DR 1086
OCTOBER 1979
AD

LEVEL II

12

METEOROLOGICAL DATA REPORT

19702A GSRS
Missile No. 212
Round No. B-54
30 October 1979

by

White Sands Meteorological Team

ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

ECOM
UNITED STATES ARMY ELECTRONICS COMMAND

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)
Meteorological data gathered for the launching of the 19702A GSRS, Missile Number 212, Round Number B-54 are presented in tabular form.

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CONTENTS

INTRODUCTION

19702A GSRS, Missile Number 212, Round Number B-54, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 0930 MST on 30 October 1979. The scheduled launch time was 0930 MST.

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 (^{o}C), relative humidity, dew point (^{o}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:

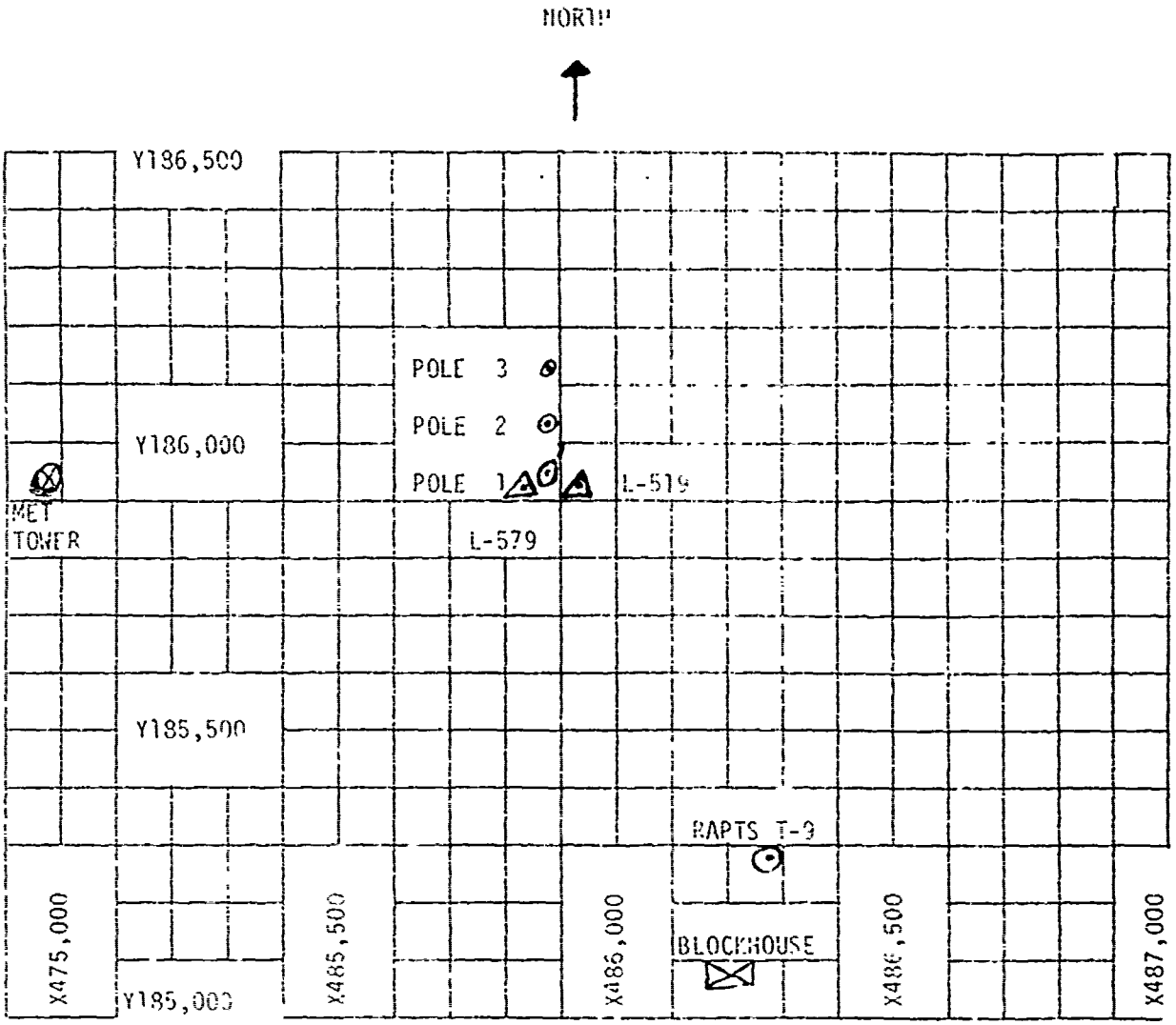
SITE AND ALTITUDE

LC-33 2Km
Nick 2Km

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to 78,500 feet in 500-feet increments.

SITE AND TIME

SMR 0930 MST



1. MET TOWER - 3 Bendix Model T-20 Anemometers at 12 ft, 62 ft, 102 ft, and 202 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 - 63.0 ft.

   (c) Pole #3 - 83.6 ft.

3. RAPTS T-9 Radar Automatic Pilot-Balloon Tracking System T-9 Radar.

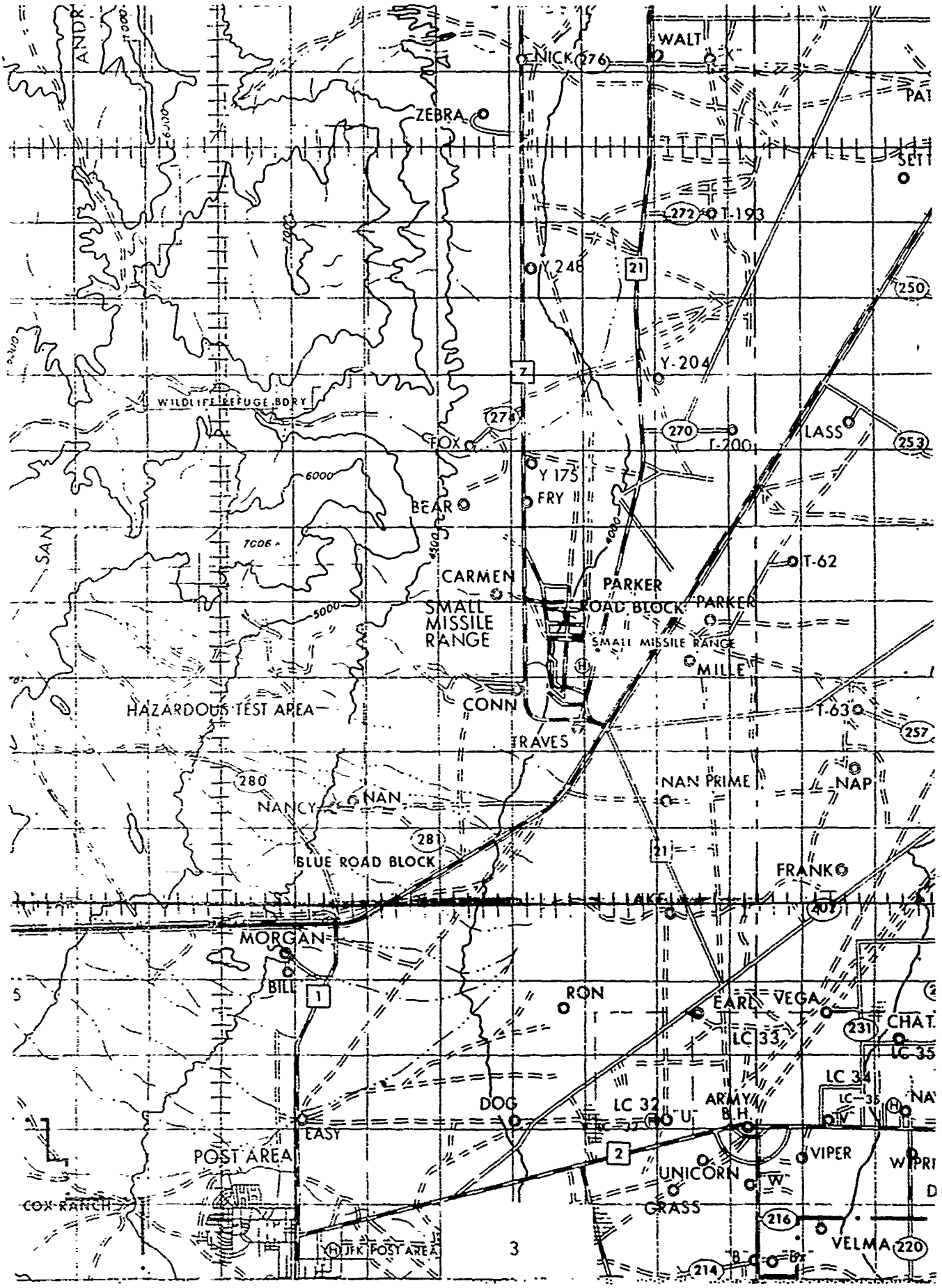

ANDR
WALT
NICK
276
ZEBRA
PA
SETT
272
T-193
Y 248
21
250
Y-204
Z
WILDLIFE REFUGE BDRY
278
FOX
270
T-200
LASS
253
Y 175
FRY
6000
BEAR
5000
4500
SAN
CARMEN
PARKER
ROAD BLOCK
PARKER
T-62
SMALL
MISSILE
RANGE
SMALL MISSILE RANGE
MILE
CONN
HAZARDOUS TEST AREA
T-63
257
TRAVES
280
NANCY
NAN
NAN PRIME
NAP
281
BLUE ROAD BLOCK
21
FRANK
LAKE
407
MORGAN
BILL
1
5
RON
EARL
VEGA
231
CHAT
LC 33
LC 35
LC 34
LC 32
DOG
ARMY
R.H.
EASY
POST AREA
2
VIPER
UNICORN
GRASS
COX RANCH
216
VELMA
220
214
JFK POST AREA
3

TABLE 1. Surface Observations taken at 0930 MST, 30 October 1979, at LC-33, 19702A GSRS, Missile Number 212, Round Number B-54.

ELEVATION	3977.30	FT/MSL
PRESSURE	870.6	MBS
TEMPERATURE	8.9	^{o}C
RELATIVE HUMIDITY	61	
DEW POINT	1.7	^{o}C
DENSITY	1070	GM/M^3
WIND SPEED	19	KTS
WIND DIRECTION	310	DEGREES
CLOUD COVER	1	St
CLOUD COVER	6	Sc
CLOUD COVER	1	Ac

TABLE 2 LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

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		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	293	16	-30	314	12	-30	311	15
-20	308	14	-20	306	15	-20	310	15
-10	321	19	-10	320	12	-10	303	19
0.0	317	13	0.0	318	10	0.0	301	17
+10	307	16	+10	310	10	+10	313	17

TABLE 3 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #2, 62 FEET X484.982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T- SEC	DIR DEG	SPEED KTS
-30	318	15	-30	321	18
-20	309	10	-20	301	15
-10	313	09	-10	312	15
0.0	320	11	0.0	308	15
+10	297	13	+10	324	17

LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #4, 202 FEET X484,982, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	316	18	-30	310	22
-20	MISG	13	-20	304	17
-10	MISG	15	-10	310	24
0.0	MISG	20	0.0	300	22
+10	MISG	18	+10	309	22

PILOT BALLOON MEASURED WIND DATA

TABLE 4

RELEASED FROM LC-33 DATE 30 October 1979 TIME 0920 MST

RELEASE POINT COORDINATES (WSTM) X= 486,037.24 Y= 182,350.16 H= 3977.30

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

HEIGHTS ARE METERS AGL XX OR FEET AGL ____.

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
SFC	315	24
90	341	16
150	320	22
210	308	26
270	311	24
330	314	24
390	315	24
500	311	25
650	310	25
800	322	25
950	322	19
1150	320	18
1350	332	19
1550	327	10
1750	332	12
2000	322	15

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS

PILOT BALLOON MEASURED WIND DATA

TABLE 5

RELEASED FROM LC-33 DATE 30 October 1979 TIME 0930 MST

RELEASE POINT COORDINATES (WSTM) X= 486,037.24 Y= 182,350.16 H= 3977.30

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

HEIGHTS ARE METERS AGL XXX OR FEET AGL ____.

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
SFC	310	19
90	330	18
150	327	21
210	332	22
270	320	23
330	329	22
390	321	22
500	321	26
650	315	24
800	312	24
950	315	25
1150	318	20
1350	333	19
1550	326	17
1750	341	17
2000	326	13

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS

PILOT BALLOON MEASURED WIND DATA

TABLE 6

RELEASED FROM NICK SITE DATE 30 October 1979 TIME 0920 MST

RELEASE POINT COORDINATES (WSTM) X= 470,734.56 Y= 255,775.64 H= 4126.57

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

HEIGHTS ARE METERS AGL XXX OR FEET AGL ____.

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
SFC	290	08
90	297	09
150	309	08
210	289	14
270	304	09
330	315	10
390	316	10
500	323	09
650	328	08
800	331	09
950	332	11
1150	333	12
1350	335	15
1550	332	13
1750	332	11
2000	325	09

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS

PILOT BALLOON MEASURED WIND DATA

TABLE 7

RELEASED FROM NICK SITE DATE 30 October 1979 TIME 0930 MST

RELEASE POINT COORDINATES (WSTM) X= 470,734.56 Y= 255,775.64 H= 4126.57

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

HEIGHTS ARE METERS AGL XXX OR FEET AGL ____.

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
SFC	280	05
90	309	07
150	251	09
210	291	09
270	296	08
330	305	07
390	306	09
500	319	09
650	308	11
800	324	07
950	311	11
1150	333	10
1350	338	11
1550	336	12
1750	326	11
2000	331	11

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS

STATION ALTITUDE 3997.30 FEET MSL
30 OCT. 79 0930 HRS MST
ASCENSION NO. 369

SIGNIFICANT LEVEL DATA
303060369
S M R

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

TABLE 8

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT
869.8	3997.3	11.2	-2.6	38.0
850.0	4624.6	7.7	-3.2	46.0
788.6	6634.2	2.1	-5.1	59.0
700.0	9749.9	-6.1	-6.8	95.0
644.6	11853.3	-11.0	-11.1	99.0
638.8	12200.9	-10.7	-10.8	99.0
627.2	12544.6	-12.1	-12.2	99.0
585.2	14277.1	-15.5	-19.1	74.0
577.0	14627.5	-15.4	-23.0	52.0
569.0	14973.6	-16.3	-27.6	36.0
560.6	15332.2	-17.0	-32.3	25.0
536.8	16407.3	-18.9	-35.7	21.0
500.0	18133.1	-22.8	-37.7	24.0
403.2	23192.7	-35.4	-48.0	26.0
400.0	23375.3	-35.3	-48.2	25.0
389.6	23978.1	-36.2	-50.5	21.0
348.5	26500.9	-40.5		
313.0	28926.5	-37.4		
300.0	29890.8	-37.4		
278.0	31614.1	-39.6		
250.0	33996.2	-41.4		
225.2	36330.9	-41.6		
207.9	38107.1	-44.1		
204.6	38461.5	-43.1		
200.0	38965.2	-44.1		
188.2	40304.3	-45.9		
175.2	41877.8	-44.9		
150.0	45254.3	-51.0		
122.4	49365.2	-56.3		
100.0	53773.9	-59.0		
94.4	54963.0	-60.3		
88.6	56271.3	-59.1		
83.0	57612.6	-62.2		
77.8	58938.1	-60.3		
70.0	61093.2	-64.1		
62.4	63411.5	-65.1		
59.2	64463.2	-60.3		
50.0	67973.1	-58.9		
30.0	78629.3	-56.5		

STATION ALTITUDE 3997.30 FEET MSL
30 OCT. 79 0930 HRS MST
ASCENSION NO. 369

UPPER AIR DATA
303000309
S M R
TABLE 9

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3997.3	869.8	11.2	-2.6	38.0	1063.3	657.7	300.0	9.9	1.000261
4000.0	869.7	11.2	-2.6	38.0	1063.2	657.6	300.0	9.9	1.000261
4500.0	853.9	8.4	-3.0	44.4	1054.3	654.4	305.5	11.9	1.000258
5000.0	838.2	6.7	-3.4	48.4	1041.3	652.4	309.4	14.0	1.000255
5500.0	822.7	5.3	-3.9	51.7	1027.2	650.7	312.3	16.1	1.000251
6000.0	807.5	3.9	-4.4	54.9	1013.4	649.1	315.5	17.2	1.000248
6500.0	792.6	2.5	-4.9	58.1	999.7	647.4	323.3	14.7	1.000244
7000.0	777.6	1.1	-5.1	63.2	985.7	645.9	332.9	12.8	1.000241
7500.0	762.9	-.2	-5.2	69.0	971.6	644.3	342.2	11.8	1.000238
8000.0	748.5	-1.5	-5.4	74.8	957.8	642.8	347.4	11.7	1.000234
8500.0	734.3	-2.8	-5.7	80.6	944.3	641.2	339.6	13.5	1.000231
9000.0	720.4	-4.1	-6.1	86.3	930.9	639.6	334.2	15.3	1.000228
9500.0	706.7	-5.4	-6.5	92.1	917.8	638.1	331.1	16.3	1.000224
10000.0	693.2	-6.7	-7.3	95.5	904.5	636.6	328.3	17.3	1.000220
10500.0	679.7	-7.8	-8.3	96.4	890.9	635.1	327.1	17.7	1.000216
11000.0	666.5	-9.0	-9.3	97.4	877.6	633.7	326.0	18.0	1.000212
11500.0	653.6	-10.2	-10.4	98.3	864.4	632.3	322.2	17.6	1.000208
12000.0	640.9	-10.9	-11.0	99.0	849.9	631.4	316.8	17.1	1.000204
12500.0	628.3	-11.9	-12.0	99.0	836.7	630.1	308.4	17.1	1.000200
13000.0	615.9	-13.0	-14.0	92.4	823.6	628.5	298.0	17.7	1.000195
13500.0	603.7	-14.0	-15.9	85.2	810.5	627.5	298.2	20.7	1.000191
14000.0	591.7	-15.0	-17.9	78.0	797.6	626.3	300.1	23.6	1.000186
14500.0	580.0	-15.4	-21.4	60.0	783.4	625.0	307.5	25.1	1.000181
15000.0	568.4	-16.4	-28.1	35.2	770.8	624.4	314.9	24.6	1.000175
15500.0	557.0	-17.3	-32.8	24.4	758.2	623.2	320.9	24.3	1.000171
16000.0	545.8	-18.2	-34.4	22.5	745.5	622.1	322.8	25.2	1.000168
16500.0	534.8	-19.1	-35.8	21.2	733.2	621.0	323.1	26.1	1.000165
17000.0	523.9	-20.2	-36.3	22.0	721.4	619.6	322.3	27.0	1.000162
17500.0	513.2	-21.4	-36.9	22.9	709.9	618.2	320.6	27.7	1.000160
18000.0	502.7	-22.5	-37.5	23.8	698.6	616.8	317.4	28.2	1.000157
18500.0	492.3	-23.7	-38.4	24.1	687.4	615.3	314.4	29.4	1.000154
19000.0	481.9	-25.0	-39.4	24.3	676.3	613.8	311.7	32.6	1.000152
19500.0	471.8	-26.2	-40.4	24.5	665.4	612.2	309.6	35.7	1.000149
20000.0	461.8	-27.4	-41.5	24.7	654.7	610.7	309.2	38.3	1.000147
20500.0	452.1	-28.7	-42.5	24.9	644.2	609.1	308.9	40.9	1.000144
21000.0	442.6	-29.9	-43.5	25.1	633.9	607.6	308.7	41.3	1.000142
21500.0	433.3	-31.2	-44.5	25.3	623.8	606.0	308.6	41.0	1.000140
22000.0	424.2	-32.4	-45.5	25.5	613.8	604.5	308.5	39.9	1.000137
22500.0	415.3	-33.7	-46.5	25.7	604.0	602.9	308.6	38.0	1.000135
23000.0	406.5	-34.9	-47.6	25.9	594.4	601.3	308.4	36.5	1.000133

STATION ALTITUDE 3997.30 FEET MSL
30 OCT 79 0930 HRS MST
ASCENSION NO. 369

UPPER AIR DATA
303006036
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	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
23500.0	397.8	-35.5	-48.7	24.2	583.1	600.6	308.0	35.5	1.000136
24000.0	389.2	-36.2	-50.6	20.8**	572.3	599.7	307.6	35.2	1.000128
24500.0	380.7	-37.1	-53.2	16.7**	561.8	598.8	307.4	36.5	1.000125
25000.0	372.4	-37.9	-56.3	12.5**	551.5	597.5	307.7	38.4	1.000123
25500.0	364.3	-38.8	-60.1	8.3**	541.5	596.4	309.0	41.7	1.000121
26000.0	356.3	-39.6	-65.9	4.2**	531.6	595.3	310.6	45.2	1.000118
26500.0	348.5	-40.5	-102.0	.0**	521.9	594.2	313.5	48.9	1.000116
27000.0	340.9	-39.9			509.0	595.0	316.0	52.7	1.000113
27500.0	333.4	-39.2			496.5	595.8	316.7	53.1	1.000111
28000.0	326.1	-38.6			484.3	596.7	317.2	53.1	1.000108
28500.0	319.0	-37.9			472.4	597.5	314.3	47.8	1.000105
29000.0	312.0	-37.4			461.0	598.2	310.8	43.5	1.000103
29500.0	305.2	-37.4			451.0	598.2	307.7	43.5	1.000100
30000.0	298.6	-37.5			441.4	598.0	305.0	44.1	1.000098
30500.0	292.0	-38.2			433.0	597.2	305.7	47.5	1.000096
31000.0	285.6	-38.8			424.6	596.4	306.2	50.8	1.000095
31500.0	279.4	-39.5			416.5	595.6	305.6	50.7	1.000093
32000.0	273.3	-39.9			408.1	595.0	305.1	50.5	1.000091
32500.0	267.2	-40.3			399.8	594.5	302.8	50.3	1.000089
33000.0	261.3	-40.6			391.6	594.0	300.3	50.2	1.000087
33500.0	255.6	-41.0			383.6	593.5	298.4	50.0	1.000085
34000.0	250.0	-41.4			375.7	593.1	296.7	49.7	1.000084
34500.0	244.4	-41.4			367.5	593.0	295.1	49.0	1.000082
35000.0	239.0	-41.5			359.4	593.0	293.4	48.1	1.000080
35500.0	233.7	-41.5			351.5	592.9	288.2	48.9	1.000078
36000.0	228.6	-41.6			343.8	592.8	281.7	50.9	1.000077
36500.0	223.5	-41.8			336.6	592.5	276.3	56.2	1.000075
37000.0	218.5	-42.5			330.1	591.6	276.3	62.5	1.000074
37500.0	213.7	-43.2			323.7	590.7	277.1	66.8	1.000072
38000.0	208.9	-43.9			317.5	589.8	278.5	70.5	1.000071
38500.0	204.2	-43.2			309.4	590.8	281.3	68.9	1.000069
39000.0	199.7	-44.1			303.8	589.5	284.9	65.9	1.000068
39500.0	195.2	-44.8			297.8	588.7	285.5	61.1	1.000066
40000.0	190.8	-45.5			292.0	587.8	285.1	55.7	1.000065
40500.0	186.5	-45.8			285.8	587.4	279.9	51.0	1.000064
41000.0	182.3	-45.5			279.0	587.9	272.7	47.1	1.000062
41500.0	178.2	-45.1			272.3	588.3	269.3	43.5	1.000061
42000.0	174.2	-45.1			266.2	588.3	268.1	39.9	1.000059
42500.0	170.3	-46.0			261.1	587.1	265.6	38.3	1.000058
43000.0	166.4	-46.9			256.2	586.0	265.5	37.0	1.000057

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

STATION ALTITUDE 3997.30 FEET MSL
30 OCT. 79 0930 HRS MST
ASCENSION NO. 369

UPPER AIR DATA
303060369
S M R

GEODETIC COORDINATES
32.46034 LAT DEG
106.42307 LON DEG

TABLE 9 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
43500.0	162.6	-47.8			251.4	584.8	267.3	37.3	1.000056
44000.0	158.9	-48.7			246.7	583.6	268.8	38.1	1.000055
44500.0	155.3	-49.6			242.0	582.4	269.0	40.8	1.000054
45000.0	151.8	-50.5			237.5	581.3	270.0	43.0	1.000053
45500.0	148.3	-51.3			232.8	580.3	272.4	44.6	1.000052
46000.0	144.8	-51.9			228.0	579.5	276.2	44.2	1.000051
46500.0	141.4	-52.5			223.3	578.7	281.2	42.7	1.000050
47000.0	138.1	-53.1			218.7	577.8	281.7	39.4	1.000049
47500.0	134.9	-53.8			214.2	577.0	281.7	35.8	1.000048
48000.0	131.8	-54.4			209.8	576.2	274.1	32.0	1.000047
48500.0	128.7	-55.0			205.5	575.4	262.7	29.2	1.000046
49000.0	125.7	-55.6			201.3	574.6	255.3	29.6	1.000045
49500.0	122.8	-56.2			197.2	573.8	251.5	31.6	1.000044
50000.0	119.9	-56.6			192.8	573.3	250.6	33.6	1.000043
50500.0	117.0	-56.9			188.5	572.9	252.9	35.4	1.000042
51000.0	114.2	-57.2			184.3	572.5	254.6	36.6	1.000041
51500.0	111.5	-57.5			180.2	572.0	255.1	35.5	1.000040
52000.0	108.9	-57.9			176.2	571.6	255.6	34.5	1.000039
52500.0	106.3	-58.2			172.3	571.2	255.4	36.0	1.000038
53000.0	103.8	-58.5			168.4	570.8	255.3	37.6	1.000038
53500.0	101.3	-58.8			164.7	570.3	254.2	37.3	1.000037
54000.0	98.9	-59.2			161.1	569.8	252.8	36.7	1.000036
54500.0	96.5	-59.8			157.6	569.0	251.6	33.7	1.000035
55000.0	94.2	-60.3			154.2	568.4	250.3	28.4	1.000034
55500.0	92.0	-59.8			150.2	569.0	249.5	24.0	1.000033
56000.0	89.8	-59.3			146.3	569.6	252.5	22.8	1.000033
56500.0	87.6	-59.6			143.0	569.3	255.8	21.7	1.000032
57000.0	85.5	-60.8			140.3	567.7	259.3	19.7	1.000031
57500.0	83.5	-61.9			137.6	566.2	263.7	17.4	1.000031
58000.0	81.4	-61.6			134.1	566.6	269.0	14.9	1.000030
58500.0	79.5	-60.9			130.5	567.5	276.4	10.4	1.000029
59000.0	77.6	-60.4			127.0	568.2	293.9	6.3	1.000028
59500.0	75.7	-61.3			124.5	567.0	326.8	4.9	1.000028
60000.0	73.9	-62.2			121.9	565.9	352.9	5.8	1.000027
60500.0	72.1	-63.1			119.5	564.7	9.6	7.5	1.000027
61000.0	70.3	-63.9			117.1	563.5	26.4	6.9	1.000026
61500.0	68.6	-64.3			114.4	563.0	48.8	6.4	1.000025
62000.0	66.9	-64.5			111.7	562.7	71.4	6.8	1.000025
62500.0	65.3	-64.7			109.1	562.5	104.0	6.5	1.000024
63000.0	63.7	-64.9			106.5	562.2	131.0	8.1	1.000024

STATION ALTITUDE 3997.30 FEET MSL
30 OCT. 79 0930 HRS MST
ASCENSION NO. 369

UPPER AIR DATA
303006U369
S M R

TABLE 9 (CONT)

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
63500.0	62.1	-64.7			103.8	562.5	147.9	9.7	1.000023
64000.0	60.6	-62.5			100.2	565.5	162.2	10.5	1.000022
64500.0	59.2	-60.3			96.8	568.4	173.7	12.0	1.000022
65000.0	57.7	-60.1			94.4	568.6	189.2	12.2	1.000021
65500.0	56.4	-59.9			92.1	568.9	204.0	13.1	1.000021
66000.0	55.0	-59.7			89.8	569.2	219.4	14.0	1.000020
66500.0	53.7	-59.5			87.5	569.5	239.5	14.7	1.000019
67000.0	52.4	-59.3			85.4	569.7	255.9	16.9	1.000019
67500.0	51.2	-59.1			83.3	570.0	265.4	15.5	1.000019
68000.0	49.9	-58.9			81.2	570.2	276.7	13.1	1.000018
68500.0	48.8	-58.8			79.2	570.4	290.6	11.1	1.000018
69000.0	47.6	-58.7			77.3	570.5	297.1	5.5	1.000017
69500.0	46.5	-58.6			75.4	570.7	25.1	1.2	1.000017
70000.0	45.4	-58.4			73.6	570.8	107.0	4.3	1.000016
70500.0	44.3	-58.3			71.8	571.0	137.4	7.0	1.000016
71000.0	43.2	-58.2			70.1	571.1	149.4	10.5	1.000016
71500.0	42.2	-58.1			68.4	571.3	168.0	11.9	1.000015
72000.0	41.2	-58.0			66.7	571.4	189.2	13.6	1.000015
72500.0	40.2	-57.9			65.1	571.6	204.0	16.8	1.000014
73000.0	39.3	-57.8			63.6	571.7	214.8	16.3	1.000014
73500.0	38.4	-57.7			62.0	571.9	226.4	15.8	1.000014
74000.0	37.5	-57.5			60.5	572.0	238.2	16.1	1.000013
74500.0	36.6	-57.4			59.1	572.2	248.5	14.5	1.000013
75000.0	35.7	-57.3			57.6	572.3	260.9	13.4	1.000013
75500.0	34.9	-57.2			56.2	572.5	274.8	12.9	1.000013
76000.0	34.0	-57.1			54.9	572.6	277.9	13.2	1.000012
76500.0	33.2	-57.0			53.5	572.8	280.4	13.6	1.000012
77000.0	32.4	-56.9			52.2	572.9	282.8	14.0	1.000012
77500.0	31.7	-56.8			51.0	573.1			1.000011
78000.0	30.9	-56.6			49.7	573.2			1.000011
78500.0	30.2	-55.5			48.5	573.4			1.000011

STATION ALTITUDE 3997.30 FEET MSL
30 OCT. 79 0930 HRS MST
ASCENSION NO. 369

UPPER AIR DATA
303000369
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	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
43500.0	162.6	-47.8			251.4	564.8	267.3	37.3	1.000056
44000.0	158.9	-48.7			246.7	563.6	268.8	38.1	1.000055
44500.0	155.3	-49.6			242.0	562.4	269.0	40.8	1.000054
45000.0	151.8	-50.5			237.5	561.3	270.0	43.0	1.000053
45500.0	148.3	-51.3			232.8	560.3	272.4	44.6	1.000052
46000.0	144.8	-51.9			228.0	559.5	276.2	44.2	1.000051
46500.0	141.4	-52.5			223.3	558.7	281.2	42.7	1.000050
47000.0	138.1	-53.1			218.7	557.8	286.7	39.4	1.000049
47500.0	134.9	-53.8			214.2	557.0	281.7	35.8	1.000048
48000.0	131.8	-54.4			209.8	556.2	274.1	32.0	1.000047
48500.0	128.7	-55.0			205.5	555.4	262.7	29.2	1.000046
49000.0	125.7	-55.6			201.3	554.6	255.3	29.6	1.000045
49500.0	122.8	-56.2			197.2	553.8	251.5	31.6	1.000044
50000.0	119.9	-56.6			192.8	553.3	250.6	33.6	1.000043
50500.0	117.0	-56.9			188.5	552.9	252.9	35.4	1.000042
51000.0	114.2	-57.2			184.3	552.5	254.6	36.6	1.000041
51500.0	111.5	-57.5			180.2	552.0	255.1	35.5	1.000040
52000.0	108.9	-57.9			176.2	551.6	255.6	34.5	1.000039
52500.0	106.3	-58.2			172.3	551.2	255.4	36.0	1.000038
53000.0	103.8	-58.5			168.4	550.8	255.3	37.6	1.000038
53500.0	101.3	-58.8			164.7	550.3	254.2	37.3	1.000037
54000.0	98.9	-59.2			161.1	549.8	252.8	36.7	1.000036
54500.0	96.5	-59.8			157.6	549.0	251.6	33.7	1.000035
55000.0	94.2	-60.3			154.2	548.4	250.3	28.4	1.000034
55500.0	92.0	-59.8			150.2	549.0	249.5	24.0	1.000033
56000.0	89.8	-59.3			146.3	549.6	252.5	22.8	1.000033
56500.0	87.6	-59.6			143.0	549.3	255.8	21.7	1.000032
57000.0	85.5	-60.8			140.3	547.7	259.3	19.7	1.000031
57500.0	83.5	-61.9			137.6	546.2	263.7	17.4	1.000031
58000.0	81.4	-61.6			134.1	546.6	269.0	14.9	1.000030
58500.0	79.5	-60.9			130.5	547.5	276.4	10.4	1.000029
59000.0	77.6	-60.4			127.0	548.2	293.9	6.3	1.000028
59500.0	75.7	-61.3			124.5	547.0	326.8	4.9	1.000028
60000.0	73.9	-62.2			121.9	545.9	352.9	5.8	1.000027
60500.0	72.1	-63.1			119.5	544.7	9.6	7.5	1.000027
61000.0	70.3	-63.9			117.1	543.5	26.4	6.9	1.000026
61500.0	68.6	-64.3			114.4	543.0	48.8	6.4	1.000025
62000.0	66.9	-64.5			111.7	542.7	71.4	6.8	1.000025
62500.0	65.3	-64.7			109.1	542.5	104.0	6.5	1.000024
63000.0	63.7	-64.9			106.5	542.2	131.0	8.1	1.000024

STATION ALTITUDE 3997.30 FEET MSL
30 OCT. 79 0930 HRS MST
ASCENSION NO. 569

UPPER AIR DATA
303006U369
S M R

TABLE 9 (CONT)

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
63500.0	62.1	-64.7			103.8	566.5	147.9	9.7	1.000023
64000.0	60.6	-62.5			100.2	565.5	162.2	10.5	1.000022
64500.0	59.2	-60.3			96.8	568.4	173.7	12.0	1.000022
65000.0	57.7	-60.1			94.4	568.6	189.2	12.2	1.000021
65500.0	56.4	-59.9			92.1	568.9	204.0	13.1	1.000021
66000.0	55.0	-59.7			89.8	569.2	219.4	14.0	1.000020
66500.0	53.7	-59.5			87.5	569.5	239.5	14.7	1.000019
67000.0	52.4	-59.3			85.4	569.7	255.9	16.9	1.000019
67500.0	51.2	-59.1			83.3	570.0	265.4	15.5	1.000019
68000.0	49.9	-58.9			81.2	570.2	276.7	13.1	1.000018
68500.0	48.8	-58.8			79.2	570.4	290.6	11.1	1.000018
69000.0	47.6	-58.7			77.3	570.5	297.1	5.5	1.000017
69500.0	46.5	-58.6			75.4	570.7	25.1	1.2	1.000017
70000.0	45.4	-58.4			73.6	570.8	107.0	4.3	1.000016
70500.0	44.3	-58.3			71.8	571.0	137.4	7.0	1.000016
71000.0	43.2	-58.2			70.1	571.1	149.4	10.5	1.000016
71500.0	42.2	-58.1			68.4	571.3	168.0	11.9	1.000015
72000.0	41.2	-58.0			66.7	571.4	189.2	13.6	1.000015
72500.0	40.2	-57.9			65.1	571.6	204.0	16.8	1.000014
73000.0	39.3	-57.8			63.6	571.7	214.8	16.3	1.000014
73500.0	38.4	-57.7			62.0	571.9	226.4	15.8	1.000014
74000.0	37.5	-57.5			60.5	572.0	238.2	16.1	1.000013
74500.0	36.6	-57.4			59.1	572.2	248.5	14.5	1.000013
75000.0	35.7	-57.3			57.6	572.3	260.9	13.4	1.000013
75500.0	34.9	-57.2			56.2	572.5	274.8	12.9	1.000013
76000.0	34.0	-57.1			54.9	572.6	277.9	13.2	1.000012
76500.0	33.2	-57.0			53.5	572.8	280.4	13.6	1.000012
77000.0	32.4	-56.9			52.2	572.9	282.8	14.0	1.000012
77500.0	31.7	-56.8			51.0	573.1			1.000011
78000.0	30.9	-56.6			49.7	573.2			1.000011
78500.0	30.2	-56.5			48.5	573.4			1.000011

STATION ALTITUDE 3997.30 FEET MSL
30 OCT. 79 0930 HRS MST
ASCENSION NO. 369

MANDATORY LEVELS
30300603G9
S M R

TABLE 10

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
850.0	4621.	7.7	-3.2	46.	306.6	12.4
800.0	6248.	3.2	-4.6	57.	319.1	15.9
750.0	7951.	-1.4	-5.3	74.	348.2	11.6
700.0	9741.	-6.1	-6.8	95.	329.7	16.8
650.0	11630.	-10.5	-10.7	99.	320.7	17.5
600.0	13640.	-14.3	-16.5	83.	298.4	21.6
550.0	15791.	-17.8	-33.8	23.	322.1	24.8
500.0	18109.	-22.8	-37.7	24.	316.7	28.3
450.0	20612.	-29.0	-42.7	25.	308.8	41.5
400.0	23338.	-35.3	-48.2	25.	308.1	35.7
350.0	26358.	-40.3	-77.4	1.**	312.9	48.1
300.0	29833.	-37.4			305.3	43.6
250.0	33924.	-41.4			296.8	49.7
200.0	38874.	-44.1			264.5	66.2
175.0	41798.	-44.9			266.9	40.7
150.0	45134.	-51.0			271.1	43.8
125.0	48985.	-55.8			254.5	30.0
100.0	53609.	-59.0			253.5	37.0
80.0	58174.	-61.1			273.4	11.8
70.0	60585.	-64.1			29.0	6.8
60.0	63979.	-61.5			166.5	11.0
50.0	67719.	-58.9			275.1	13.4
40.0	72325.	-57.9			205.7	17.1
30.0	78295.	-56.5				

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