

Flt ID: 020510H	From: KMCF	To: KMCF
Flt No: 02-51	Blk In: 0132	ATA: 0127
ETD: 1800Z	Blk Out: 1750	ATD: 1807
ETE: 6+45	Blk Time: 7.7	Flt Time: 7.3
Sponsor Org: NOAA/AL	Program: ITCT 2K2	Purpose: IOP7

AOC Personnel

AC: TENNESEN, D ✓	Sys Eng: BARR, J ✓
CP: HALVERSON, H	Data Sys:
Nav: NEWMAN, C ✓	Radar:
FE: BAST, G ✓	GPS/BT:
FD: SHEPHERD, T ✓	Cld Phys:
Avionics: ROGERS, M ✓	

Participating Scientists / Visitors / AOC

Name (Last, First)	Activity on Aircraft	Affiliation
1 HÜBLER, G ✓	PI	NOAA/CIRES
2 RYERSON, T. B. ✓		NOAA
3I BROCK, C ✓		NOAA/CIRES
30 ORSINI, D ✓		
5 de Gouw ✓		
CSX TANNER, D ✓		GA. TECH
G RADKE, Larry ✓	↓	NCAR NCAR
JAMES HATTOVI ✓	MEDIA	CNN
JEFF KING ✓	↓	CNN

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

Switch to CPU A before Takeoff

1833-300 JW

1854 - Bal DP1; says it balanced OK but ~5° warmer than 2 and 3 probably salt on mirror.

~1930 - DP1 T.O. Switch to DP2

~0017 All DP's suspect; #1 still TU, #2 -40 #3-49

2492

1750

742

Flt ID: 020510H	Time Off: 1807	Time On: 0127
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	A/C (Take Off)	Wx Station (Take Off)	A/C (Land)	Wx Station (Land)
Pressure	1013.0	30.10	1010.8	30.04

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

Video

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

Remarks

ITCT 2k2

Flight #8 020510H

<u>Sensor or system</u>	<u>Number or Name</u>
INE	2
Accelerometer	2
Total Temperature Probe	1
Dew Point Probe	2
Altitude (for vertical wind)	Pressure Altitude
Static Pressure	Rosemount Fuselage
Dynamic Pressure	Rosemount Fuselage
Time Source	Micro 99
Constants File	CO2022.CON

Notes:

Takeoff: 1807Z

Land: 0127Z

There were no reported time gaps.

The radar altimeter (APN-159) was replaced by the APN-232 due to spiking during takeoff (180401 - 181430) and landing (010400 - 013000).

Dewpointer # 1 was bad for the entire flight. Dewpointer #3 went in to a rapid oscillation mode several time during the flight but was trending the same as Dewpointer #2 with approximately the same temperature.

	<u>Takeoff</u>	<u>Landing</u>
Aircraft static pressure	1013.0	1010.8
Corrected tower pressure	1019.3	1017.3

The aircraft INE positions were renavigated with respect to GPS.

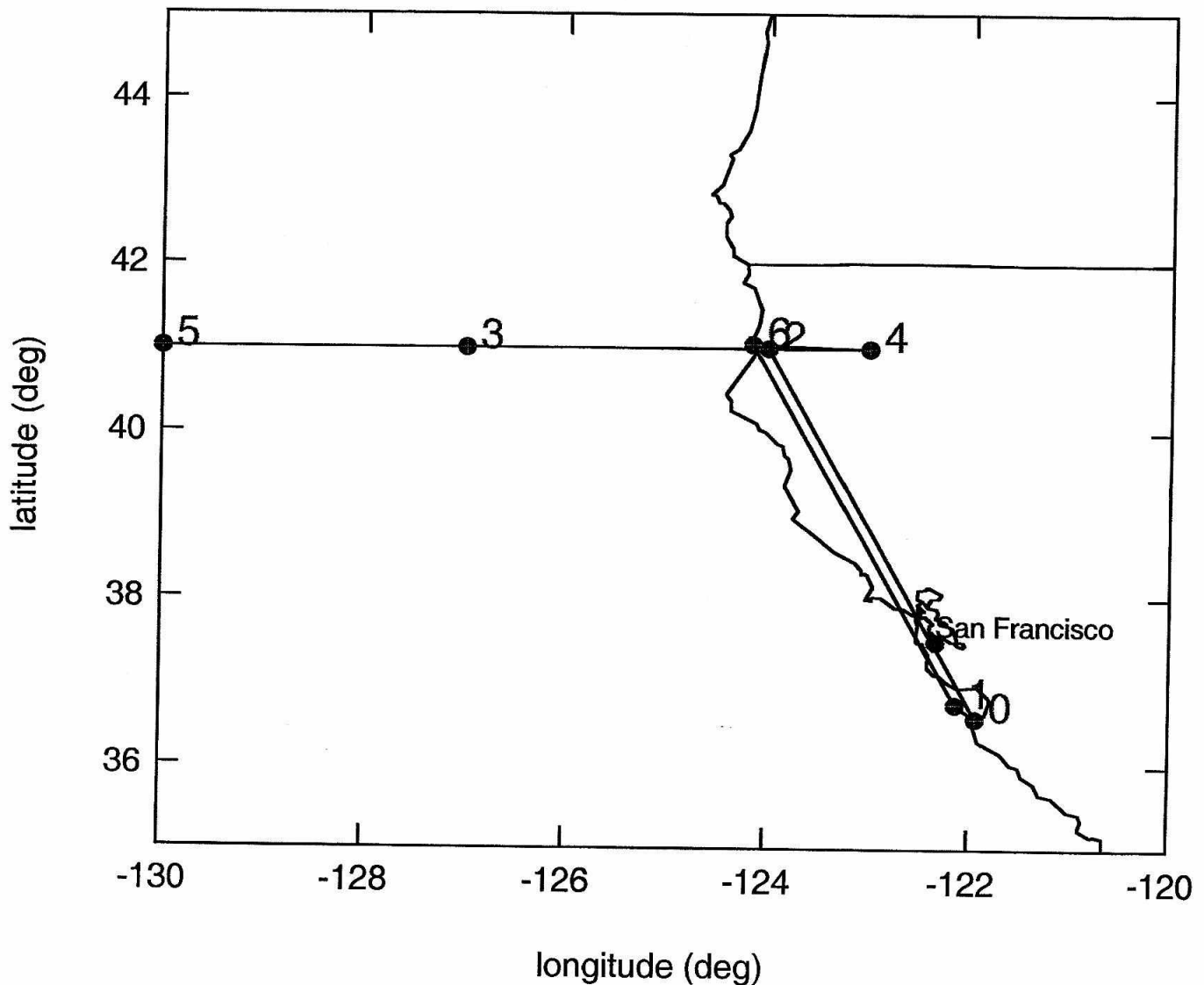
SPECIAL NOTE!!!

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.

Flight Director: Tom Shepherd, (813) 828-3310 ext. 3053

Time	Lat	Long	Trk	Hdg	Wind Dir	Wind Spd	T _a	T _d	Press. Alt.	Geo. Alt.	Sfc Press.	Press. Sfc	Dyn. Press	Remarks
182140	3713	12220	320	319	309	33.7	-1.7	-25.3	3024	3031	1011.0	699.1	64.2	10000 SCT BCO
183715	3800	12250	343	339	304	29.2	-2.6	-23.9	3021	2817	990.6	699.2	69.9	
190000	3914	12320	339	339	336	25.7	-5.1	-33.8	3020	2317	936.2	699.1	68.9	OVR LAND 10000
190200	3921	12323	342	342	330	30.6	-7.4	-35.3	3335	2785	944.1	671.6	67.8	11000
192810	4044	12356	343	345	352	36.3	-8.4	-1.6	3334	2725	937.2	671.6	69.4	11000 ft.
193255	4059	12403	-	-	357	54.5	-13.4	-45.9	4246	4217	1015.2	596.9	65.4	14000 Pt 2
200420	4100	12449	271	280	005	36.1	-7.3	-39.4	4246	4338	1013.9	596.9	67.7	
200830	4100	12712	In a spiral descent down to 500 feet.											
201740	4100	12714	091	085	0	22.5	8.2	3.9	046	150	1026.0	1007.9	68.7	500'
201915	4100	12706	088	83	358	23.8	3.8	2.2	607	719	1027.0	928.8	84.7	in climb to FL175
203440	4100	12549	090	080	348	5.4	-15.1	-46.7	5276	5389	1015.9	520.5	68.2	FL175
205235	4102	12406	085	071	354	77.8	-14.9	-48.8	5276	5182	987.8	520.7	67.6	OVR BEACH NEAR TRINIDAD HEAD
210420	4100	12300	25	21	003	49.8	-21.9	-50.4	5538	3993	802.6	497.8	60.7	L90 R270 P4 CLIMB TO FL200
213336	4100	12518	271	283	350	50.1	-21.1	-40.9	6084	6197	1017.1	466.4	66.7	FL200
222010	4100	13000	-	-	015	30.7	-19.9	-36.2	6326	6550	1021.6	446.4	60.2	PS Climb FL230
222800	4100	12940	090	085	356	27.3	-27.1	-42.6	7020	7227	1025.4	409.5	67.2	FL230
225120	4100	12711	087	080	343	43.2	-26.7	-45.7	7018	7191	1020.0	409.6	67.3	FL230
231310	4100	12447	090	080	344	58.5	-27.7	-43.7	7016	7140	1017.5	409.6	68.9	FL230
232940	4100	12300	-	-	359	68.8	-29.1	-54.0	7018	5541	823.8	409.7	70.6	P4 L90 R270 RETURN PT6
233700	4100	12305	269	284	001	68.2	-29.4	-54.3	7017	5899	843.0	409.7	68.1	HDS TO P6
235540	4103	12410	344	346	351	32.4	8.7	4.6	33	84	1019.7	1009.3	63.9	300' TRINIDAD HEAD
001200	4014	12349	157	152	058	28.4	-3.8	-27.7	3176	3135	983.0	670.6	62.6	CLIMBING TO 13500
001500	AT 13500'													
002940	3854	12314	155	152	357	65.9	Climb to 17500							
003950	3804	12251	153	156	325	53.4	-15.3	-47.8	5789	5605	979.0	485.7	65.5	FL190
005220	3659	12212	160	170	295	61.9	-29.3	-53.1	7624	7806	1015.0	375.9	66.6	FL250
005622	3645	12208	Begin spiral descent from 25000'											
011650	3646	12157	81	75	296	41.6	9.5	6.2	72	89	1015.6	-	75	TOWER 300' CLIMB TO 1500

May 10, 2002 Version B
 Longitudinal Transect over Trinidad Head



Head to Pt. 2 at 13 kft

Head to Pt. 2 (41 N, 124 W) at 10 kft, arrive at Pt. 2 at 14 kft

Head to Pt. 3 (41 N, 127 W) at 14 kft, spiral descent at Pt 3. 500'

Climb in route to Pt 4 (41N, 123 W) to 17 kft.

Head to Pt. 5 (41 N, 130W) at 20 kft.

Head to Pt 4 (41 N, 123 W) at max altitude

Head to Pt 6, Trinidad Head at max altitude.

Spiral Profile at Trinidad Head, fly by ground site. 300'

Step climb to max altitude in route to Pt. SHOEY

Spiral descent at Pt. 1 (36 45N, 122 8W). 300'

Return to Monterey.

T.O. 1807
LAND 0127

020510 H

TT#1

TD#2

No time gaps reported

INE/AZI #2

Dewpointer 1 was bad for entire flight. Dewpointer 3 went in to a rapid oscillation mode several times but it and DP#2 were trending the same with the same temp. approximately

APN 159 replaced with 232

180401 - 181430 T.O
010400 - 013000 Land

Review (over)

INE 2

1)	182500	0.3	0.1	37 20.7	122 29.8 ✓
	190500	0.4	0.6	39 30.4	123 26.8 ✓
	195000	0.7	0.7	41 0.0	125 31.7 ✓
	203000	0.7	1.4	41 0.0	126 14.4 ✓
5)	210500	1.1	1.2	41 2.2	122 56.2 ✓
	215500	1.6	1.5	41 0.0	127 25.8 ✓
	223200	1.5	1.4	41 0.0	129 15.5 ✓
	231500	2.8	0.7	41 0.0	124 34.7 ✓
	000000	3.3	-0.4	40 57.7	124 12.2 ✓
10)	003500	3.7	-0.3	38 27.8	122 59.5 ✓
	011500	4.2	-1.3	36 44.2	122 4.6 ✓
12)	013000	3.9	-3.3	36 35.4	121 51.0 ✓

latitude (deg)



30.09, 10°C, No Wind

47 gas

80.8

128 K

$$4600 \text{ SHP} @ 10^\circ \text{C} = 1053^\circ$$

4370 = 95%

DIST 80 = 1158'

$$V_{REF} = 121 @ 2777$$
$$V_{RO} = 128 @ 3133$$
$$V_{LOF} = 133 @ 3445'$$

DIST LOF = 3939 ENG FAIL

1049° $\beta_{ENL} \text{ ROC} = 559' / \text{min}$

$$V_{50-3} = 136 \text{ Kt}$$

