A/C COMMANDER	NAVIGATOR	A/C NO.	MISSION NO.	TIME AIRBORNE	LOCATION	DATE	PROJ. NAME
McKIM	RATHBUN	N43RF	94-29	1650	PVR	24SEP94	OLIVIA

TIME OF ENTRY	POSITION	TYPE INE USED	INE #1 POSITION	LAT LON COR'S	INE #2 POSITION	LAT LON COR'S	ALT / GS	TH / TK	REMARKS
1637 1642 1650									ENG START TAXI TAKEOFF
	1942.5		1942.6	-.1			160	249	
1729	10757.6		10757.3	+.3			281	248	
	1810.9		1811.1	-.2			160	244	
1820	11149.3		11149.2	+.1			277	246	
	1749.8		1750.0	-.2			160	247	
1832	11242.6		11242.5	+.1			285	248	DROP
	1631.2		1632.1	-.9			160	227	
1914	11553.4		11552.5	+.9			271	236	70 MILES FROM STOKUM
	1548.1		1549.1	-1.0					
1932	11701.0		11700.4	+.7					DROP
	1546.4		1547.3	-.9					
1944	11754.8		11754.4	+.4					S
	1546.6								
1956	11848.4								TURN TO PT 3
	1541.3		1542.1	-.8					
1957	11849.2		11848.5	+.7					DROP
	1550.9		1552.6	-1.7					
2019	11800.2		11758.1						S
	1642.8		1644.3	-1.5					ORBIT AT
2037	11802.2		11801.2	+1.0					#5
	1644.6		1645.9	-1.3					
2040	11759.8		11758.5	+1.3					DROP

ATC CLEARANCE: 246/170 1541 11754

1547.5N 117 55.3W 425 AT 1946

1554 11808W 425 AT 2051

ENROUTE CLEARANCES: 1603N 11816W 425 AT 2158

TYPE OF FIX: (1) DR (2) RADIO (3) CELESTIAL (4) VISUAL (5) LORAN (6) RADAR (7) DOPPLER - INERTIAL (8) OMEGA (9) INERTIAL (10) OMEGA - INERTIAL

TIME OF ENTRY	POSITION	TYPE INE USED	INE #1 POSITION	LAT LON COR'S	INE #2 POSITION	LAT LON COR'S	ALT / GS	TH / TK	REMARKS
	1556.9		1558.1	-1.3					
2051	11805.7		11804.6	+1.1					S
	1506.6								
2103	11806.0								TURN FROM 6 TO 7
	1505.4		1507.0	-1.6					
2104	11800.3		11759.3	+1.0					DROP
	1558.6		1601.7						
2123	11808.0		11806.1						S
	1620.9		1622.9	-2.1					
2129	11824.3		11823.9	+.4					
	1603.9		1605.3						
2155	11813.8		11811.0						S
	1602.7		1605.1	-2.4					
2200	11751.0		11749.0	+2					
	1605.6		1609.3						
2223	11816.5		11815.5						S
	1609.5		1610.1						
2248	11822.3		11821.6						S
	1607.3		1610.0	-2.7					
2253	11802.8		11802.0	+.8					
	1640.5		1643.6	-3.1			230 / 314	074 / 068	
2320	11556.8		11554.6	+2.2					
	1835.9		1839.2	-3.3			230 / 311	071 / 069	
0019	11105.1		11104.2	+.9					
	2006.3		2009.7	-2.4			230 / 308	069 / 069	
0107	10657.5		10655.7	+1.8					
	2041.0		2043.8	-2.8					
0130	10515.0		10514.5	+.5					LAND

NOAA FORM 56-49
(3-86)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
OFFICE OF AIRCRAFT OPERATIONS

FLIGHT PLAN

0230 Z

PROPOSED T.O. 1630Z
ACTUAL T.O.

WAY POINT	TO	RTE	ALT	TAS	TC	W / V / DC	TH	VAR	MH	GS	ZONE DIST	TOTAL DIST	ZONE TIME / TOTAL TIME	PROPOSED ETA	ETA / ATA
1	N20 40.8 W105 15.2 PVR										815	815	2+55 / 2+55		
2	N1545 W117 08 IP														
3	5														
4	N1546 W11847 #2														
5	1511 W11831 #3														
6	1629 11727 #4	+1 -1													
7	N1540 W11500 #5														
6	1507 11906 #6														
7	1521 11729 #7	+1 -1													
8	1647 11842 #8 11842	+2 -1													
9	1558 11900 #9														
1	1604 11723	+2 -2													
2	1606 11817														
1	1609.5 11730														
		+3 -2													

SYS	BEGIN ALIGN TIME	NCS CONN	Ω AID	TIME OUT OF COARSE / ELAPSE ALIGN POST TIME	ALIGN STS 0-5	(1) TIME INTO NAV.	(2) TIME OUT NAV.	ΔT (2)(1)	TERMINAL ERRORS LAT	LONG	G S
INS 1	1250Z	—		—	0	1637	0130	8+53	-2.8	+.5	1
INS 2 IMU	—			—		—	—			—	

ALIGN REMARKS: #2 IN ATT REF

OTHER REMARKS:

3117 7+23 1+30 8+53

55
25

OAA FORM 59-4
(-72)

0-107
10-108
WS 109
SP 111

940924I H. OLIVIA

Time	LAT	LON	TR	WD	WS	PA	GA	TA	TD	SP	DS				
													21 Z		
1642	2040.7	10515.1				20		32.6	24.1		1010.7		15.7N	118.3W	
165845	2031.7	10541.1	249	1	6	2474	—	14.5	5.9	—	743.3	↑	955 mb		
170515	2022.3	10608.2	250	18	9	4051	4276	4.9	-3.5	1008.0	610.4	↑	100 KTS		
1722	1955	10724	249	21	5	4901	5159	-0.2	-15.0	1005.6	547.4	—	290/110KTS		
174745	1910	10922	249	89	7	4896	5153	0.0	-14.6	1005.2	547.7				
1825	18025	11210.2	248	115	10	4894	5148	-0.6	-9.3	1006.1	547.9				
183158	1749	11243	248	122	7	4894	5146	-1.3	-4.3	1006.8	547.9	Drop	1		
1932	Drop Sonde														
193445	1545	11713	269	165	56										
1944	1546	11755		6			15	47.5N	117 55.3			(3)	15 11	118	31
195734	1540	11846	155	342	32	4277	4423	3.5	2.5	996.0	594	PT	2		
201527	1552	11758		6				16.2	6.6	937		6	15 50.9	118	00.2
204046	1644	11759	Drop		N										
205149	1556	11806	6												
210427	1506	11759	Drop		S										
212322	1559	11828	6												
214635	1559	11851	80	355	31	4281	4403	3.8	4.4	997	594	W of E46			949
215530	1604	118,14	6												
220245	1603	11741	92												
221115	16 07.9	11722	267	164	62	4304	4445	4.8	3.4	995					
221745	1607	11753	268	170	65	4304	4374	4.1	5.7	986.0	592	W Band to center			
2223	1606	11816	6												
2231	1607.5	11853	270	9	41	4285	4400	4.2	4.7	992.9	593.9	W of center			
224215	1606.6	118514	87	355	38	4282	4384	4.6	4.5	989.6	594.2				
2248	16 09.5	118 22.3	6												
225445	1607	11752	91	181	59	4297	4401	3.7	6.3	991.1	592.3	E of CENTER			
2300	1606.8	11729	91	171	53	4342	4507	3.3	5.2	995.2	576.5	Done ↑ & Home			
231930	1638.4	11601.7	68	156	32	7059	7424	-13.0	-23.6	995.0	407.1	— at 23K PA			
2356	1751	11303	67	126	22	7058	7437	-13.0	-28.6	996.5	407.3				
004115	1918.7	109145	67	50	6	7056	7443	-13.9	-28.9	1000.9	407.4				
011330	2016.8	10627.6	70	69	8	7046	7429	-14.9	-29.4	999.0	402.5				
0137	2040.7	10516.1				37		30.2	27.2		1008.7	2043.6	10514.6	BLK	

U.S. DEPT. COMM./NOAA/OAO - DATA SECTION WORK FORM NO.1 OAOWF1 FILE

FLT ID: 940924I	FM: PVM	TO: PVM
FLT NO: ~~tte~~	BLK IN: 0137	ATA: 0131
ETD: 1630	BLK OUT: 1642	ATD: 165135
ETE: 10+11	BLK TIME: 8:55 (8.9)	FLT TIME: 8:39 (8.7)
SPONSOR ORG: HRD	PROGRAM: Research	PURPOSE: H. Divin...

OAO PERSONNEL

AC	McKim ✓	SYS ENG	Lynch ✓
CP	Tennesen ✓	DATA SYS	Delgado ✓
NAV	Rathbun ✓	RADAR	
FE	Bast ✓	BT/ODW	Prudas ✓
RADIO	Sans Souci ✓	CLD PHYS	
FD	Parrish ✓	DOPPLER	

PARTICIPATING SCIENTIST/VISITORS/OAO

LAST, FIRST NAME	ACTIVITY ON A/C	AFFILIATION
Marks, F. ✓		HRD
Willoughby, H. ✓		↓
Griffin, J. ✓		
Franklin, J.		
Fremmel,		
Black, P. ✓		
Ohlmo, B		IMAX
Fuentes, U. ✓	Visitor	Mex. AF

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

Fly Inner Core Structure & Evolution Exp. IP 15 24N 117 32W
Bad AR-159 at T.O. Bad CO2 system.
One Radar glitch at N cardinal pt; but very brief.

Fix	1944Z	15°46'N 117° 55'W
Fix	201930Z	15°52'N 117° 58'W
Fix	2052Z	15°56'N 118° 06'W
Fix	2123Z	15°59'N 118° 08'W
Fix	215530Z	16°04'N 118° 14'W
Fix	2223Z	16°06'N 118° 16'W
Fix	2248Z	16° 09.5'N 118° 22'W

7 Penetrations

940924I N43RF HURRICANE OLIVIA HRD RESEARCH

Sensor or system	Number or Name
INE	1 (See note)
Accelerometer	1
Temperature Probe	1
Dew Point Probe	1
Altimeter	APN-232 (See note)
Altitude change option (for vertical winds)	RA
Static Pressure	Rosemount Fuselage
Dynamic Pressure	Rosemount Fuselage
Time Source	Micro 29
Constants File	CO3943.CON

Notes:

INE 1 positions were corrected every hour during the ferries, and about every 40 minutes while in the storm, using good GPS positions. No corrections were made to INE 1 groundspeeds. INE 2 was used for cockpit attitude instruments only, and provides no position or groundspeed information on the Type 4 record.

Due to ADC spiking, the Fuselage Static Pressure (PSF) was patched with offset Wingtip Static Pressure (PSW) several times during the ferry out to Olivia. The problem was repaired before we arrived at the storm.

The APN-159 radar altimeter failed at takeoff, and was unusable for the flight's duration.

	Aircraft	Tower
Takeoff surface pressure	1012.0 mb	1013.0 mb
Landing surface pressure	1009.5 mb	

Jack Parrish, Flight Director