H 500MB Fri 17 Jan 97 12Z GEOPOTENTIAL

Hirlam 24H 500MB Fri 17 Jan 97 12Z WIND

— Hirlam 24H 500MB Fri 17 Jan 97 12Z ISOTACHS



40°N

0°

50°N

N970117

DA = TR - HD

DROP#

LAT

LON

1	50°00'	020°00'	✓
2	49°00'	019°49'	✓
3	48°00'	019°37'	✓
4	47°00'	019°27'	✓
5	46°00'	019°18'	✓
6	45°00'	019°08'	✓
7	44°00'	019°00'	✓
8	44°54'	019°48'	✓
9	45°42'	020°33'	✓
10	46°36'	021°23'	✓
11	47°24'	022°11'	✓
12	48°18'	023°07'	✓
13	49°06'	023°58'	✓
14	50°00'	025°00'	D14 ✓
15	49°00'	025°00'	(D1) ✓
16	48°00'	025°00'	(D2) ✓
17	47°00'	025°00'	(D3) ✓
18	46°00'	025°00'	(D4) ✓
19	45°00'	025°00'	(D5) ✓
20	44°00'	025°00'	(D6) ✓
21	43°00'	025°00'	(D7) ✓
22	43°42'	024°22'	(D8) ✓
23	44°24'	023°42'	(D9) ✓
24	45°12'	022°53'	(D10) ✓
25	45°54'	022°10'	(D11) ✓
26	46°36'	021°24'	(D12) ✓
27	47°18'	020°39'	(D13) ✓
28	48°06'	019°45'	(D14) ✓

29 48°48' 018°53' (D1)
30 49°30' 018°03' (D2)

10.015 HF

240 10.

1800

10

1800
1004

10 km

2800
400

1004

Prog. Mgr. MOBILE

353 87 423 371

011 61 353 474 621 474 622

471 439 MET OFFICE

307
122
302

37

218

.76 MH

212

215

180

32

305

212/32

125

215
035

(4)

Dropsonde Launch Positions

G-4 Flight 17 Jan 1997

Transect A-B $50^{\circ}\text{N}, 20^{\circ}\text{W} \rightarrow 44^{\circ}\text{N}, 19^{\circ}\text{W}$

Drop #	Latitude	Longitude
1	50°N	020°W
2	49	$019^{\circ} 49'$
3	48	$019^{\circ} 37'$
4	47	$019^{\circ} 27'$
5	46	$019^{\circ} 18'$
6	45	$019^{\circ} 08'$
7	44	$019^{\circ} 00'$

Transect B-C $44^{\circ}\text{N}, 19^{\circ}\text{W} \rightarrow 50^{\circ}\text{N}, 25^{\circ}\text{W}$

Drop #	Latitude	Longitude
8	44.9°N	$44^{\circ} 54'$ $019^{\circ} 45'$
9	45.7	$45^{\circ} 42'$ $020^{\circ} 31'$
10	46.6	$46^{\circ} 36'$ $021^{\circ} 23'$
11	47.4	$47^{\circ} 24'$ $022^{\circ} 10'$
12	48.3	$48^{\circ} 18'$ $023^{\circ} 06'$
13	49.1	$49^{\circ} 06'$ $023^{\circ} 58'$
14	50	$50^{\circ} 00'$ $025^{\circ} 00'$

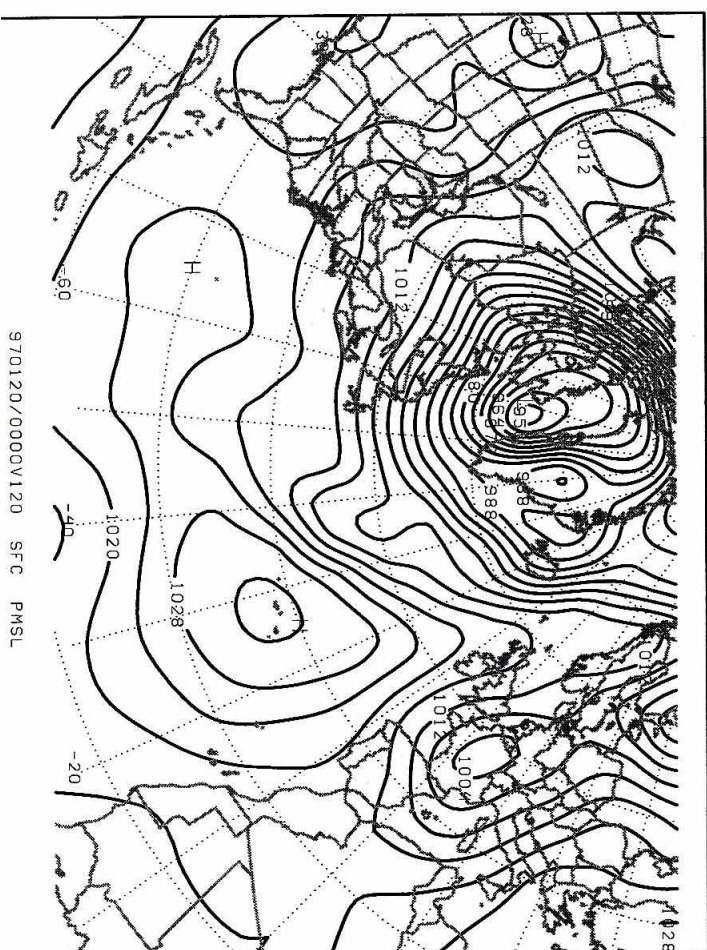
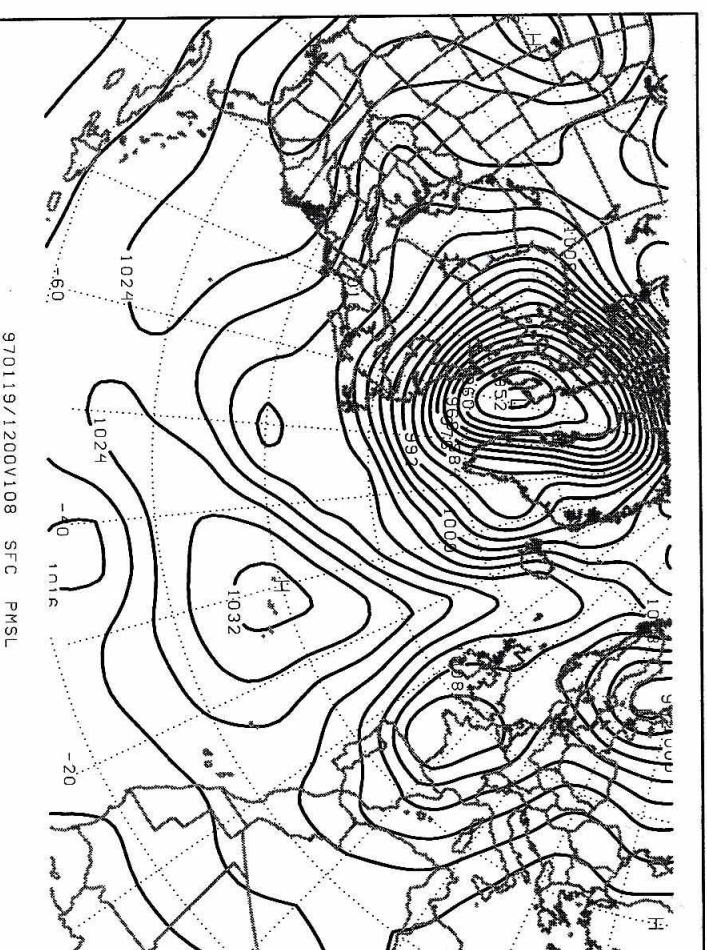
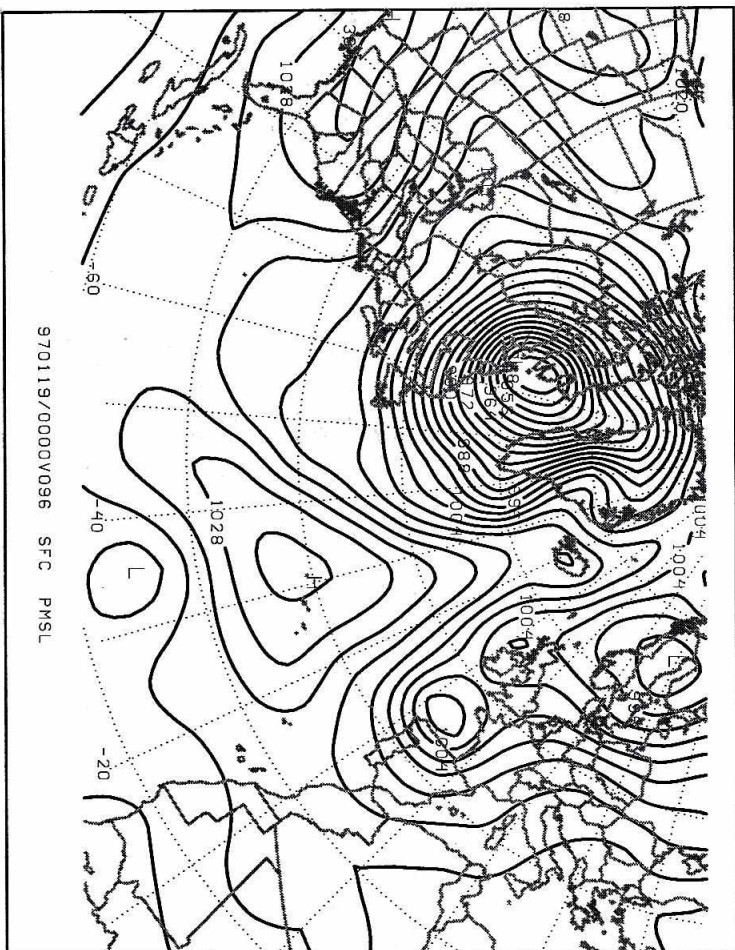
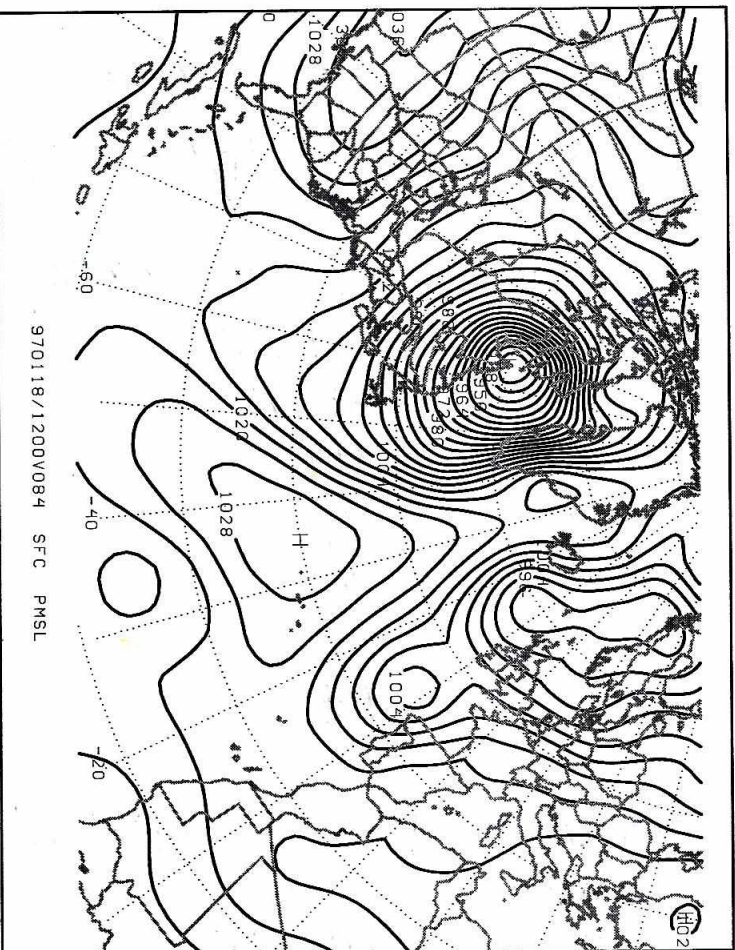
Transect C-D $50^{\circ}\text{N}, 25^{\circ}\text{W} \rightarrow 43^{\circ}\text{N}, 25^{\circ}\text{W}$

15	49°N	025°W
16	48	025°W
17	47	025°W
18	46	025°W
19	45	025°W
20	44	025°W
21	43	025°W

Transect D-Ferry $43^{\circ}\text{N}, 25^{\circ}\text{W} \rightarrow \text{Shannon}$

22	43.7	$43^{\circ} 42'$	$024^{\circ} 22'$
23	44.4	$44^{\circ} 24'$	$023^{\circ} 42'$
24	45.2	$45^{\circ} 12'$	$022^{\circ} 54'$
25	45.9	$45^{\circ} 54'$	$022^{\circ} 10'$
26	46.6	$46^{\circ} 36'$	$021^{\circ} 24'$
27	47.3	$47^{\circ} 18'$	$020^{\circ} 39'$
28	48.1	$48^{\circ} 06'$	$019^{\circ} 45'$
29	48.8	$48^{\circ} 48'$	$018^{\circ} 53'$
30	49.5		

$49^{\circ} 30'$



Barry,

Stuff to do:

- 1) st.conf onboard and airmet. The st.conf file on everest and airmet seems good. airmet needs to be 'halt'ed and 'boot -r', I forgot the '-r' part Saturday. This will get /dev/rmt/0 [or 1] working without the 'l'. You need to install /kernel/drv/st.conf on rainier from everest, and then 'halt' and 'boot -r'.

Reading ADS tapes recorded to date will require typing /dev/rmt/01, new ones should work with just /dev/rmt/0.

- 2) Nimbus install on board.

```
cd /home/local/  
tar cf /dev/rmt/1 proj/defaults proj/405 nimbus
```

on board:

```
cd /home/local  
tar xf /dev/rmt/0  
wbin  
rm winput  
wsrc  
pmake -X winput
```

If you need/want us to look at data during the project, copy the tape to Exabyte, have Krista download it on marley, and have her Email me, then I can ftp it back to Jeffco.

- 3) Mike Daniels wants to collect the Exabyte drive back at the end of this project. Can you give to RAF, when getting ready to pack up. Thanx.

Good luck. My office # is 303-497-1044, and home is 303-494-6369, and/or Krista can Email me.

--Chris

Enabled GPS corrected winds (XWSC, XWDC, etc). I sort of fixed second AOCD and AOCT~~RR~~, you'll need to manually modify the dependencies for the -PITR ones to use New-PITR and Vms -PITR, as currently they use the ones from the primary inertials