

FLT ID: 1000224	FM: KSLC	TO: KSLC
FLT NO: 00-22	BLK IN: 1901	ATA: 1854Z
ETD: 1000Z	BLK OUT: 1040Z	ATD: 1054Z
ETE:	BLK TIME: 8:21	FLT TIME: 8:00
SPONSOR ORG: NSSL	PROGRAM: IPEX	PURPOSE: FLT # 6

DAO PERSONNEL

AC TENNESEN ✓	SYS ENG
CP O'MARA ✓	DATA SYS BARR ✓
NAV ADLER RATHBUN ✓	RADAR
FE BAST ✓	BT/ODW SMITH ✓
RADIO SANS SOULT ✓	CLD PHYS
FD DAMIANO ✓	DOPLER FLOYD

PARTICIPATING SCIENTIST/VISITORS/DAO

LAST, FIRST NAME	ACTIVITY ON A/C	AFFILIATION
SCHULTZ ✓	PI	NSSL
SMULL ✓	ASST. PI	NSSL
COX ✓	PMS	U of U
NELSON ✓	OBS	↓
STROHM ✓	OBS	↓
ZAFF ✓	OBS	NWS SLC

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

T/O delayed due to PMS ~~probe~~ probe problems.

1600Z DAP fixed-up

1609Z DAP being opened in did not work

1705Z DAP fixed

1109Z
-1910
BAL DWI
111347Z
done

2 units en LUG

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

FLT ID: 1000224 TIME OFF: 10542 TIME ON: 18542

	A/C T/O	WX STN	A/C LAND	WX STN
PRESSURE	<u>856.7</u>	<u>29.56</u>	<u>858.6</u>	<u>29.61</u>

NO DATA DISPOSITION/DATE/QUALITY

1/SEC FLT LVL TAPES

2

FAST FLT LVL TAPES

RADAR TAPES

2

DOPPLER TAPES

ODW CASSETTES

HARD COPIES

PMS

2

VIDEO

4

AXBT

AXCP

ODW

PHOTOGRAPHY

	FWD	LS	RS	VERT
ON				
OFF				
RATE				

REMARKS 09562

220/3

4 29.56

3

IPEX

Flight 6 I000224

DATA TYPE	SENSOR or OPTION
INE	2
Accelerometer	2
Temperature Probe	1
Altitude (for vertical wind)	Pressure Altitude
Static Pressure	Fuselage
Dynamic Pressure	Fuselage
Dewpoint Probe	2

Notes:

There were no data/time gaps.

The dynamic attack pressure probe, DAP, iced-up during the time period 152914Z - 170433Z. The erroneous output from this probe produced unacceptable horizontal and vertical winds during this time. The erroneous dynamic attack pressure data was removed and replaced using the following equation

$$DAP = PQF1 - .6, \text{ where } PQF1 \text{ is fuselage dynamic pressure.}$$

The differential attack pressure probe, AP, also was effected during the aforementioned time frame. The erroneous data between 1529Z - 1533Z and 1608Z - 1611Z was fixed using editing techniques.

Dewpoint sensor #2, DW2, experienced some problems from 175725Z - 175921Z. The erroneous dewpoint sensor #2 data was removed and replaced with values from dewpoint sensor #1, DW1.

Downward spikes in radar altimeter values were due to overflying mountain crests.

Both INEs performed poorly during this flight. INE #2 was the least worse of the two with respect to groundspeeds in the x and y directions.

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 wind speeds, respectively, derived from Dave Jorgensen's vertical wind algorithm. It is recommended that these values be used for vertical wind analysis.

The King liquid water voltage is in location 79 of record five on the standard tape.

	Takeoff	Landing
Aircraft static pressure	856.7 mb	858.6 mb
Corrected tower pressure	N/A	N/A

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

T000224

TIME	LAT	LONG	TRK	HD	WD	WS	TA	TD	PA	GA	SP	PS			PG
110400	4101	11240	290	285	192	26	-13.7	-17.2	4304	2916	832.9	590.2	—	—	65.7
111400	4114	11335	288	284	166	26	-19.6	-21.1	5005	3574	855.7	539.9	—	—	65.5
111800	4119	11358	288	286	141	23	-19.8	-19.8	5004	3156	836.8	540.1	—	—	68.6
113400	4140	11529	286	283	185	16	-21.1	-23.9	4989	3022	752.9	540.9	—	—	62.6
114000	4146	11602	286	286	229	6	-23.3	-26.0	4986	2547	766.5	541.3	—	16K	66.8
114410	4151	11625			282	11	-24.6	-27.8				541.4	—	—	
114900	4153	11635	94	93	326	17	-18.9	-36.1	4032	2295	828.3	613.8	—	13K	72.8
120000	4145	11533	100	100	306	16	-16.3	-21.1	4027	1686	774.8	613.0	—	12K	72.8
120800	4141	11502	100	97	338	22	-12.8	-17.0	3450	1108	766.5	661.5	—	11K	62.7
122000	4131	11355	102	100	21	18	-11.6	-13.3	3447	1783	829.7	661.9	—	11K	61.9
122300	4130	11341	98	100	110	9	-10.7	-11.0	3450	1728	827.8	661.8	—	11K	70.0
122900	4125	11312	101	105	171	16	-7.6	-7.9	3167	1198	803.1	686.4	—	10K	67.8
124200	4115	11207	102	111	208	30	-10.6	-12.7	3769	2358	854.9	635.2	—	12K	64.5
125500	4114	11205	282	276	185	32	-19.8	-19.8	5013	3594	856.9	539.2	—	16K	71.6
130800	4124	11319	279	275	169	26	-20.1	-21.8	5012	3569	855.2	539.5	—	16K	64.8
132200	4104	11400	172	174	188	21	-21.0	-21.7	5005	3269	827.4	539.7	—	16K	65.8
132700	4056	11345	70	72	173	4							—	13K	
132900	4059	11334	70	72	113	8	-11.0	-11.3	3476	2049	855.5	659.6	—	11K	69.1
133900	4106	11243	79	87	176	28	-9.7	-10.0	3473	2062	856.4	660.2	—	11K	70.6
134300	4109	11222	79	85	197	24	-11.5	-11.6	3776	2365	856.7	634.5	—	12K	64.9
135700	4115	11131	260	255	201	29	-19.9	-22.8	5025	2427	738.4	538.6	—	16K	68.3
140800	4107	11231	257	255	161	16	-20.2	-21.0	5017	3600	857.1	538.5	—	16K	68.9
141500	4103	11309	262	257	183	29	-20.7	-23.4	5019	3579	856.5	539.0	BTN	CLD	69.4
142700	4050	11353	102	106	206	16	-15.4	-17.8	4072	2640	856.5	610.6	BTN	CLD	73.1
144000	4036	11244	107	115	191	28	-14.1	-18.8	4070	2465	834.2	610.7	BTN	CLD	65.4
145100	4020	11155	174	177	185	34	-14.5	-15.1	4072	2371	822.8	610.5	CLD		71.5
150200	3941	11153	178	182	189	50	-18.1	-20.3	4390	2727	831.9	585.6	14K	CLD	69.1
151500	4009	11130	1	2	180	19	-16.9	-17.9	4391	2372	788.5	585.5	14K	CLD	67.0
152300	4045	11135	348	349	176	16	-16.4	-17.9	4388	2144	774.0	585.8	14K	CLD	65.2
153800	4117	11159	260	255	191	25	-15.3	-15.8	4391	2730	833.4	585.6	14K	RW	70.4
154300	4134	11209	172	174	188	17	-15.3	-17.0	4388	2970	855.9	585.8	14K	CLD	67.0
155600	4044	11157	172	175	182	36	-17.1	-18.0	4390	2968	857.4	585.9	14K	CLD	69.4
160800	4039	11132	344	343	183	27	-16.9	-17.9	4386	2034	751.4	585.7	14K	CLD	70.0
162500	4145	11204	261	258			-15.9	-16.3	4387	2908	850.8	586.0	14K	CLD	70.4
170000	4107	11248	79	80			-7.5	-8.3	2840	1439	858.0	715.5	9K	RW	68.6
170700	4112	11212	80	86	191	24	-13.0	-15.2	3765	2357	857.5	635.5	12K	CLD	70.1
171700	4119	11138	254	249	208	29	-13.0	-14.5	3761	1800	799.4	635.8	12K	CLD	66.1
173600	4104	11246	69	74	197	18	-13.3	-15.2	3762	2352	858.5	635.9	12K	CLD	70.7
174500	4107	11206	167	169	200	19	-15.1	-17.1	4069	2646	857.0	610.9	13K	CLD	69.8
175300	4039	11157	170	173	197	16	-16.6	-19.5	4067	2593	853.0	611.0	13K	CLD	67.6
180200	4034	11131	344	344	174	25	-18.4	-20.4	4376	4379	698.2	586.8	14K	CLD	62.8
181200	4118	11144	349	349	188	18	-15.7	-17.5	4083	1325	736.2	609.9	13K	CLD	68.7
181900	4147	11156	260	257	200	24	-15.0	-17.9	4084	2595	850.1	609.8	13K	CLD	69.0
182700	4125	11206	172	174	198	13	-15.3	-17.6	4081	2663	857.1	609.9	13K	CLD	66.0
183400	4059	11159	170	173	207	18	-16.7	-17.6	4082	2667	859.6	609.9	13K	CLD	70.9
184600	4020	11154	329	326	210	15	-13.8	-15.0	3437	1923	848.2	663.9	11K	CLD	57.3

Fan 2.2K
 3.85K
 5.8 OVL
 7 SMSH
 150/11 3

WIP
 SNT

18
 5K
 7

310/27 6 32

~~11330~~
 714°00'

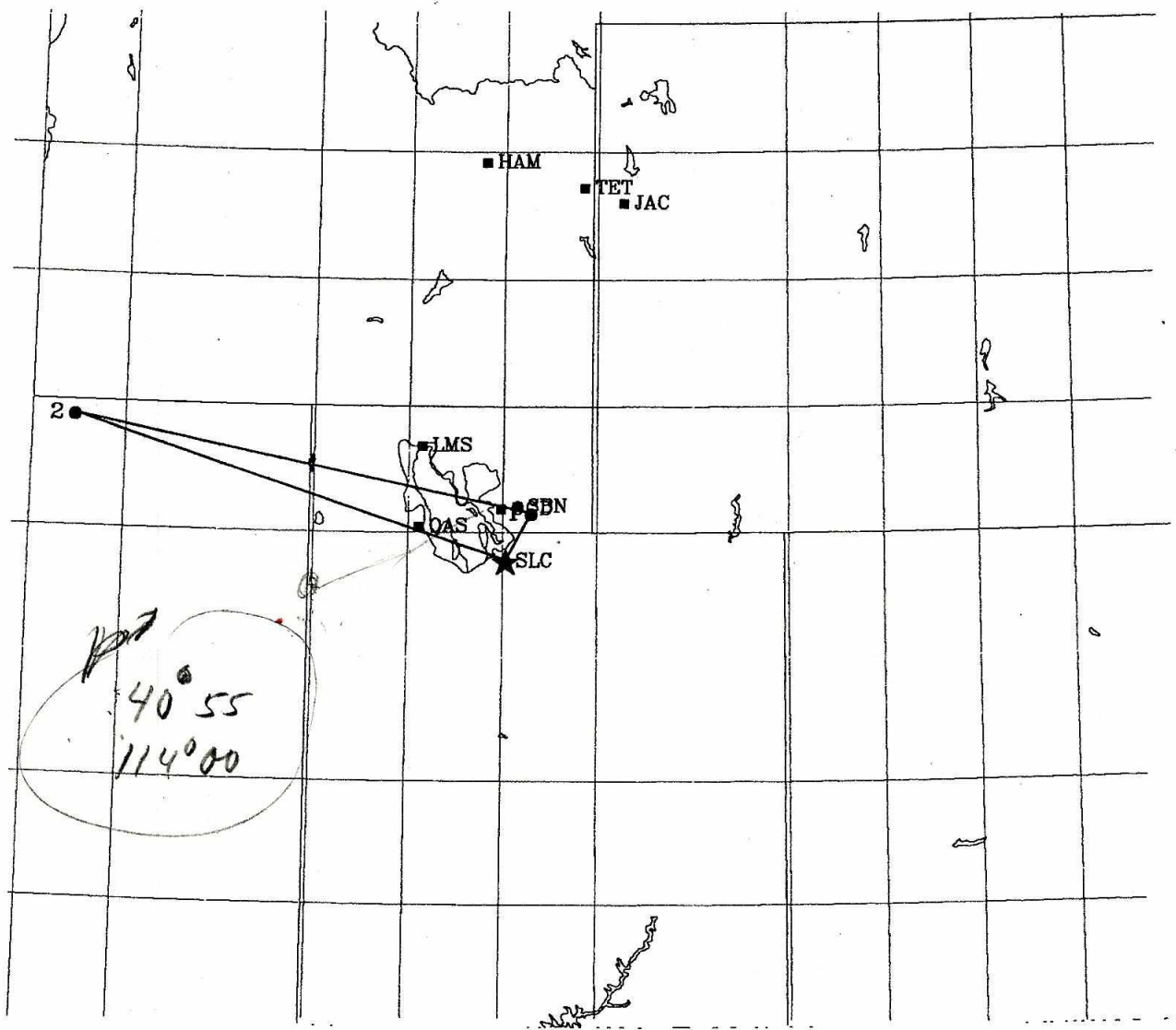
18 BKN
 15 OVL

2VIS

10

Aircraft Flight Track Plan

(45.0,-105.0)



(37.0,-117.0)

NOAA/NSSL Lambert Conformal (41.0,-111.5)

P 41° 3.5'
 112° 58.6

Q 41° 15'
 111° 30'

11K
 16K
 18K
 20K

Aircraft Flight Track Plan

Location of Airport: 40.78 -111.97 Take off time: 1200 UTC

Way Point # 1 Lat: 41 9.7 Lon: -111 42.0 ⁶
Wind Dir: 260.0 Wind Spd: 20.0 kts TAS: 250.0 kts Alt: 15000 ft
Dist to Way point: 25.8 nm Leg duration: 5.9 mins Arrival Time: 1205 UTC
Ground Speed: 261.8 kts Track: 27.9 degrees

Way Point # 2 Lat: 41 53.6 Lon: -116 32.8 ⁶
Wind Dir: 260.0 Wind Spd: 20.0 kts TAS: 250.0 kts Alt: 15000 ft
Dist to Way point: 222.1 nm Leg duration: 57.6 mins Arrival Time: 1303 UTC
Ground Speed: 231.5 kts Track: 283.0 degrees

Dist to base: 216.8 nm Leg duration: 48.6 mins Landing time: 1352 UTC
Wind Dir: 260.0 Wind Spd: 20.0 kts TAS: 250.0 kts Alt: 15000 ft
Ground Speed: 267.8 kts Track: 106.4 degrees

Total mission duration: 1.9 hrs

#1 40 25 111 54

113K

2	39° 36'	111 53
3	39 37	111 36

4	40 26	111 29
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5 41 46 111 53

6 41 44 112 12

7 41° 01' 111° 57'

17562

260/7

1 VIS

-SN DR

400 FEW

1900 BKN

2600 OVC

NOAA • AOC • SED
N43RF DATA STATION LOG

Project : IPEX '00

Mission : IPEX#6

Flight ID : 000224I

Operators : BARR

Take Off : 1054Z

Landing : 1854Z

RAMS DAT 1 On [8/9]: 1039Z	RAMS DAT 1 Off: 1901Z	Data : Slow Fast AVAPS
RAMS DAT 2 On [8/9]: 1039Z	RAMS DAT 2 Off: 1901Z	Data : Slow Fast AVAPS
RAMS DAT 3 On [8/9]: —	RAMS DAT 3 Off: —	Data : Slow Fast AVAPS
Printer On: 1037Z	Printer Off: 1901Z	
MARS DAT 1 On [8/9]: 1058Z	MARS DAT 1 Off: 1514Z	CPU Selected : A (B)
MARS DAT 2 On [8/9]: 1520Z	MARS DAT 2 Off: 1849Z	VCR's Used : (N) (L) (R) (D)
MARS DAT 3 On [8/9]: —	MARS DAT 3 Off: —	VCR Mode : VHS (S-VHS) 27(12)
PMS DAT 1 On: 1046Z	PMS DAT 1 Off: 1500Z	
PMS DAT 2 On: 1503Z	PMS DAT 2 Off: 1855Z	Tapes Given To
PMS DAT 3 On: —	PMS DAT 3 Off: —	RAMS :
VCR Tape 1 On: 1045Z	VCR Tape 1 Off: 1902Z	MARS :
VCR Tape 2 On: 1045Z	VCR Tape 2 Off: ↓	PMS :
VCR Tape 3 On: 1045Z	VCR Tape 3 Off: ↓	VCR :

VCR TAPE 4 ON: 1045Z

VCR TAPE 4 OFF: ↓

CARCAH Tasking

ASDL Setup

Mission Number : _____

Flight Level (Minobs) Sample Frequency : _____

Storm Name : _____

Flight Level (Minobs) Block Time : _____

Data Station Operator Notes

1503Z Change! PMS DAT using QUIT and Powered-off Computer
before starting 2nd TAPE (Verbatims)

2005

INS PERFORMANCE		INS 1	INS 2
BEGIN ALIGN TIME		08/3	08/3
ALIGN STATUS (0-5)		0	0
END NAV TIME		1856	1856
START NAV TIME		1026	1026
DELTA T		8730	8736

TERMINAL ERRORS		
	INS 1	INS 2
DELTA LAT	+1.5	+4.3
DELTA LON	- .3	-3.5
RGS	2	2
RADIAL ERROR	2	5.

[illegible][illegible]