

Aeronomy Lab Clouds and Radiation Arkansas/Louisiana Convection

Flight #2: 000504H

<u>Sensor or system</u>	<u>Number or Name</u>
INE	1
Accelerometer	2
Temperature Probe	1
Dew Point Probe	1
Altitude (for vertical wind)	RA-159
Static Pressure	Rosemount Fuselage
Dynamic Pressure	Rosemount Fuselage
Time Source	Micro 99
Constants File	CO2993.CON

Notes:

Dewpoint (DW1) was not functioning properly due to being "maxed out" from 1647:31-1658:30. Dewpoint exceeded ambient temperature several times due to heavy precipitation. DW1 had two spikes removed and patched due to overshooting 2120:31-2122:00 and 2153:30-2154:30.

Radar altitude (RA-159) was set to to zero prior to takeoff due to spikes (1320:01-1322:55) and replaced by RA-232 from 1322:55-1323:10. RA-159 had several spikes throughout the flight and were removed and patched (1445:01-1445:30, 1456:31-1457:00, 1502:31-1503:30, 1516:31-1517:30, 1527:31-1528:30, 1534:01-1535:00, 1535:31-1536:00, 1555:01-1555:30, 1600:31-1601:00, 1601:31-1602:00, 1605:01-1605:30, 1611:31-1612:30, 1617:00-1618:00 (3), 1649:31-1650:00, 1704:31-1705:00, 1710:00-1711:00, 1737:01-1737:30, 1738:31-1739:30, 1740:01-1740:30, 1741:01-1741:30, 1748:31-1749:00, 1849:01-1850:00, 1934:30-1935:00, 1936:31-1937:00, 2020:31-2021:00, 2043:31-2045:00 (2), 2111:00-2111:30, 2121:31-2122:00, and 2135:31-2136:00). RA-159 was replaced by RA-232 just prior to landing due to spikes (2157:57-2210:00).

Total temperature (TT1) appears not be functioning properly from 1828:00-1838:00 and 2016:31-2020:00. TT1 was replaced by TT2 from 1835:28-1842:16 with an offset of +0.6.

Static pressure (PSF) had several spikes removed and patched 1350:30-1357:30.

	<u>Takeoff</u>	<u>Landing</u>
Aircraft static pressure	1020.1	1017.3
Corrected tower pressure	1021.0	1018.3

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 Meteorologist: Stan Czyzyk, (813) 828-3310 ext. 3086

Flt ID: 000504H	From: KMCF	To: KMCF
Flt No.: 00-32	Blk In: 2216Z	ATA: 2207Z
ETD: 13Z	Blk Out: 1308Z	ATD: 1322Z
ETE: 22Z	Blk Time: 9:08 9.1	Flt Time: 8.45 8.8
Sponsor Org: NOAA/AL	Program: NOAA CLOUDS+RAD	Purpose: THICK STRATUS LA

AOC Personnel

AC: TAGGART, B ✓	Sys Eng: McMILLAN, S ✓
CP: OMARA, T ✓	Data Sys: HORNBRUCK, C ✓
Nav: NEWMAN, C ✓ ADLER, J ✓ #1	Radar: BARR, J ✓
FE: TURET, R ✓	GPS/BT:
Avionics:	Cld Phys:
FD: C2424K, S ✓	

Participating Scientists/Visitors/AOC

Name (Last, First)	Activity on Aircraft	Affiliation
SOLOMON, S ✓	P.I.	NOAA/AL
LANGFORD, A ✓	MIDAS	"
DANIEL, J ✓	"	"

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

BAD DOWN RAD, UP @ 1425
 TERRA OVP 1616 + 1754 ON TOP OF CLOUD
 HD Flight

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

AOCWF2

Flt ID: 000504H

Time Off: 1322Z

Time On: 2207Z

	A/C (Take Off)	Wx Stn (Take Off)	A/C (Land)	Wx Stn (Land)
Pressure	1020.1	30.15	1017.3	30.07

	Number	Data Disposition/Date/Quality
Slow/Fast Flt Lvl Tapes	2	
Radar Tapes	—	
Cloud Physics Tapes		
Video Tapes		
Flt Lvl Data Printout		
AXB T		
AXCP		
AXCTD		
GPS		

Video

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

Remarks

000504H

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

Form 413-50

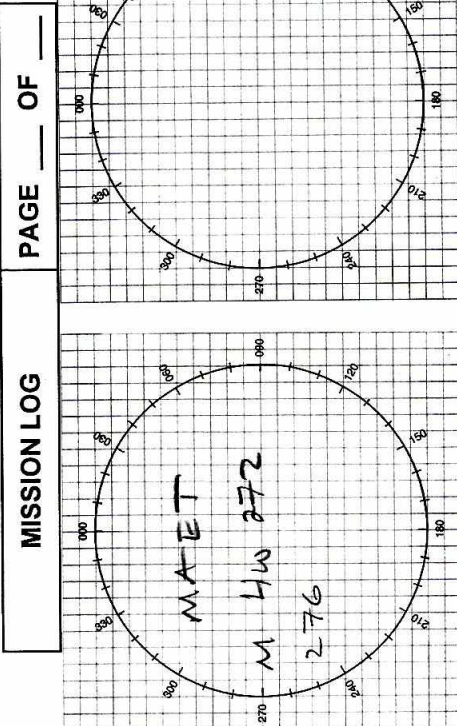
TIME	LAT	CON	TK	HD	TA	TD	WD	WS	PA	GA	PS	SP	REMARKS
141530	28 09	86 14	291	291	-6.5	-17.2	159	4.1	4833	5066	552.3	1017.7	LEVEL 16K
1420	28 17	86 40											PASS BETWEEN CELLS
143350	28 34	87 48	284	284	-6.5	-26.8	146	2.9	4838	5067	552.1	1018.2	MAC EE
145522	30 00	88 49	335	332	-5.9	-26.4	236	19.4	4832	5054	552.5	1015.5	BREACH
150100	30 23	89 04	332	329	-5.5	-27.3	216	20.9	4841	5041	551.7	1012.8	MAINLAND
153700	31 18	91 28	265	264	-7.5	-14.1	235	20.3	4862	5037	550.7	1012.4	SET BLO
1556	31 45	92 40	337	321	-8.7	-12.2	231	34.8	4858	4975	550.5	1008.6	IN + AROUND CONV. CLDS
160935													CLIMB 100 FT TURN
161115	32 41	93 14	147	155	-8.9	-8.7	241	33.5	4894	4944	547.9	1002.1	LEVEL 16, 200 FT
161635	32 20	93 03											TURN + CLIMB
161910	32 26	93 01	333	328	-9.3	-9.1	218	36.4	4990	5058	540.8	1022.5	LEVEL 16, 400 FT
164120	32 47	92 37	089	008	-22.0	-24.1	220	30.4	7031	7222	408.8	1007.1	LEVEL 23K PA LEG BEG
164635	33 14	92 32											RELEASE + DESCEND
165630	32 42	92 36	199	198	-2.7	-3.6	184	30.9	3955	4043	620.4	1006.9	LEVEL 13K
170350	32 27	92 47	17	18	0.0	6.8	191	25.4	2124	2133	782.7	1007.5	LEVEL 7K BEGIN LEG
170850	32 47	92 38											CLIMB + TURN
171200	32 51	92 36	198	198	7.1	3.8	200	30.4	2278	2311	767.8	1008.0	LEVEL 7501
171720	32 33	92 44											CLIMB + TURN
172155	32 36	92 41	19	21	3.9	2.0	196	32.6	2719	2750	726.7	1008.2	LEVEL 9K BEGIN LEG
172630	32 57	92 32											CLIMB + TURN
172945	33 00	92 30	202	203	1.2	0.1	193	31.9	3173	3242	685.9	1011.2	LEVEL 10.5K BEGIN LEG
173500													END TURN + CLIMB
173725	32 48	92 32	19	18	-1.4	-1.8	211						LEVEL 12K
174110	33 05	92 25											TURN + CLIMB
174435	33 06	92 25	200	201	-4.7	-5.5	202	27.0	4250	4337	596.7	1004.9	LEVEL 14K
175030	32 45	92 32											CLIMB + TURN
175345	32 54	92 24	10	07	-8.1	-8.4	217	34.1	4858	4972	550.6	1007.0	LEVEL 16K
175603	32 04	92 22											TURN + CLIMB
181700	32 10	92 21	168	173	-22.1	-22.3	224	27.1	7041	7261	408.2	1008.3	LEVEL 23K
183100	31 10	92 42											TURN + DESCEND
184435													LEVEL 7K + TURN
1848	32 08	92 15	211	213	8.9	6.3	210	20.1	2105	2162	784.2	1011.7	BEGIN LEG 7K
185235	31 53	92 26											TURN + CLIMB
1858	32 00	92 20											LEVEL 9K + BEGIN LEG
190200	32 15	92 11											TURN + CLIMB
190450	32 10	92 10	207	209	0.2	0.5	213	23.2	3324	3406	672.4	1012.2	LEVEL 11K
190945	31 54	92 21											CLIMB + TURN
191215	31 55	92 15	30	29	-3.0	-3.2	230	30.1	3972	4082	618.4	1010.8	LEVEL 13K BEGIN LEG
191630													CLIMB + TURN
192110	32 15	92 03	201	206	-6.1	-7.1	237	29.8	5575	4732	571.3	1012.0	LEVEL 15K BEGIN LEG
192750	31 52	92 16											CLIMB + TURN
193055	31 57	92 07	27	27	-10.0	-9.0	217	30.1	5183	5338	527.0	1017.5	LEVEL 17K BEGIN LEG
													CLIMB + TURN
193740	32 08	92 01	211	213	-13.3	-13.9	220	27.1	5797	5994	484.9	1009.1	LEVEL 19K BEGIN LEG
1951-			40	42	-17.4	-17.8	203	29.7	6411	6634	446.0	1009.6	LEVEL 21K BEGIN LEG
1954													TURN
200300	31 45	92 12	208	210	-26.7	-28.1	242	19.9	7126	7874	375.3	1013.0	LEVEL 25K

132.18 302 TK

13604

1412

CLEARANCES			OTHER
FREQ	ALT	HDG	
			C AF 1600
			080 1600 710



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 121.5 2182 KHZ 8364 KHZ 500 KHZ

MAYDAY, MAYDAY, MAYDAY

THIS IS NOAA, NOAA, NOAA

POSITION: N/S E/W AT Z

HEADING: TRUE/MAG

AT KTS TRUE/INDICATED

FLIGHT LEVEL OR ALTITUDE

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	K ERR	INS 2 POSITION	K ERR	MH	VAR +E=>	TH	DR +R=>	TRK	WD	WS	ALT	TAS	NEXT PT	DIST	TIME	ETA	REMARKS
1253																				FUEL 55.2K
1308																				TAXI 4 35
1323																				70
1424	Δ	28 19.1 086 52.1	28 18.0 086 52.0	+1.1 +1.1	28 19.8 086 52.4	-1.7 -1.3	281 347	ZE ZE	283 349	0 ZE	283 351	225 200	20	160	270	82	111	1433		
1504	Δ	30 38.3 089 07.5	30 38.8 089 07.5	-1.5 +0	30 39.5 089 06.7	-1.2 +8									280	280				10K
1535																				42.1K
1629	Δ	32 48.4 093 06.8	32 45.8 092 59.5	+2.7 +2.3	32 50 093 00.5	-1.6 +1.3	154	5E	159	8L	151	235	33	71	252					
175	Δ	32 54.7 092 24.4	32 53.5 092 24.4	+1.2 +0	32 57.2 092 22.8	-2.5 +1.6	004	SE	009	0	009	294	30	160	259					31.0K
1819	Δ	32 02.0 092 14.9	32 00.0 092 21.6	+2.0 +1.7	32 04.3 092 19.4	-2.3 +2.2	219	SE	214	ZE	212	213	25	7K	235					26.0K
1957	Δ	32 06.3 091 59.2	30 04.0 092 00.7	+2.3 -1.5	32 09.5 091 58.2	-3.2 +1.0	205	SE	210	ZE	208	238	25	25K	260					updated 2032
2207																				LAND
2206																				CHECK

1361 1362 1363 1364

2039 092/31

3004

