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ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/6 4/2
19702A 6SRS; MISSILE NUMBERS 223, 224; ROUND NUMBERS B-47; B-48--ETC(U)

OCT 79

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) eteorological data gathered for the launching of 19702A GRS, Missile Numbers 223, 224, Round Numbers B-47, B-48 are presented in tabular form.		

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INTRODUCTION

19702A GSRS, Missile Numbers 223 and 224, Round Numbers B-47 and B-48, were launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 0945 and 0945:04 MDT, 22 October 1979. The scheduled launch times were 0945 and 0945:04 MDT.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air

(1) Low level wind data were obtained from RAPTS T-9 pibal observation at:

SITE AND ALTITUDE

LC-33 2Km
NICK 2Km

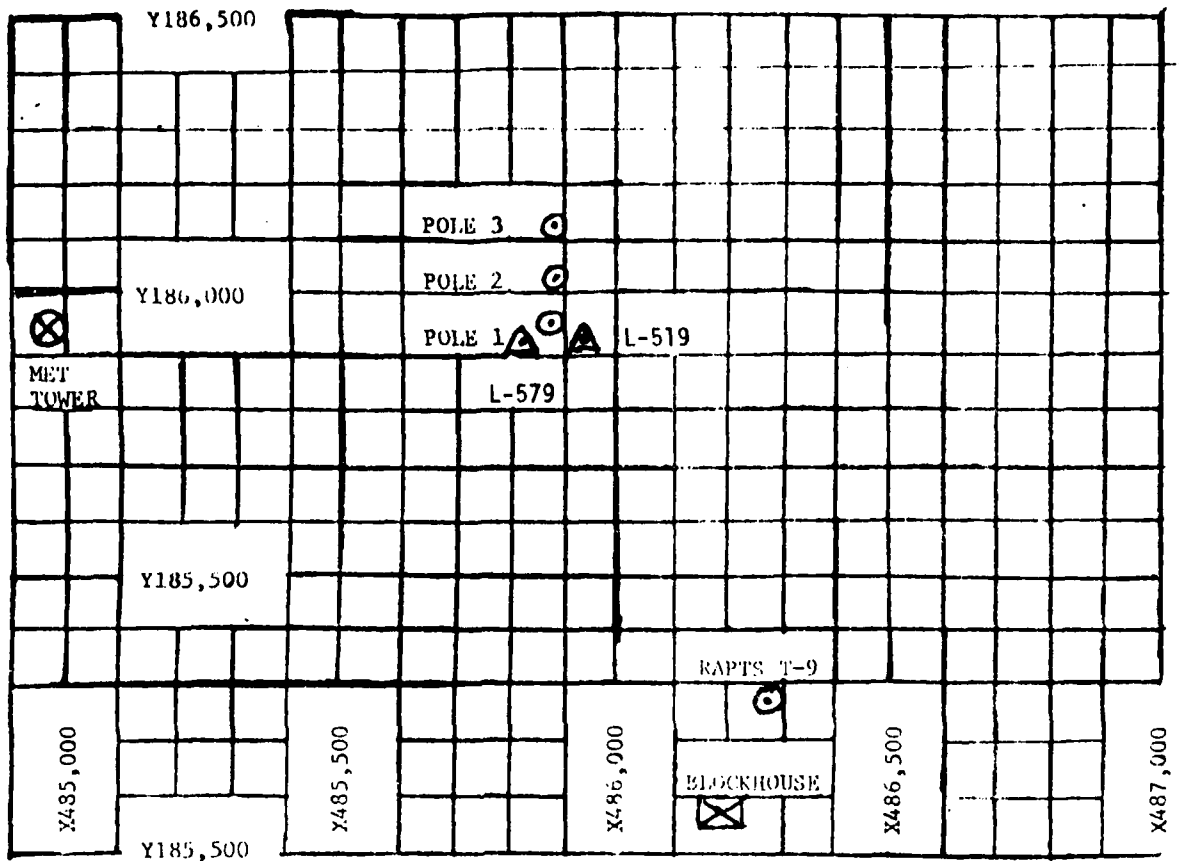
(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to 97,500 feet in 500-foot increments.

SITE AND TIME

SMR 0845 MST

Accession For	Miss G. 421
Dist	MB
Unannounced	
Justification	
By	
Distribution	
Availability Codes	
Avail and/or special	
Dist	A 23 615

NORTH



1. MET TOWER - 4 Bendix Model T-20 Anemometers at 17 ft, 52 ft, 102 ft, and 167 ft with E/A recorders.
2. POLE ANEMOMETER - Bendix Model T-120 with E/A recorders.
 - (a) Pole #1 - 38.7 ft
 - (b) Pole #2 - 53.0 ft
 - (c) Pole #3 - 83.6 ft
3. RAPT5 T-9 Radar Automatic Pilot-Balloon Tracking system T-9 Radar.

TABLE 1. Surface Observations taken at 0945 MDT,
 22 October 1979, at LC-33, 19702A GSRS,
 Missile Numbers 223, 224, Round
 Numbers B-47, B-48.

ELEVATION	3977.30	FT/MSL
PRESSURE	877.6	MBS
TEMPERATURE	12.9	°C
RELATIVE HUMIDITY	37	%
DEW POINT	-1.4	°C
DENSITY	1064	GM/M ³
WIND SPEED	08	KTS
WIND DIRECTION	020	DEGREES
CLOUD COVER	1	Ac

LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

POLE #1			POLE #2			POLE #3		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	033	02	-30	027	MISG	-30	027	13
-20	030	13	-20	031	MISG	-20	028	13
-10	030	13	-10	027	MISG	-10	029	13
0.0	030	12	0.0	026	MISG	0.0	032	12
+10	035	11	+10	027	MISG	+10	025	12

POLE #1 = X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL

POLE #2 = X485,874.93 Y186,012.00 H4033.57 53.0 ft AGL

POLE #3 = X485,877.29 Y186,116.06 H4063.92 83.6 ft AGL

TABLE 2

TYPE 19702A GSRS MISSILE NOS. 223, 224 ROUND NOS. B-47, B-48

LAUNCHED FROM LC-33 DATE 22 October 1979 TIMES. 0945, 0945:04 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1 12 Feet			LEVEL #2 62 Feet		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	009	06	-30	028	11
-20	021	07	-20	032	09
-10	030	06	-10	026	10
0.0	013	09	0.0	019	10
+10	021	07	+10	045	09
LEVEL #3 102 Feet			LEVEL #4 202 Feet		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	012	10	-30	028	11
-20	036	10	-20	028	11
-10	033	11	-10	021	11
0.0	030	09	0.0	021	11
+10	035	09	+10	018	11

WTSM COORDINATES: X484,982.64 Y185,057.73 H3983.00 (base)

TABLE 3

TYPE 19702A GSRS MISSILE NOS. 223,224 ROUND NOS. B-47, B-48

LAUNCHED FROM LC-33 DATE 22 October 1979 TIMES. 0945, 0945:04 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

GSRS PILOT BALLOON MEASURED WIND DATA

TABLE 5

RELEASED FROM LC-33 DATE 22 October 1979 TIME 0945 MDT

RELEASED POINT COORDINATES (WSTM) X= 486.037.24 Y= 182.350.16 H= 3977.30

MISSILE TYPE 19702A GSRS MISSILE NOS. 223, 224 ROUND NOS. B-47, B-48

MISSILE LAUNCHED FROM LC-33 DATE 22 October 1979 TIMES. 0945, 0945:04 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

HEIGHT - METERS AGL

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS	HEIGHT AGL	DIRECTION DEGREES	SPEED KTS	HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
SFC	020	08						
90	MISG	MISG						
150	026	06						
210	040	13						
270	038	11						
330	032	14						
390	008	13						
500	012	14						
650	014	15						
800	007	13						
950	348	09						
1150	MISG	MISG						
1350	275	02						
1550	250	07						
1750	272	13						
2000	292	09						

STATION ALTITUDE 9997.30 FEET MSL
 22 OCT. 79
 ASCENSION NO. 300

SIGNIFICANT LEVEL DATA
 2950960360
 S M K

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LONG DEG

TABLE 8

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
886.1	9997.3	-2.6	34.0
879.2	4211.8	-4.9	34.0
850.0	5129.9	-7.0	32.0
805.2	6566.0	-10.2	34.0
774.6	7616.3	-17.7	17.0
700.0	10322.4	-20.5	17.0
688.4	10765.0	-21.2	16.0
664.8	11695.3	-18.2	16.0
551.2	16655.9	-18.2	29.0
527.8	17779.4	-20.5	29.0
500.0	19171.6	-7.1	20.0
483.4	20035.4	-27.2	20.0
469.0	20404.3	-20.4	21.0
400.0	24752.2	-32.0	37.0
391.9	25247.6	-32.8	39.0
385.2	25769.7	-36.8	26.0
371.0	26569.1	-38.7	24.0
300.0	31545.6	-48.3	27.0
292.2	32149.1	-49.4	27.0
250.0	35630.0		
200.0	40392.0		
182.6	42266.5		
155.2	45530.0		
150.0	46202.5		
151.4	48795.1		
122.6	50152.5		
105.4	53110.2		
100.0	54131.0		
79.0	61151.8		
63.4	63152.2		
50.0	68011.0		
37.7	73916.4		
30.0	78783.2		
21.6	85761.3		
20.0	87408.4		
12.4	97153.4		

STATION ALTITUDE 6997.30 FEET MSL
 22 OCT. 79 0845 HRS MST
 ASCENSION NO. 300

UPPER AIR DATA
 2950003300
 S M R

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42507 LONG DEG

TABLE 9

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CELSIUS	REL. HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (TR) SPEED KNOTS	INDEX OF REFRACTION
3997.3	886.1	12.8	34.0	1077.2	659.5	50.0	1.000263
4000.0	885.0	12.8	34.0	1077.2	659.4	50.0	1.000263
4500.0	869.9	9.4	33.4	1070.5	655.5	25.0	1.000257
5000.0	854.1	8.1	32.3	1056.1	653.9	20.2	1.000252
5500.0	838.4	6.9	32.5	1041.4	652.4	14.2	1.000248
6000.0	822.9	5.6	33.2	1026.9	650.9	7.4	1.000244
6500.0	807.8	4.4	33.9	1012.5	649.5	1.0	1.000240
7000.0	792.8	4.7	27.2	993.0	649.7	350.2	1.000233
7500.0	778.2	5.3	18.9	972.9	650.3	350.3	1.000225
8000.0	763.7	4.9	17.0	956.2	649.9	324.3	1.000220
8500.0	749.5	4.3	17.0	940.6	649.1	285.3	1.000216
9000.0	735.8	3.6	17.0	925.3	648.3	261.0	1.000213
9500.0	721.9	3.0	17.0	910.2	647.8	235.0	1.000209
10000.0	708.5	2.3	17.0	895.4	646.8	209.5	1.000206
10500.0	695.3	1.9	16.6	880.1	646.3	203.5	1.000202
11000.0	682.4	2.8	16.0	866.8	647.4	297.6	1.000198
11500.0	669.1	4.0	16.0	853.6	649.8	307.4	1.000194
12000.0	657.2	5.1	15.8	822.1	650.1	303.0	1.000190
12500.0	644.9	4.3	18.1	809.1	649.1	300.7	1.000188
13000.0	632.8	3.4	19.4	796.4	648.2	296.4	1.000185
13500.0	621.0	2.8	20.7	783.8	647.2	293.0	1.000182
14000.0	609.3	1.7	22.0	771.5	646.2	290.2	1.000180
14500.0	597.9	.9	23.4	759.3	645.2	292.7	1.000177
15000.0	586.8	.1	24.7	747.4	644.3	291.0	1.000174
15500.0	575.8	-.8	26.0	735.7	643.3	290.9	1.000172
16000.0	565.0	-1.6	27.3	724.1	642.3	292.4	1.000169
16500.0	554.4	-2.4	28.6	712.8	641.3	293.8	1.000166
17000.0	543.9	-3.5	29.0	702.0	640.0	290.4	1.000164
17500.0	533.5	-4.7	29.9	691.6	638.8	299.0	1.000161
18000.0	523.3	-5.6	27.6	680.6	637.5	300.7	1.000158
18500.0	513.2	-6.2	24.3	669.4	636.7	301.9	1.000154
19000.0	503.3	-6.9	21.1	658.2	635.9	302.5	1.000151
19500.0	493.6	-7.6	20.0	647.1	635.1	302.0	1.000148
20000.0	484.1	-8.3	20.0	636.3	634.2	303.2	1.000145
20500.0	474.6	-9.6	20.6	627.0	632.8	304.1	1.000143
21000.0	465.3	-10.9	21.6	617.9	631.0	304.7	1.000141
21500.0	456.0	-12.3	23.8	608.8	629.3	303.1	1.000139
22000.0	446.9	-13.7	25.8	599.8	627.7	304.0	1.000137
22500.0	438.0	-15.0	27.9	590.9	626.0	303.0	1.000135
23000.0	429.3	-16.4	29.9	582.2	624.4	302.0	1.000133

UPPER AIR DATA
2950000300
S M K

STATION ALTITUDE 9997.30 FEET MSL
22 OCT. 79
ASCENSION NO. 500

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

TABLE 9 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND METERS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION, DEGREES (TN)	SPEED KNOTS	
25500.0	420.7	-17.8	-30.4	31.9	573.7	622.7	301.4	40.6	1.000131
24000.0	412.3	-19.1	-31.0	34.0	565.2	621.0	297.6	41.8	1.000129
24500.0	404.1	-20.5	-31.6	36.0	557.0	619.3	297.0	42.8	1.000127
25000.0	395.9	-22.0	-32.4	38.0	546.9	617.0	294.9	42.7	1.000125
25500.0	387.8	-22.7	-34.5	32.9	539.3	616.0	291.3	40.8	1.000122
26000.0	379.9	-23.0	-37.3	25.5	528.9	616.2	291.4	38.6	1.000119
26500.0	372.1	-23.8	-38.5	24.2	519.7	613.3	283.0	35.9	1.000117
27000.0	364.2	-25.0	-39.5	24.3	511.2	613.8	289.6	34.7	1.000115
27500.0	356.6	-26.2	-40.4	24.6	502.9	612.3	294.0	35.4	1.000113
28000.0	349.0	-27.4	-41.4	24.9	494.8	610.7	296.8	36.9	1.000111
28500.0	341.7	-28.7	-42.4	25.2	486.8	609.2	302.1	38.9	1.000109
29000.0	334.5	-29.9	-43.3	25.5	478.9	607.6	300.9	40.2	1.000107
29500.0	327.4	-31.1	-44.3	25.6	471.2	608.1	296.2	41.4	1.000166
30000.0	320.3	-32.4	-45.3	26.1	463.6	604.5	297.9	42.1	1.000104
30500.0	313.7	-33.6	-46.3	26.4	456.2	603.0	293.3	42.6	1.000102
31000.0	307.1	-34.8	-47.3	26.7	448.9	601.4	295.3	43.1	1.000101
31500.0	300.6	-36.1	-48.2	27.0	441.7	599.9	295.0	43.7	1.000099
32000.0	294.1	-37.1	-49.1	27.0	434.0	598.6	297.7	43.7	1.000097
32500.0	287.6	-38.3	-51.1	24.3**	426.6	597.1	297.3	43.0	1.000095
33000.0	281.3	-39.6	-53.6	20.4**	419.4	595.4	290.9	42.1	1.000094
33500.0	275.0	-40.8	-55.4	16.5**	412.4	593.8	290.4	40.6	1.000092
34000.0	268.9	-42.1	-57.6	12.6**	405.5	592.2	295.3	39.1	1.000090
34500.0	263.0	-43.3	-63.4	8.8**	398.7	590.6	293.0	37.8	1.000089
35000.0	257.2	-44.6	-69.6	4.9**	392.0	589.0	294.7	36.8	1.000087
35500.0	251.5	-45.9	-79.7	1.0**	385.4	587.3	292.2	36.3	1.000086
36000.0	245.7	-47.1			378.7	585.7	289.7	36.2	1.000084
36500.0	240.0	-48.3			371.9	584.1	287.8	38.6	1.000083
37000.0	234.5	-49.5			365.3	582.0	288.2	41.1	1.000081
37500.0	229.0	-50.8			358.8	581.0	288.5	42.8	1.000080
38000.0	223.7	-52.0			352.4	579.4	288.9	44.5	1.000079
38500.0	218.5	-53.2			346.1	577.8	287.0	46.3	1.000077
39000.0	213.3	-54.4			340.0	576.2	286.0	48.0	1.000076
39500.0	208.0	-55.6			334.0	574.6	286.6	49.0	1.000074
40000.0	203.7	-56.8			328.1	573.0	283.4	49.8	1.000073
40500.0	199.0	-58.0			322.2	571.4	283.7	49.8	1.000072
41000.0	194.2	-59.1			316.0	570.0	289.0	49.0	1.000070
41500.0	189.5	-60.2			310.0	568.6	290.4	48.4	1.000069
42000.0	185.0	-61.2			304.1	567.1	290.1	48.7	1.000068
42500.0	180.5	-62.3			298.2	565.7	289.8	49.0	1.000066
43000.0	176.0	-63.4			292.3	564.3	287.7	49.4	1.000065

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN LINE INTERPOLATION.

UPPER AIR DATA
 2950060300
 S M R

STATION ALTITUDE 9997.30 FEET MSL
 22 OCT. 79
 ASCENSION NO. 300

GEOMETRIC COORDINATES
 32.46034 LAT DEG
 106.42307 LON DEG

TABLE 9 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	DEWPOINT DEGREES	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES (TRUE)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
43500.0	171.7	-64.4			286.6	562.9	265.3	49.9	1.000064
44000.0	167.5	-65.3			289.9	561.4	265.3	50.5	1.000063
44500.0	163.4	-66.5			275.4	560.0	262.0	51.0	1.000061
45000.0	159.4	-67.6			270.0	558.6	261.1	51.4	1.000060
45500.0	155.4	-68.8			264.8	557.1	260.7	51.7	1.000059
46000.0	151.5	-69.8			259.4	556.9	262.1	51.7	1.000058
46500.0	147.7	-69.2			252.4	556.3	264.7	51.4	1.000056
47000.0	144.0	-69.8			246.7	555.5	263.5	50.1	1.000055
47500.0	140.4	-70.4			241.2	554.7	267.3	47.9	1.000054
48000.0	136.8	-71.0			235.8	553.9	263.4	46.7	1.000053
48500.0	133.4	-71.6			237.5	553.1	266.2	46.6	1.000051
49000.0	130.0	-71.5			224.6	553.3	263.2	46.5	1.000050
49500.0	126.8	-70.4			217.8	554.7	263.0	46.7	1.000049
50000.0	123.6	-69.3			211.2	556.2	267.3	46.9	1.000047
50500.0	120.4	-69.4			205.9	556.1	291.4	46.1	1.000046
51000.0	117.4	-69.9			201.3	555.3	293.5	45.3	1.000045
51500.0	114.4	-70.5			196.7	554.6	290.6	46.1	1.000044
52000.0	111.6	-71.1			192.3	553.8	304.4	47.8	1.000043
52500.0	108.7	-71.6			188.0	553.1	306.6	48.1	1.000042
53000.0	106.0	-72.2			183.7	552.3	312.0	47.0	1.000041
53500.0	103.3	-72.3			179.2	552.1	314.5	44.9	1.000040
54000.0	100.7	-72.3			174.6	552.1	310.8	40.1	1.000039
54500.0	98.1	-72.0			170.0	552.5	303.2	35.5	1.000038
55000.0	95.7	-71.6			165.4	553.1	302.6	33.2	1.000037
55500.0	93.3	-71.2			160.9	553.6	299.0	31.0	1.000036
56000.0	90.9	-70.8			156.6	554.1	297.2	27.4	1.000035
56500.0	88.7	-70.4			152.4	554.7	293.0	23.3	1.000034
57000.0	86.4	-70.1			148.3	555.2	290.7	19.0	1.000033
57500.0	84.3	-69.7			144.3	555.7	277.0	15.1	1.000032
58000.0	82.2	-69.3			140.4	556.3	253.6	13.3	1.000031
58500.0	80.1	-68.9			136.6	556.8	236.1	17.0	1.000030
59000.0	78.1	-68.5			132.9	557.3	243.1	20.8	1.000030
59500.0	76.1	-68.1			129.3	557.9	252.1	23.6	1.000029
60000.0	74.2	-67.7			125.8	558.4	259.2	26.6	1.000028
60500.0	72.4	-67.3			122.5	558.9	263.9	27.6	1.000027
61000.0	70.5	-66.9			119.2	559.5	279.3	27.4	1.000027
61500.0	68.8	-66.5			115.7	560.8	289.0	26.9	1.000026
62000.0	67.1	-64.7			112.2	562.5	300.0	22.5	1.000025
62500.0	65.5	-63.4			108.8	564.2	315.7	19.3	1.000024
63000.0	63.9	-62.2			105.5	565.9	329.0	14.1	1.000023

STATION ALTITUDE 9997.30 FEET MSL
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UPPER AIR DATA
 255000300
 S M R

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

TABLE 9 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	WIND DATA			INDEX OF REFRACTION
						DIRECTION, DEGREES (TIN)	SPEED KNOTS	REFRACTION	
63500.0	62.3	-61.8		102.7	566.4	330.1	10.1	1.000023	
64000.0	60.8	-61.7		100.2	569.4	23.2	8.4	1.000022	
64500.0	59.4	-61.7		97.8	566.5	57.1	7.1	1.000022	
65000.0	57.9	-61.7		95.4	566.5	67.7	7.9	1.000021	
65500.0	56.5	-61.7		93.1	569.6	110.1	9.2	1.000021	
66000.0	55.2	-61.6		90.6	568.6	123.1	11.2	1.000020	
66500.0	53.8	-61.6		88.6	569.6	137.0	13.3	1.000020	
67000.0	52.5	-61.6		86.5	568.7	143.5	14.1	1.000019	
67500.0	51.3	-61.5		84.4	566.7	160.4	15.5	1.000019	
68000.0	50.0	-61.5		82.3	568.8	173.9	15.5	1.000018	
68500.0	48.8	-60.8		80.1	567.7	182.9	15.1	1.000018	
69000.0	47.7	-60.0		78.0	568.7	193.0	15.4	1.000017	
69500.0	46.6	-59.3		75.8	569.7	203.0	15.3	1.000017	
70000.0	45.5	-58.5		73.8	570.7	203.1	15.3	1.000016	
70500.0	44.4	-57.8		71.6	571.7	203.6	14.4	1.000016	
71000.0	43.3	-57.0		69.9	572.7	213.1	11.6	1.000016	
71500.0	42.3	-56.3		68.0	573.7	223.6	9.1	1.000015	
72000.0	41.3	-55.6		66.1	574.7	223.1	7.2	1.000015	
72500.0	40.3	-54.8		64.4	575.7	233.3	5.5	1.000014	
73000.0	39.4	-54.1		62.6	576.6	233.1	3.9	1.000014	
73500.0	38.5	-53.3		60.9	577.6	193.3	4.3	1.000014	
74000.0	37.6	-52.7		59.3	578.4	171.5	6.3	1.000013	
74500.0	36.7	-52.0		58.0	578.3	139.3	8.1	1.000013	
75000.0	35.8	-52.0		56.7	578.1	147.5	8.8	1.000013	
75500.0	35.0	-53.0		55.4	578.0	141.4	9.8	1.000012	
76000.0	34.2	-53.1		54.1	577.9	133.7	9.4	1.000012	
76500.0	33.4	-53.2		52.9	577.7	133.1	8.3	1.000012	
77000.0	32.6	-53.3		51.7	577.6	137.2	7.2	1.000012	
77500.0	31.9	-53.4		50.5	577.5	213.2	7.9	1.000011	
78000.0	31.1	-53.5		49.4	577.3	250.3	22.2	1.000011	
78500.0	30.4	-53.6		48.2	577.2	263.5	33.9	1.000011	
79000.0	29.7	-53.7		47.1	577.1	283.9	25.4	1.000010	
79500.0	29.0	-53.8		46.1	577.0	290.7	16.8	1.000010	
80000.0	28.3	-53.8		45.0	577.0	294.6	4.5	1.000010	
80500.0	27.7	-53.9		44.0	577.0	109.6	16.7	1.000010	
81000.0	27.0	-53.9		42.9	576.9	110.2	37.9	1.000010	
81500.0	26.4	-53.7		41.9	576.9	107.3	44.9	1.000009	
82000.0	25.8	-53.9		41.0	576.8	107.2	36.2	1.000009	
82500.0	25.2	-54.1		40.0	576.8	103.4	27.6	1.000009	
83000.0	24.6	-54.0		39.1	576.7	57.4	20.4	1.000009	

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UPPER AIR DATA
 2950050300
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GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

TABLE 9 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CELSIUS	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND M/SEC	WIND DIRECTION DEGREES (T)	WIND SPEED KNOTS	INDEX OF REFRACTION
83500.0	24.0	-54.0			38.2	576.7	93.4	14.0	1.000009
84000.0	23.5	-54.1			37.3	576.6	73.1	8.0	1.000008
84500.0	22.9	-54.1			36.5	576.6	69.4	7.0	1.000008
85000.0	22.4	-54.1			35.6	576.5	107.7	7.7	1.000008
85500.0	21.9	-54.2			34.8	576.5	121.9	8.9	1.000008
86000.0	21.4	-53.7			33.9	577.1	130.3	9.8	1.000008
86500.0	20.9	-52.6			33.0	578.6	137.2	10.9	1.000007
87000.0	20.4	-51.3			32.0	580.0	142.0	11.7	1.000007
87500.0	19.9	-50.6			31.2	581.2	141.9	10.6	1.000007
88000.0	19.5	-50.3			30.4	581.6	141.3	9.6	1.000007
88500.0	19.0	-50.0			29.7	581.9	140.2	8.1	1.000007
89000.0	18.6	-49.3			29.0	582.3	131.2	5.5	1.000006
89500.0	18.2	-49.3			28.3	582.8	130.3	3.3	1.000006
90000.0	17.8	-49.3			27.6	582.9	70.0	3.0	1.000006
90500.0	17.4	-49.0			27.0	583.3	61.4	4.2	1.000006
91000.0	17.0	-48.7			26.3	583.6	50.0	5.6	1.000006
91500.0	16.6	-48.5			25.7	583.9	53.9	6.9	1.000006
92000.0	16.2	-48.2			25.1	584.3	53.1	8.3	1.000006
92500.0	15.8	-48.0			24.5	584.8	61.1	9.8	1.000005
93000.0	15.5	-47.7			23.9	584.9	63.4	11.2	1.000005
93500.0	15.1	-47.5			23.4	585.3	63.9	12.4	1.000005
94000.0	14.8	-47.2			22.8	585.6	63.9	13.5	1.000005
94500.0	14.5	-46.9			22.3	585.9	63.9	14.6	1.000005
95000.0	14.1	-46.7			21.7	586.3	63.9		1.000005
95500.0	13.8	-46.4			21.2	586.6			1.000005
96000.0	13.5	-46.2			20.7	586.9			1.000005
96500.0	13.2	-45.9			20.2	587.3			1.000005
97000.0	12.9	-45.6			19.7	587.6			1.000004
97500.0	12.6	-45.4			19.3	588.0			1.000004

STATION ALTITUDE 997.30 FEET MSL
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MANDATORY LEVELS
 295060300
 S M R

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

TABLE 10

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	TEMPPOINT DEGREE CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	5126.	7.8	-7.8	32.	16.7	8.4
800.0	5754.	4.4	-11.2	31.	360.0	6.5
750.0	6479.	4.3	-18.0	17.	280.0	3.5
700.0	7032.	1.9	-20.5	17.	270.0	8.3
650.0	7686.	4.6	-17.9	18.	301.7	14.6
600.0	8440.	1.1	-17.7	23.	292.0	18.7
550.0	9289.	-2.8	-14.3	29.	294.0	24.2
500.0	10145.	-7.1	-26.2	20.	302.0	30.6
450.0	11013.	-13.2	-28.9	29.	305.1	37.0
400.0	11911.	-21.2	-32.0	37.	295.0	43.3
350.0	12909.	-27.3	-41.3	25.	293.0	50.7
300.0	14046.	-36.2	-48.3	27.	290.0	43.7
250.0	15352.	-46.2			291.0	36.2
200.0	16894.	-57.8			266.4	50.0
175.0	18020.	-63.6			267.2	49.5
150.0	19078.	-68.9			263.0	51.6
125.0	20626.	-69.8			289.1	46.9
100.0	23964.	-72.3			309.7	39.1
80.0	28308.	-68.9			250.0	16.8
70.0	30943.	-66.8			282.0	27.6
60.0	34050.	-61.7			41.0	7.5
50.0	37757.	-61.5			170.0	15.6
40.0	42570.	-54.5			234.0	5.1
30.0	48408.	-53.7			289.7	29.8
25.0	52291.	-54.0			102.2	25.6
20.0	57001.	-50.6			141.9	10.9
15.0	63198.	-47.4			63.7	12.7

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THIS INTERPOLATION.