DR-255
October 1967
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METEOROLOGICAL DATA REPORT

NIKE-HYDAC STV (SR 059)
(21 September 1967)

BY

STANLEY KUBINSKI

ECOM
UNITED STATES ARMY ELECTRONICS COMMAND

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METEOROLOGICAL DATA REPORT

NIKE-HYDAC STV (SR 059)
(21 September 1967)

By

Stanley Rubinski

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October 1967

DA Task 1V650212A127-02

ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

ABSTRACT

Meteorological data gathered for the launching of Nike-Hydac STV (SR 059) are presented for the Ballistics Systems Division, U. S. Air Force, and for ballistic studies. The data appear, along with calculated ballistic data, in tabular form.

CONTENTS

INTRODUCTION

Nike-Hydac STV (SR 059) was launched from Launch Complex 33, L-314, White Sands Missile Range (WSMR), New Mexico, at 1000 hours MDT, 21 September 1967.

Meteorological data used in conjunction with theoretical calculations to predict rocket impact were collected by the Meteorological Support Division, Atmospheric Sciences Laboratory (ASL), WSMR, New Mexico. The Ballistics Meteorologist for this firing was Stanley F. Kubinski.

DISCUSSION

Wind data for the first 216 feet above the surface were obtained from a system composed of 5 Aerovanes mounted on a 200-foot tower and cabled to wind component indicators.

From 216 to 4,000 feet above the surface, wind data were obtained from T-9 radar observed balloon ascents.

Temperature, pressure, and humidity data, along with upper wind data from 4,000 to 74,168 feet above the surface, were obtained from standard rawinsonde observations.

Mean wind component values in each ballistic zone were determined from vertical cross sections by the equal-area method.

Theoretical rocket performance values and ballistic factors as a function of altitude were provided by ASL, and are the basis for data appearing in Table XII.

PAYLOAD		215.0	Pounds
CORIOLIS DISPLACEMENT	WEST	5.0	Miles
SECOND-STAGE IGNITION	TIME	20.0	Seconds
	ALTITUDE	36,690.0	Feet MSL
PEAK	TIME	232.0	Seconds
	ALTITUDE	720,000.0	Feet MSL
UNIT WIND EFFECT	RANGE	2.27	Miles/MPH
	CROSS	2.36	Miles/MPH
			Miles/MPH
TOWER TILT EFFECT		14.3	Miles/Degree

TABLE I. THEORETICAL ROCKET PERFORMANCE VALUES
NIKE-HYDAC STV (SR 059)

LAYERS IN FEET ABOVE GROUND	BALLISTIC FACTORS
11- 60	.1440
60- 108	.0966
108- 148	.0629
148- 184	.0502
184- 216	.0286
216- 300	.0724
300- 400	.0533
400- 600	.0752
600- 800	.0557
800-1000	.0400

LAYERS IN FEET ABOVE GROUND	BALLISTIC FACTORS
1000- 1400	.0555
1400- 2000	.0575
2000- 2500	.0288
2500- 3000	.0195
3000- 3500	.0112
3500- 4000	.0073
4000- 4250	.0012
4250- 9000	-.0135
9000-15000	-.0147
15000-21000	-.0166

LAYERS IN FEET ABOVE GROUND	BALLISTIC FACTORS
21000-26000	-.0102
26000-32691	-.0110
32691-34000	.0430
34000-36000	.0411
36000-41000	.0545
41000-46000	.0259
46000-51000	.0154
51000-56000	.0092
56000-61000	.0060
61000-66000	.0040
66000-74168	.0020

TABLE II. BALLISTIC FACTORS
NIKE-HYDAC STV (SR 059)

AERO-VANE NO. *	MEAN WIND COMPONENTS IN MILES PER HOUR									
	1 0800 MDT		2 0830 MDT		3 0900 MDT		4 0915 MDT		5 0930 MDT	
	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W
1	2.0S	1.5W	2.0S	1.5W	4.5S	0.5E	5.5S	0.0	4.0S	1.5W
2	4.0	2.0	3.5	2.0	4.0	0.5	6.0	0.5W	5.5	2.5
3	5.0	0.0	4.0	2.0	4.0	0.5	5.0	0.0	6.0	2.0
4	6.5	1.5E	6.0	1.5	4.0	0.0	6.0	0.0	6.5	2.0
5	6.0	2.0	7.0	0.0	4.0	0.0	4.5	3.5E	6.0	0.5E

AERO-VANE NO. *	MEAN WIND COMPONENTS IN MILES PER HOUR									
	6 0940 MDT		7 0950 MDT		8 1000 MDT					
	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W
1	2.5S	0.5W	5.0S	0.5E	3.5S	1.5E				
2	3.0	0.0	4.0	0.0	1.0	2.0				
3	4.0	1.5W	4.0	0.5W	3.0	1.0				
4	5.0	0.5	4.5	1.0E	3.5	0.5				
5	3.5	1.5E	4.5	4.5	1.5	3.5				

TABLE III. ANEMOMETER WIND SPEED AND DIRECTION
NIKE-HYDAC STV (SR 059)

* Heights corresponding to Aerovane Numbers: 1 = 35 Feet 2 = 88 Feet 3 = 128 Feet 4 = 168 Feet 5 = 200 Feet

LAYERS IN FEET ABOVE GROUND	MEAN WIND COMPONENTS IN MILES PER HOUR									
	1 0800 MDT		2 0830 MDT		3 0900 MDT		4 0915 MDT		5 0930 MDT	
	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W
216- 300	6.0S	4.0E	6.5S	0.0	4.0S	0.0	4.0S	0.5E	1.0S	3.0W
300- 400	5.5	6.0	5.5	0.0	4.0	0.0	3.0	0.5W	2.0	3.0
400- 600	6.5	7.0	5.0	0.0	5.5	1.0W	3.0	1.0	5.0	0.0
600- 800	8.0	8.0	6.5	2.5E	4.0	0.5	4.0	0.0	4.0	1.0E
800-1000	8.5	10.0	7.5	3.5	2.0	1.0E	2.5	1.0E	3.0	1.0W
1000-1400	7.0	11.5	5.0	2.0	1.5N	2.0	2.0N	0.5	1.0	0.5
1400-2000	2.0	9.0	1.5	4.0	4.5	2.0	4.5	0.5	5.0N	0.5
2000-2500	1.5N	4.0	1.5N	2.5	8.5	1.0	7.0	2.0	9.5	2.0E
2500-3000	1.0	4.5	6.0	0.5W	9.0	1.5	10.0	1.5	12.0	1.0
3000-3500	0.5S	8.0	7.0	0.5	10.5	2.0	10.5	0.0	13.5	2.0
3500-4000	1.5	12.0	3.0	0.0	4.5	0.5	8.0	3.0E	9.5	4.0

TABLE IV. PILOT-BALLOON-MEASURED WIND DATA
(T-9 RADAR TRACKER METHOD)
NIKE-HYDAC STV (SR 059)

LAYERS IN FEET ABOVE GROUND	MEAN WIND COMPONENTS IN MILES PER HOUR									
	6 0940 MDT		7 0950 MDT		8 1001 MDT					
	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W
216- 300	3.5S	3.0W	4.5S	2.5E	1.0S	0.5E				
300- 400	4.5	3.0	6.5	0.5	2.0	2.5W				
400- 600	5.0	1.5	6.5	0.5	4.5	1.5				
600- 800	5.5	0.0	6.0	1.5	6.5	0.0				
800-1000	2.5	1.0W	6.5	1.0	6.5	0.5W				
1000-1400	0.5N	3.0	6.0	1.0W	4.0	1.0E				
1400-2000	5.0	2.5	4.0N	3.0	3.5N	2.0W				
2000-2500	9.0	1.0E	8.0	0.5	8.0	0.5				
2500-3000	11.0	1.0	11.0	0.5	11.0	0.5				
3000-3500	10.5	0.0	9.5	3.5E	10.0	2.5E				
3500-4000	8.0	4.5E	5.5	3.5	7.0	3.5E				

TABLE IV. PILOT-BALLOON-MEASURED WIND DATA (CONT)
(T-9 RADAR TRACKER METHOD)
NIKE-HYDAC STV (SR 059)

LAYERS IN FEET ABOVE GROUND	MEAN WIND COMPONENTS IN KNOTS					
	1 0700 MDT		2 1030 MDT			
	N-S	E-W	N-S	E-W	N-S	E-W
4000- 4253	2.5N	19.0E	5.0N	6.0E		
4253- 9000	0.0	14.0	6.0	10.5		
9000-15000	6.0N	3.0	7.5	9.0		
15000-21000	10.5	6.0W	8.5	9.0W		
21000-26000	9.5	16.5	7.0	12.0		
26000-32691	0.0	29.0	4.0	23.5		
32691-34000	0.0	25.0	4.5	26.5		
34000-36000	4.5S	26.5	4.5	26.5		
36000-41000	10.0	28.0	0.0	27.0		
41000-46000	5.5	30.5	0.0	26.0		
46000-51000	0.0	22.0	11.5N	9.5		
51000-56000	10.5S	4.0E	5.0S	8.5E		
56000-61000	3.5N	18.5	2.5	13.0		
61000-66000	2.5	13.0	0.0	12.0		
66000-74168	5.0	13.0	3.0S	16.0		

TABLE V. RAWINSONDE-MEASURED WIND DATA
NIKE-HYDAC STV (SR 059)

STATION ALTITUDE 3989.0 FEET MSL
21 SEPT.67 1030 HRS MDT
ASCENSION NO. 766

SIGNIFICANT LEVEL DATA
9360003901
WHITE SANDS SITE
TABLE VI

WSTM SITE COORDINATES
E 488,580 FEET
N 185,045 FEET

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT
885.0	3989.0	23.6	13.0	50.0
875.0	4314.5	22.1	10.0	46.0
829.0	5845.4	18.1	8.4	53.0
790.0	9394.1	13.6	-2.4	33.0
632.0	13310.6	3.6	-9.4	38.0
582.0	15504.4	2.5	-21.6	15.0
489.0	20050.9	-6.6	-31.4	12.0
474.0	20851.3	-6.4	-39.1	10.0
405.0	24829.9	-14.9	-38.9	11.0
320.0	30525.9	-29.6	-45.5	20.0
294.0	32507.3	-31.7	-50.4	14.0
164.0	45267.9	-61.2	0.	-0. **
126.0	50517.8	-72.5	0.	-0. **
121.0	51303.8	-71.9	0.	-0. **
107.0	53672.3	-75.6	0.	-0. **
100.0	54976.9	-72.2	0.	-0. **
86.0	57924.1	-69.4	0.	-0. **
78.0	59873.5	-63.8	0.	-0. **
68.0	62633.9	-66.3	0.	-0. **
47.0	70192.1	-56.8	0.	-0. **
35.0	76381.6	-55.6	0.	-0. **
24.0	84473.9	-47.7	0.	-0. **
12.0	99788.9	-42.6	0.	-0. **
9.0	106317.8	-36.0	0.	-0. **

** RELATIVE HUMIDITY NOT SUPPLIED. ZERO VALUE ASSUMED FOR COMPUTATIONS.

STATION ALTITUDE 3989.0 FEET MSL
21 SEPT.67 1030 HRS MDT
ASCENSION NO. 766

UPPER AIR DATA
0160003901
WHITE SANDS SITE
TABLE VII

WSYM SITE COORDINATES
E 480,500 FEET
N 185,045 FEET

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
3989.0	885.0	23.6	15.0	58.0	1031.6	673.2	180.0	1.9	1.000303
4000.0	884.7	23.5	14.8	57.6	1031.4	673.1	180.9	2.0	1.000302
4500.0	869.3	21.6	9.8	46.8	1022.1	670.3	220.9	2.3	1.000281
5000.0	854.1	20.3	9.4	49.1	1008.8	668.8	260.9	2.7	1.000276
5500.0	839.2	19.0	8.8	51.4	995.7	667.2	300.9	3.1	1.000272
6000.0	824.4	17.9	8.0	52.1	982.1	665.9	341.0	3.5	1.000267
6500.0	809.8	17.3	6.6	49.3	967.1	665.1	4.5	4.6	1.000259
7000.0	795.4	16.6	5.2	46.5	952.3	664.2	17.6	6.2	1.000252
7500.0	781.3	16.0	3.7	43.7	937.8	663.4	25.3	7.4	1.000245
8000.0	767.4	15.4	2.2	40.9	923.5	662.6	32.1	8.8	1.000238
8500.0	753.8	14.7	0.6	38.0	909.3	661.7	38.8	11.1	1.000232
9000.0	740.4	14.1	-1.0	35.2	895.4	660.9	41.0	12.9	1.000226
9500.0	727.2	13.3	-2.5	33.1	882.0	659.9	47.8	14.2	1.000221
10000.0	713.9	12.1	-3.4	33.8	869.9	658.4	52.9	15.1	1.000216
10500.0	700.9	10.8	-4.3	34.4	858.0	656.9	57.5	15.8	1.000212
11000.0	688.1	9.5	-5.2	35.1	846.3	655.4	58.7	15.8	1.000208
11500.0	675.6	8.2	-6.1	35.7	834.7	653.9	59.3	15.7	1.000205
12000.0	663.2	6.9	-7.0	36.3	823.3	652.3	57.6	15.2	1.000201
12500.0	651.1	5.7	-7.9	37.0	812.1	650.8	55.9	14.7	1.000197
13000.0	639.3	4.4	-8.8	37.6	801.0	649.3	54.0	13.9	1.000194
13500.0	627.8	3.5	-10.2	36.0	788.9	648.2	52.6	12.9	1.000190
14000.0	615.8	3.3	-12.4	30.8	775.2	647.8	51.7	11.9	1.000184
14500.0	604.4	3.0	-14.9	25.5	761.6	647.5	50.0	10.1	1.000179
15000.0	593.1	2.8	-17.9	20.3	748.3	647.1	47.7	8.6	1.000174
15500.0	582.1	2.5	-21.6	15.0	735.2	646.7	47.7	8.0	1.000169
16000.0	571.1	1.5	-22.6	14.7	723.9	645.5	49.6	7.4	1.000166
16500.0	560.2	0.5	-23.7	14.3	712.8	644.3	55.6	6.0	1.000163
17000.0	549.6	-0.5	-24.8	14.0	701.9	643.1	59.3	7.1	1.000161
17500.0	539.2	-1.5	-25.9	13.7	691.2	641.9	61.9	7.7	1.000158
18000.0	529.0	-2.5	-26.9	13.4	680.6	640.7	62.3	7.7	1.000155

STATION ALTITUDE 3989.0 FEET MSL
21 SEPT.67 1030 HRS MDT
ASCENSION NO. 766

UPPER AIR DATA
0360003901
WHITE SANDS SITE
TABLE VII (Cont)

WSTM SITE COORDINATES
E 400,580 FEET
N 185,045 FEET

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
18500.0	518.9	-3.5	-28.0	13.0	670.2	639.5	98.0	7.6	1.000152
19000.0	509.1	-4.5	-29.1	12.7	660.0	638.3	41.6	7.1	1.000150
19500.0	499.4	-5.5	-30.2	12.4	649.9	637.1	22.9	7.1	1.000147
20000.0	490.0	-6.5	-31.3	12.0	640.0	635.9	1.7	7.5	1.000145
20500.0	480.5	-6.5	-32.3	10.9	627.6	635.9	346.1	8.3	1.000142
21000.0	471.2	-6.7	-33.3	10.0	614.0	635.7	334.4	9.9	1.000139
21500.0	462.0	-7.8	-34.0	10.2	606.4	634.4	328.6	10.2	1.000137
22000.0	453.0	-8.9	-34.8	10.3	597.0	633.1	326.4	9.8	1.000135
22500.0	444.1	-9.9	-35.5	10.4	587.7	631.8	325.8	9.0	1.000133
23000.0	435.4	-11.0	-36.2	10.5	578.5	630.5	325.9	7.9	1.000130
23500.0	426.9	-12.1	-36.9	10.7	569.5	629.2	327.8	7.2	1.000128
24000.0	418.5	-13.1	-37.7	10.8	560.7	627.9	330.0	6.6	1.000126
24500.0	410.3	-14.2	-38.4	10.9	552.0	626.7	325.7	7.3	1.000124
25000.0	402.2	-15.3	-39.0	11.3	543.4	625.3	321.5	8.1	1.000122
25500.0	393.9	-16.6	-39.4	12.1	534.9	623.7	318.6	9.6	1.000120
26000.0	385.9	-17.9	-39.9	12.8	526.7	622.1	314.2	11.0	1.000118
26500.0	378.0	-19.2	-40.3	13.6	518.5	620.5	305.8	12.3	1.000117
27000.0	370.2	-20.5	-40.9	14.4	510.5	619.0	290.2	13.3	1.000115
27500.0	362.7	-21.8	-41.4	15.2	502.6	617.4	291.7	14.0	1.000113
28000.0	355.2	-23.1	-42.0	16.0	494.9	615.8	285.0	15.3	1.000111
28500.0	348.0	-24.4	-42.7	16.8	487.3	614.2	278.3	16.9	1.000109
29000.0	340.8	-25.7	-43.3	17.6	479.8	612.6	273.7	18.3	1.000108
29500.0	333.9	-27.0	-44.0	18.4	472.4	611.0	270.0	19.4	1.000106
30000.0	327.0	-28.2	-44.7	19.2	465.2	609.4	268.8	20.5	1.000104
30500.0	320.3	-29.5	-45.5	20.0	458.1	607.8	268.2	21.5	1.000103
31000.0	313.6	-30.1	-46.6	18.6	449.5	607.1	270.7	21.6	1.000101
31500.0	306.9	-30.6	-47.8	17.1	440.9	606.4	274.1	21.4	1.000099
32000.0	300.4	-31.2	-49.1	15.5	432.5	605.7	278.7	21.7	1.000097
32500.0	294.1	-31.7	-50.4	14.0	424.3	605.1	283.6	22.1	1.000095
33000.0	287.4	-32.8	-51.7	13.5**	416.7	603.6	288.5	22.8	1.000093

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

STATION ALTITUDE 3989.0 FEET MSL
21 SEPT.67 1030 HRS MDT
ASCENSION NO. 766

UPPER AIR DATA
0360003901
WHITE SANDS SITE
TABLE VII (Cont)

WSTN SITE COORDINATES
E 488,580 FEET
N 185,045 FEET

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
33500.0	280.9	-34.0	-53.0	12.9**	409.3	602.2	293.3	23.5	1.000091
34000.0	274.5	-35.2	-54.3	12.4**	402.0	600.7	292.3	24.1	1.000090
34500.0	268.4	-36.3	-55.7	11.8**	394.8	599.3	291.1	24.7	1.000088
35000.0	262.3	-37.5	-57.0	11.3**	387.8	597.8	288.9	24.9	1.000087
35500.0	256.4	-38.6	-58.3	10.7**	380.9	596.3	286.7	25.2	1.000085
36000.0	250.6	-39.8	-59.7	10.2**	374.1	594.8	283.1	26.0	1.000083
36500.0	244.9	-40.9	-61.0	9.6**	367.5	593.4	279.6	26.8	1.000082
37000.0	239.4	-42.1	-62.4	9.1**	361.0	591.9	276.8	26.4	1.000080
37500.0	234.0	-43.2	-63.8	8.5**	354.6	590.4	273.9	25.9	1.000079
38000.0	228.7	-44.4	-65.2	8.0**	348.3	588.9	272.6	26.1	1.000078
38500.0	223.5	-45.6	-66.7	7.4**	342.2	587.4	271.6	26.4	1.000076
39000.0	218.5	-46.7	-68.1	6.9**	336.1	585.9	269.9	26.0	1.000075
39500.0	213.5	-47.9	-69.6	6.3**	330.2	584.4	267.8	25.1	1.000074
40000.0	208.7	-49.0	-71.2	5.8**	324.4	582.9	266.6	24.9	1.000072
40500.0	204.0	-50.2	-72.7	5.2**	318.7	581.4	267.8	26.5	1.000071
41000.0	199.4	-51.3	-74.4	4.7**	313.1	579.9	269.0	28.1	1.000070
41500.0	194.8	-52.5	-76.1	4.1**	307.7	578.4	266.7	27.0	1.000069
42000.0	190.4	-53.6	-77.8	3.6**	302.3	576.9	264.3	25.8	1.000067
42500.0	186.1	-54.8	-79.7	3.0**	297.0	575.4	264.3	25.4	1.000066
43000.0	181.9	-56.0	-81.8	2.5**	291.8	573.8	266.2	25.7	1.000065
43500.0	177.8	-57.1	-84.1	1.9**	286.8	572.3	267.8	25.9	1.000064
44000.0	173.8	-58.3	-86.8	1.4**	281.8	570.8	266.5	24.9	1.000063
44500.0	169.9	-59.4	-90.3	0.8**	276.9	569.2	265.2	23.9	1.000062
45000.0	166.0	-60.6	-96.5	0.3**	272.1	567.7	266.4	24.9	1.000061
45500.0	162.1	-61.7	0.	-0. **	267.1	566.2	269.3	27.2	1.000059
46000.0	158.1	-62.8	0.	-0. **	261.8	564.8	271.3	28.2	1.000058
46500.0	154.2	-63.9	0.	-0. **	256.6	563.3	271.4	26.2	1.000057
47000.0	150.3	-64.9	0.	-0. **	251.6	561.9	271.8	24.5	1.000056
47500.0	146.6	-66.0	0.	-0. **	246.6	560.4	276.0	25.5	1.000055
48000.0	143.0	-67.1	0.	-0. **	241.7	559.0	280.1	26.5	1.000054

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

STATION ALTITUDE 3989.0 FEET MSL
21 SEPT.67 ~~1030 HRS MST~~
ASCENSION NO. 766

UPPER AIR DATA
0360003901
WHITE SANDS SITE
TABLE VII (Cont)

WSTM SITE COORDINATES
E 488,580 FEET
N 185,045 FEET

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
48500.0	139.4	-68.2	0.	-0. **	237.0	557.5	282.8	24.1	1.000053
49000.0	136.0	-69.2	0.	-0. **	232.3	556.0	285.4	21.2	1.000052
49500.0	132.6	-70.3	0.	-0. **	227.8	554.6	287.5	20.3	1.000051
50000.0	129.3	-71.4	0.	-0. **	223.3	553.1	289.2	20.4	1.000050
50500.0	126.1	-72.5	0.	-0. **	218.9	551.6	290.6	19.8	1.000049
51000.0	122.9	-72.1	0.	-0. **	213.0	552.1	291.0	17.0	1.000047
51500.0	119.8	-72.2	0.	-0. **	207.7	552.0	291.4	14.3	1.000046
52000.0	116.7	-73.0	0.	-0. **	203.1	550.9	291.6	13.0	1.000045
52500.0	113.7	-73.8	0.	-0. **	198.7	549.8	291.7	12.2	1.000044
53000.0	110.8	-74.5	0.	-0. **	194.4	548.7	291.1	10.9	1.000043
53500.0	108.0	-75.3	0.	-0. **	190.1	547.7	288.3	8.1	1.000042
54000.0	105.2	-74.7	0.	-0. **	184.7	548.5	285.6	5.3	1.000041
54500.0	102.5	-73.4	0.	-0. **	178.8	550.3	237.1	4.7	1.000040
55000.0	99.9	-72.2	0.	-0. **	173.1	552.0	172.7	4.8	1.000039
55500.0	97.4	-71.7	0.	-0. **	168.4	552.7	122.2	5.5	1.000037
56000.0	94.9	-71.2	0.	-0. **	163.7	553.3	119.4	8.0	1.000036
56500.0	92.5	-70.8	0.	-0. **	159.2	554.0	116.6	10.4	1.000035
57000.0	90.2	-70.3	0.	-0. **	154.8	554.6	115.9	11.2	1.000034
57500.0	87.9	-69.8	0.	-0. **	150.6	555.3	115.9	11.3	1.000034
58000.0	85.7	-69.2	0.	-0. **	146.3	556.1	115.4	11.6	1.000033
58500.0	83.6	-67.7	0.	-0. **	141.7	558.1	113.4	12.1	1.000032
59000.0	81.5	-66.3	0.	-0. **	137.3	560.0	111.5	12.5	1.000031
59500.0	79.5	-64.9	0.	-0. **	132.9	561.9	108.8	13.4	1.000030
60000.0	77.5	-63.9	0.	-0. **	129.1	563.2	105.9	14.3	1.000029
60500.0	75.6	-64.4	0.	-0. **	126.2	562.6	103.0	15.0	1.000028
61000.0	73.8	-64.8	0.	-0. **	123.3	562.0	99.8	15.0	1.000027
61500.0	71.9	-65.3	0.	-0. **	120.6	561.4	96.6	15.0	1.000027
62000.0	70.2	-65.7	0.	-0. **	117.9	560.8	97.4	14.3	1.000026
62500.0	68.5	-66.2	0.	-0. **	115.2	560.2	98.5	13.6	1.000026
63000.0	66.8	-65.8	0.	-0. **	112.3	560.6	99.1	12.7	1.000025

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

STATION ALTITUDE 3989.0 FEET MSL
21 SEPT.67 1030 HRS MDT
ASCENSION NO. 766

UPPER AIR DATA
0360003901
WHITE SANDS SITE
TABLE VII (Cont.)

WSYM SITE COORDINATES
E 488,580 FEET
N 185,045 FEET

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	65.2	-65.2	0.	-0. **	109.2	561.5	98.9	11.7	1.000024
64000.0	63.6	-64.6	0.	-0. **	106.3	562.3	98.7	10.6	1.000024
64500.0	62.1	-64.0	0.	-0. **	103.4	563.2	96.1	10.3	1.000023
65000.0	60.6	-63.3	0.	-0. **	100.6	564.0	93.4	9.9	1.000022
65500.0	59.1	-62.7	0.	-0. **	97.9	564.9	90.3	10.2	1.000022
66000.0	57.7	-62.1	0.	-0. **	95.2	565.7	86.8	11.2	1.000021
66500.0	56.3	-61.4	0.	-0. **	92.6	566.6	83.6	12.0	1.000021
67000.0	54.9	-60.8	0.	-0. **	90.1	567.4	85.1	12.5	1.000020
67500.0	53.6	-60.2	0.	-0. **	87.7	568.2	86.6	12.9	1.000020
68000.0	52.3	-59.6	0.	-0. **	85.3	569.1	87.6	13.4	1.000019
68500.0	51.1	-58.9	0.	-0. **	83.0	569.9	88.2	13.8	1.000018
69000.0	49.8	-58.3	0.	-0. **	80.8	570.7	88.7	14.2	1.000018
69500.0	48.6	-57.7	0.	-0. **	78.6	571.6	87.3	13.7	1.000017
70000.0	47.4	-57.0	0.	-0. **	76.5	572.4	85.8	13.1	1.000017
70500.0	46.3	-56.7	0.	-0. **	74.6	572.8	84.3	12.5	1.000017
71000.0	45.2	-56.6	0.	-0. **	72.8	572.9	82.8	11.7	1.000016
71500.0	44.2	-56.5	0.	-0. **	71.0	573.1	81.4	10.9	1.000016
72000.0	43.1	-56.4	0.	-0. **	69.3	573.2	85.1	10.9	1.000015
72500.0	42.1	-56.4	0.	-0. **	67.7	573.3	90.0	11.0	1.000015
73000.0	41.1	-56.3	0.	-0. **	66.0	573.5	94.3	10.9	1.000015
73500.0	40.1	-56.2	0.	-0. **	64.5	573.6	96.2	9.8	1.000014
74000.0	39.2	-56.1	0.	-0. **	62.9	573.7	98.0	8.7	1.000014
74500.0	38.3	-56.0	0.	-0. **	61.4	573.8	99.1	8.4	1.000014
75000.0	37.4	-55.9	0.	-0. **	59.9	574.0	99.4	8.9	1.000013
75500.0	36.5	-55.8	0.	-0. **	58.5	574.1	99.7	9.3	1.000013
76000.0	35.6	-55.7	0.	-0. **	57.1	574.2	95.9	8.9	1.000013
76500.0	34.8	-55.5	0.	-0. **	55.7	574.5	91.2	8.3	1.000012
77000.0	34.0	-55.0	0.	-0. **	54.3	575.1	86.5	7.8	1.000012
77500.0	33.2	-54.5	0.	-0. **	52.9	575.8	80.5	8.1	1.000012
78000.0	32.5	-54.0	0.	-0. **	51.6	576.4	74.4	8.5	1.000011

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

STATION ALTITUDE 3989.0 FEET MSL
21 SEPT.67 1030 HRS MDT
ASCENSION NO. 766

UPPER AIR DATA
7360003901
WHITE SANDS SITE
TABLE VII (Cont)

WSTM SITE COORDINATES
E 488,580 FEET
N 185,045 FEET

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
78500.0	31.7	-53.5	0.	-0. **	50.3	577.0	68.9	8.8	1.000011
79000.0	31.0	-53.0	0.	-0. **	49.0	577.7	66.8	8.9	1.000011
79500.0	30.3	-52.6	0.	-0. **	47.8	578.3	64.7	9.0	1.000011
80000.0	29.6	-52.1	0.	-0. **	46.6	579.0	63.3	9.0	1.000010
80500.0	28.9	-51.6	0.	-0. **	45.4	579.6	65.1	8.9	1.000010
81000.0	28.2	-51.1	0.	-0. **	44.3	580.2	66.9	8.8	1.000010
81500.0	27.6	-50.6	0.	-0. **	43.2	580.9	68.8	8.8	1.000010
82000.0	26.9	-50.1	0.	-0. **	42.1	581.5	71.0	9.0	1.000009
82500.0	26.3	-49.6	0.	-0. **	41.0	582.1	73.2	9.2	1.000009
83000.0	25.7	-49.1	0.	-0. **	40.0	582.8	74.4	9.4	1.000009
83500.0	25.1	-48.7	0.	-0. **	39.0	583.4	73.7	9.5	1.000009
84000.0	24.5	-48.2	0.	-0. **	38.0	584.1	73.0	9.6	1.000008
84500.0	24.0	-47.7	0.	-0. **	37.0	584.7	75.0	9.7	1.000008
85000.0	23.4	-47.5	0.	-0. **	36.2	584.9	80.8	9.7	1.000008
85500.0	22.9	-47.4	0.	-0. **	35.4	585.1	86.5	9.7	1.000008
86000.0	22.4	-47.2	0.	-0. **	34.5	585.3	91.8	9.6	1.000008
86500.0	21.9	-47.0	0.	-0. **	33.7	585.5	96.4	9.4	1.000008
87000.0	21.4	-46.9	0.	-0. **	33.0	585.7	100.9	9.2	1.000007
87500.0	20.9	-46.7	0.	-0. **	32.2	586.0	105.6	9.0	1.000007
88000.0	20.5	-46.5	0.	-0. **	31.5	586.2	110.6	8.8	1.000007
88500.0	20.0	-46.4	0.	-0. **	30.7	586.4	115.5	8.6	1.000007
89000.0	19.6	-46.2	0.	-0. **	30.0	586.6	118.6	8.3	1.000007
89500.0	19.1	-46.0	0.	-0. **	29.3	586.8	113.7	7.2	1.000007
90000.0	18.7	-45.9	0.	-0. **	28.6	587.0	108.9	6.1	1.000006
90500.0	18.3	-45.7	0.	-0. **	28.0	587.2	104.1	5.0	1.000006
91000.0	17.9	-45.5	0.	-0. **	27.3	587.5	106.3	4.9	1.000006
91500.0	17.5	-45.4	0.	-0. **	26.7	587.7	111.8	5.3	1.000006
92000.0	17.1	-45.2	0.	-0. **	26.1	587.9	117.3	5.7	1.000006
92500.0	16.7	-45.0	0.	-0. **	25.5	588.1	122.3	6.0	1.000006
93000.0	16.3	-44.9	0.	-0. **	24.9	588.3	120.9	5.5	1.000006

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

STATION ALTITUDE 3989.0 FEET MSL
21 SEPT.67 1030 HRS MDT
ASCENSION NO. 766

UPPER AIR DATA
(360003901
WHITE SANDS SITE
TABLE VII (Cont)

WSTM SITE COORDINATES
E 488,580 FEET
N 185,045 FEET

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
93500.0	16.0	-44.7	0.	-0. **	24.3	588.5	119.5	4.9	1.000005
94000.0	15.6	-44.5	0.	-0. **	23.8	588.8	118.0	4.3	1.000005
94500.0	15.2	-44.4	0.	-0. **	23.2	589.0	119.1	4.7	1.000005
95000.0	14.9	-44.2	0.	-0. **	22.7	589.2	122.9	6.3	1.000005
95500.0	14.6	-44.0	0.	-0. **	22.2	589.4	126.7	7.8	1.000005
96000.0	14.2	-43.9	0.	-0. **	21.6	589.6	130.5	9.3	1.000005
96500.0	13.9	-43.7	0.	-0. **	21.1	589.8	129.5	10.0	1.000005
97000.0	13.6	-43.5	0.	-0. **	20.7	590.0	127.8	10.7	1.000005
97500.0	13.3	-43.4	0.	-0. **	20.2	590.2	126.1	11.3	1.000004
98000.0	13.0	-43.2	0.	-0. **	19.7	590.5	124.1	11.9	1.000004
98500.0	12.7	-43.0	0.	-0. **	19.3	590.7	121.1	12.7	1.000004
99000.0	12.4	-42.9	0.	-0. **	18.8	590.9	118.1	13.5	1.000004
99500.0	12.2	-42.7	0.	-0. **	18.4	591.1	115.2	14.2	1.000004
100000.0	11.9	-42.4	0.	-0. **	18.0	591.5	114.4	16.0	1.000004
100500.0	11.6	-41.9	0.	-0. **	17.5	592.1	114.8	18.3	1.000004
101000.0	11.4	-41.4	0.	-0. **	17.1	592.8	115.2	20.6	1.000004
101500.0	11.1	-40.9	0.	-0. **	16.7	593.4	115.6	22.8	1.000004
102000.0	10.9	-40.4	0.	-0. **	16.3	594.1	111.5	21.7	1.000004
102500.0	10.6	-39.9	0.	-0. **	15.9	594.7	107.4	20.6	1.000004
103000.0	10.4	-39.4	0.	-0. **	15.5	595.4	103.3	19.4	1.000003
103500.0	10.2	-38.8	0.	-0. **	15.2	596.0			1.000003
104000.0	10.0	-38.3	0.	-0. **	14.8	596.7			1.000003
104500.0	9.8	-37.8	0.	-0. **	14.4	597.3			1.000003
105000.0	9.5	-37.3	0.	-0. **	14.1	597.9			1.000003
105500.0	9.3	-36.8	0.	-0. **	13.8	598.6			1.000003
106000.0	9.1	-36.3	0.	-0. **	13.4	599.2			1.000003

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

STATION ALTITUDE 3989.0 FEET MSL
21 SEPT.67 1030 HRS MDT
ASCENSION NO. 766

MANDATORY LEVELS
0360003901
WHITE SANDS SITE
TABLE VIII

WSTM SITE COORDINATES
E 488,580 FEET
N 185,045 FEET

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL.HUM.	WIND DATA	
		AIR	DEWPOINT	PERCENT	DIRECTION	SPEED
MILLIBARS	FEET	DEGREES CENTIGRADE			DEGREES(TN)	KNOTS
850.0	5137.	20.0	9.2	50.	272.0	2.8
800.0	6842.	16.8	5.6	47.	13.5	5.7
750.0	8641.	14.6	0.1	37.	36.9	11.7
700.0	10542.	10.7	-4.4	34.	57.7	15.9
650.0	12550.	5.5	-8.0	37.	55.6	14.6
600.0	14683.	2.9	-16.0	24.	49.1	9.5
550.0	16982.	-0.5	-24.8	14.	59.2	7.1
500.0	19458.	-5.4	-30.1	12.	23.9	7.1
450.0	22153.	-9.2	-35.0	10.	325.7	9.6
400.0	25105.	-15.7	-39.1	11.	320.7	8.5
350.0	28356.	-24.0	-42.5	17.	279.7	16.6
300.0	31984.	-31.2	-49.2	15.	279.0	21.7
250.0	36151.	-39.9	-59.8	10.**	281.6	26.4
200.0	41032.	-51.2	-74.1	5.**	268.6	27.9
175.0	43838.	-57.9	-85.9	2.**	266.7	25.1
150.0	46971.	-65.0	0.	-0.**	272.5	24.6
125.0	50550.	-72.4	0.	-0.**	290.8	18.9
100.0	54830.	-72.2	0.	-0.**	176.1	4.8
80.0	59193.	-65.3	0.	-0.**	109.6	13.1
70.0	61867.	-65.8	0.	-0.**	97.5	14.3
60.0	64952.	-63.1	0.	-0.**	92.5	9.8
50.0	68673.	-58.4	0.	-0.**	88.7	14.2
40.0	73313.	-56.1	0.	-0.**	96.4	9.6
30.0	79348.	-52.4	0.	-0.**	64.0	9.0
25.0	83249.	-48.6	0.	-0.**	73.6	9.5
20.0	88094.	-46.4	0.	-0.**	115.1	8.6
15.0	94393.	-44.2	0.	-0.**	121.5	5.7
10.0	103396.	-38.4	0.	-0.**		

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

STATION ALTITUDE 3989.0 FEET MSL
21 SEPT.67 0700 HRS MDT
ASCENSION NO. 765

SIGNIFICANT LEVEL DATA
0312003906
WHITE SANDS SITE
TABLE IX

WSTM SITE COORDINATES
E 488,580 FEET
N 185,045 FEET

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
883.4	3989.0	16.5	15.1	91.0
873.0	4323.0	19.5	14.2	71.0
787.0	7238.2	15.1	9.5	69.0
774.0	7701.1	13.3	8.4	72.0
724.0	9542.0	10.6	5.8	72.0
690.0	10850.8	5.9	5.8	99.0
686.0	11007.5	5.4	5.4	100.0
666.0	11804.1	5.4	1.5	76.0
651.0	12414.7	3.4	-2.1	67.0
607.0	14268.7	-0.8	-3.7	81.0
582.0	15373.7	-0.8	-13.4	38.0
577.0	15600.7	0.4	-18.9	22.0
550.0	16859.3	-1.5	-22.8	18.0
541.0	17290.2	-2.8	-17.6	31.0
512.0	18719.7	-5.0	-27.0	16.0
485.0	20112.6	-7.6	-27.3	19.0
477.0	20538.7	-7.0	-29.4	15.0
334.0	29340.6	-26.6	-42.0	22.0
315.0	30722.1	-30.4	-41.0	35.0
296.0	32174.2	-31.8	-47.4	20.0
284.0	33132.6	-34.2	-49.9	19.0
208.0	40070.5	-50.1	0.	-0. **
154.0	46319.8	-65.3	0.	-0. **
130.0	49658.5	-72.8	0.	-0. **
114.0	52190.5	-74.3	0.	-0. **
93.0	56110.7	-73.4	0.	-0. **
44.0	71075.9	-59.1	0.	-0. **
38.0	74140.0	-55.3	0.	-0. **
20.0	79823.5	-56.6	0.	-0. **
23.0	84761.0	-49.9	0.	-0. **

** RELATIVE HUMIDITY NOT SUPPLIED. ZERO VALUE ASSUMED FOR COMPUTATIONS.

STATION ALTITUDE 39890 FEET MSL
21 SEPT. 67 0700 HRS MDT
ASCENSION NO. 765

SIGNIFICANT LEVEL DATA
0312003906
WHITE SANDS SITE
TABLE IX (Cont)

MSTM SITE COORDINATES
E 488,980 FEET
N 185,045 FEET

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
9.6	103977.6	-42.5	0.	-0. **
8.8	105936.2	-40.1	0.	-0. **

** RELATIVE HUMIDITY NOT SUPPLIED. ZERO VALUE ASSUMED FOR COMPUTATIONS.

STATION ALTITUDE 3989.0 FEET MSL
21 SEPT.67 0700 HRS MDT
ASCENSION NO. 765

UPPER AIR DATA
0312003906
WHITE SANDS SITE
TABLE X

WSTN SITE COORDINATES
E 486,500 FEET
N 185,045 FEET

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
3989.0	883.4	16.5	15.1	91.0	1054.9	665.1	0.	0.	1.000312
4000.0	883.1	16.6	15.1	90.3	1054.1	665.2	0.5	0.1	1.000312
4500.0	867.5	19.2	13.9	70.9	1026.7	668.1	21.4	3.0	1.000299
5000.0	852.2	18.5	13.1	70.5	1011.4	667.2	42.3	5.9	1.000292
5500.0	837.2	17.7	12.3	70.2	996.4	666.2	63.3	8.9	1.000286
6000.0	822.4	17.0	11.5	69.8	981.6	665.3	84.2	11.8	1.000280
6500.0	807.9	16.2	10.7	69.5	967.0	664.4	92.2	13.3	1.000274
7000.0	793.7	15.5	9.9	69.2	952.6	663.4	87.9	13.4	1.000268
7500.0	779.6	14.1	8.9	70.7	940.5	661.7	83.9	13.0	1.000262
8000.0	765.7	12.9	8.0	72.0	927.8	660.3	80.2	12.3	1.000256
8500.0	751.9	12.1	7.3	72.0	913.6	659.4	79.6	12.9	1.000251
9000.0	738.4	11.4	6.6	72.0	899.6	658.5	79.9	13.6	1.000246
9500.0	725.1	10.7	5.9	72.0	885.9	657.6	82.9	14.8	1.000241
10000.0	711.9	9.0	6.0	81.4	874.9	655.6	85.6	15.8	1.000239
10500.0	699.0	7.2	6.0	91.8	864.4	653.6	87.3	16.3	1.000237
11000.0	686.2	5.4	5.5	100.0	854.0	651.5	88.5	16.4	1.000234
11500.0	673.6	5.4	3.1	85.2	838.9	651.3	89.0	16.0	1.000224
12000.0	661.2	4.8	0.4	73.1	825.9	650.3	89.6	14.7	1.000215
12500.0	648.9	3.2	-2.2	67.6	815.6	648.3	90.2	12.6	1.000208
13000.0	636.8	2.1	-2.6	71.4	803.7	646.9	90.0	10.3	1.000204
13500.0	624.9	0.9	-3.0	75.2	792.0	645.6	89.1	7.9	1.000201
14000.0	613.2	-0.2	-3.4	79.0	780.4	644.3	86.0	5.1	1.000198
14500.0	601.7	-0.8	-5.2	72.0	767.7	643.4	81.6	2.2	1.000192
15000.0	590.3	-0.8	-9.3	52.5	755.8	643.2	73.6	1.7	1.000183
15500.0	579.2	-0.1	-16.0	29.1	738.3	643.7	45.7	1.8	1.000173
16000.0	568.3	-0.2	-20.1	20.7	724.8	643.6	353.1	2.7	1.000168
16500.0	557.6	-1.0	-21.7	19.1	713.2	642.6	347.7	4.3	1.000164
17000.0	547.0	-1.9	-20.8	22.2	702.2	641.5	353.7	6.1	1.000162
17500.0	536.6	-3.1	-18.8	28.8	691.8	640.2	356.9	8.0	1.000161
18000.0	526.4	-3.9	-21.8	23.6	680.6	639.2	359.9	9.6	1.000157

STATION ALTITUDE 3989.0 FEET MSL
21 SEPT.67 0700 HRS MDT
ASCENSION NO. 765

UPPER AIR DATA
0312003906
WHITE SANDS SITE
TABLE X (Cont)

WSTM SITE COORDINATES
E 488,580 FEET
N 185,045 FEET

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
18500.0	516.4	-4.7	-25.3	18.3	669.7	638.2	2.7	10.5	1.000153
19000.0	506.4	-5.5	-27.1	16.6	659.0	637.2	3.3	11.2	1.000150
19500.0	496.7	-6.5	-27.1	17.7	648.6	636.0	359.9	11.4	1.000148
20000.0	487.1	-7.4	-27.3	18.8	638.3	634.9	354.6	11.6	1.000146
20500.0	477.7	-7.1	-29.1	15.4	625.2	635.3	342.2	11.6	1.000142
21000.0	468.2	-8.0	-29.9	15.4	615.0	634.1	330.7	11.6	1.000140
21500.0	458.8	-9.1	-30.6	15.8	605.2	632.8	322.6	11.8	1.000137
22000.0	449.6	-10.3	-31.3	16.2	595.6	631.5	315.8	12.2	1.000135
22500.0	440.6	-11.4	-31.9	16.6	586.2	630.1	311.7	13.0	1.000133
23000.0	431.8	-12.5	-32.6	17.0	576.9	628.8	312.1	13.4	1.000131
23500.0	423.1	-13.6	-33.3	17.4	567.8	627.4	317.4	13.5	1.000129
24000.0	414.6	-14.7	-34.0	17.8	558.8	626.1	321.9	13.7	1.000126
24500.0	406.3	-15.8	-34.7	18.2	550.0	624.7	326.0	13.9	1.000124
25000.0	398.2	-16.9	-35.4	18.5	541.3	623.4	327.8	13.9	1.000122
25500.0	390.2	-18.0	-36.2	18.9	532.8	622.0	327.2	14.3	1.000120
26000.0	382.4	-19.2	-36.9	19.3	524.4	620.6	321.6	15.5	1.000118
26500.0	374.7	-20.3	-37.7	19.7	516.2	619.3	314.4	16.2	1.000116
27000.0	367.2	-21.4	-38.4	20.1	508.1	617.9	306.2	16.7	1.000114
27500.0	359.8	-22.5	-39.2	20.5	500.1	616.9	296.8	17.6	1.000113
28000.0	352.6	-23.6	-39.9	20.9	492.3	615.2	287.6	18.4	1.000111
28500.0	345.6	-24.7	-40.7	21.3	484.6	613.8	279.7	18.8	1.000109
29000.0	338.6	-25.8	-41.5	21.7	477.0	612.4	273.5	19.6	1.000107
29500.0	331.8	-27.0	-41.8	23.5	469.6	610.9	270.6	21.1	1.000106
30000.0	324.8	-28.4	-41.3	28.2	462.3	609.2	268.5	22.5	1.000104
30500.0	318.0	-29.8	-41.1	32.9	455.2	607.5	267.1	24.0	1.000102
31000.0	311.3	-30.7	-42.1	32.1	447.2	606.4	268.1	25.4	1.000101
31500.0	304.7	-31.2	-44.1	27.0	438.6	605.8	270.7	26.8	1.000098
32000.0	298.2	-31.6	-46.5	21.8	430.2	605.2	272.9	28.1	1.000096
32500.0	291.9	-32.6	-48.3	19.7	422.7	603.9	274.9	29.3	1.000095
33000.0	285.6	-33.9	-49.6	19.1	415.9	602.3	276.8	29.4	1.000093

STATION ALTITUDE 3989.0 FEET MSL
21 SEPT.67 0700 HRS MDT
ASCENSION NO. 765

UPPER AIR DATA
0312003906
WHITE SANDS SITE
TABLE X (Cont)

WSTM SITE COORDINATES
E 486,580 FEET
N 185,045 FEET

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
33500.0	279.4	-35.0	-51.1	18.0**	408.7	600.9	278.8	28.9	1.000091
34000.0	273.2	-36.2	-52.7	16.6**	401.6	599.4	279.3	28.9	1.000090
34500.0	267.1	-37.3	-54.4	15.3**	394.6	598.0	279.0	29.1	1.000088
35000.0	261.2	-38.5	-56.1	13.9**	387.7	596.5	278.0	27.9	1.000087
35500.0	255.4	-39.6	-57.9	12.5**	381.0	595.0	276.7	25.9	1.000085
36000.0	249.7	-40.8	-59.8	11.1**	374.4	593.6	275.7	25.5	1.000084
36500.0	244.2	-41.9	-61.7	9.8**	367.9	592.1	275.0	25.8	1.000082
37000.0	238.7	-43.1	-63.8	8.4**	361.5	590.6	272.6	25.5	1.000081
37500.0	233.4	-44.2	-66.0	7.0**	355.3	589.2	269.0	24.9	1.000079
38000.0	228.3	-45.4	-68.4	5.7**	349.1	587.7	266.2	24.9	1.000078
38500.0	223.2	-46.5	-71.2	4.3**	343.1	586.2	264.7	25.9	1.000076
39000.0	218.2	-47.6	-74.6	2.9**	337.2	584.7	263.2	26.8	1.000075
39500.0	213.4	-48.8	-79.4	1.6**	331.4	583.2	261.1	26.8	1.000074
40000.0	208.7	-49.9	-92.0	0.2**	325.7	581.7	259.1	26.8	1.000073
40500.0	203.7	-51.1	0.	-0. **	319.8	580.2	257.2	27.5	1.000071
41000.0	198.9	-52.4	0.	-0. **	313.9	578.6	255.3	28.3	1.000070
41500.0	194.2	-53.6	0.	-0. **	308.1	577.0	254.1	28.8	1.000069
42000.0	189.6	-54.8	0.	-0. **	302.5	575.4	252.9	29.2	1.000067
42500.0	185.1	-56.0	0.	-0. **	296.9	573.8	251.7	29.6	1.000066
43000.0	180.7	-57.2	0.	-0. **	291.5	572.2	250.5	30.1	1.000065
43500.0	176.4	-58.4	0.	-0. **	286.2	570.6	251.1	29.8	1.000064
44000.0	172.2	-59.7	0.	-0. **	281.0	568.9	252.0	29.4	1.000063
44500.0	168.1	-60.9	0.	-0. **	275.9	567.3	252.1	29.6	1.000061
45000.0	164.1	-62.1	0.	-0. **	270.9	565.7	251.8	30.1	1.000060
45500.0	160.2	-63.3	0.	-0. **	266.0	564.1	252.7	30.0	1.000059
46000.0	156.4	-64.5	0.	-0. **	261.2	562.4	253.1	29.4	1.000058
46500.0	152.6	-65.7	0.	-0. **	256.3	560.8	257.5	28.8	1.000057
47000.0	148.8	-66.8	0.	-0. **	251.2	559.3	260.5	28.6	1.000056
47500.0	145.0	-68.0	0.	-0. **	246.3	557.8	263.4	28.4	1.000055
48000.0	141.4	-69.1	0.	-0. **	241.4	556.2	267.0	28.7	1.000054

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

STATION ALTITUDE 3989.0 FEET MSL
21 SEPT.67 0700 HRS MDT
ASCENSION NO. 765

UPPER AIR DATA
0312003906
WHITE SANDS SITE
TABLE X (Cont)

WSTM SITE COORDINATES
E 488,580 FEET
N 189,045 FEET

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
48500.0	137.9	-70.2	0.	-0. **	236.7	554.7	270.7	29.1	1.000053
49000.0	134.4	-71.3	0.	-0. **	232.0	553.2	272.9	29.6	1.000052
49500.0	131.0	-72.4	0.	-0. **	227.5	551.6	274.2	30.1	1.000051
50000.0	127.7	-73.0	0.	-0. **	222.3	550.9	275.1	29.6	1.000050
50500.0	124.4	-73.3	0.	-0. **	217.0	550.5	275.4	27.6	1.000048
51000.0	121.3	-73.6	0.	-0. **	211.7	550.1	275.3	25.5	1.000047
51500.0	118.2	-73.9	0.	-0. **	206.6	549.6	273.6	22.9	1.000046
52000.0	115.1	-74.2	0.	-0. **	201.6	549.2	271.9	20.2	1.000045
52500.0	112.2	-74.2	0.	-0. **	196.5	549.2	267.9	18.2	1.000044
53000.0	109.3	-74.1	0.	-0. **	191.3	549.3	263.9	16.2	1.000043
53500.0	106.5	-74.0	0.	-0. **	186.3	549.5	262.6	15.3	1.000041
54000.0	103.8	-73.9	0.	-0. **	181.4	549.7	262.5	14.9	1.000040
54500.0	101.1	-73.8	0.	-0. **	176.7	549.8	261.4	13.2	1.000039
55000.0	98.5	-73.7	0.	-0. **	172.1	550.0	258.5	9.6	1.000038
55500.0	96.0	-73.5	0.	-0. **	167.6	550.1	248.7	6.1	1.000037
56000.0	93.5	-73.4	0.	-0. **	163.2	550.3	183.9	4.7	1.000036
56500.0	91.2	-73.0	0.	-0. **	158.8	550.8	119.0	3.2	1.000035
57000.0	89.0	-72.6	0.	-0. **	154.5	551.5	102.7	5.3	1.000034
57500.0	6.8	-72.1	0.	-0. **	150.3	552.1	99.7	8.3	1.000033
58000.0	4.6	-71.6	0.	-0. **	146.3	552.8	91.8	10.0	1.000033
58500.0	82.5	-71.1	0.	-0. **	142.3	553.5	79.1	10.6	1.000032
59000.0	80.5	-70.6	0.	-0. **	138.5	554.1	68.9	11.6	1.000031
59500.0	78.5	-70.2	0.	-0. **	134.7	554.8	66.7	13.3	1.000030
60000.0	76.6	-69.7	0.	-0. **	131.1	555.4	64.7	15.0	1.000029
60500.0	74.7	-69.2	0.	-0. **	127.6	556.1	65.2	16.7	1.000028
61000.0	72.8	-68.7	0.	-0. **	124.1	556.7	67.0	18.2	1.000028
61500.0	71.0	-68.3	0.	-0. **	120.8	557.4	73.3	19.3	1.000027
62000.0	69.3	-67.8	0.	-0. **	117.5	558.0	79.7	20.4	1.000026
62500.0	67.6	-67.3	0.	-0. **	114.4	558.7	81.7	19.5	1.000025
63000.0	65.9	-66.8	0.	-0. **	111.3	559.3	83.6	19.5	1.000025

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

STATION ALTITUDE 3989.0 FEET MSL
21 SEPT.67 0700 HRS MDT
ASCENSION NO. 765

UPPER AIR DATA
0312003906
WHITE SANDS SITE
TABLE X (Cont)

WSTN SITE COORDINATES
E 408,300 FEET
N 185,045 FEET

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	64.3	-66.3	0.	-0. **	108.3	560.0	86.0	17.7	1.000024
64000.0	62.7	-65.9	0.	-0. **	105.4	560.6	88.7	17.1	1.000023
64500.0	61.1	-65.4	0.	-0. **	102.5	561.3	91.5	16.5	1.000023
65000.0	59.6	-64.9	0.	-0. **	99.8	561.9	93.3	14.3	1.000022
65500.0	58.2	-64.4	0.	-0. **	97.1	562.5	95.2	12.1	1.000022
66000.0	56.7	-64.0	0.	-0. **	94.5	563.2	97.1	11.2	1.000021
66500.0	55.3	-63.5	0.	-0. **	91.9	563.8	99.0	11.6	1.000020
67000.0	53.9	-63.0	0.	-0. **	89.4	564.5	101.0	11.9	1.000020
67500.0	52.6	-62.5	0.	-0. **	87.0	565.1	96.0	10.7	1.000019
68000.0	51.3	-62.0	0.	-0. **	84.7	565.8	91.1	9.5	1.000019
68500.0	50.0	-61.6	0.	-0. **	82.4	566.4	86.5	8.9	1.000018
69000.0	48.8	-61.1	0.	-0. **	80.2	567.0	82.5	9.4	1.000018
69500.0	47.6	-60.6	0.	-0. **	78.0	567.7	78.5	9.8	1.000017
70000.0	46.4	-60.1	0.	-0. **	75.9	568.3	72.1	9.9	1.000017
70500.0	45.3	-59.6	0.	-0. **	73.9	568.9	64.8	9.8	1.000016
71000.0	44.2	-59.1	0.	-0. **	71.9	569.6	58.1	9.7	1.000016
71500.0	43.1	-58.6	0.	-0. **	70.0	570.4	60.5	10.0	1.000016
72000.0	42.1	-58.0	0.	-0. **	68.2	571.2	62.8	10.4	1.000015
72500.0	41.1	-57.3	0.	-0. **	66.4	572.0	65.0	10.8	1.000015
73000.0	40.1	-56.7	0.	-0. **	64.6	572.8	66.7	11.2	1.000014
73500.0	39.2	-56.1	0.	-0. **	62.9	573.7	68.3	11.6	1.000014
74000.0	38.3	-55.5	0.	-0. **	61.2	574.5	69.6	11.3	1.000014
74500.0	37.4	-55.4	0.	-0. **	59.8	574.6	70.4	10.5	1.000013
75000.0	36.5	-55.5	0.	-0. **	58.4	574.5	71.2	9.6	1.000013
75500.0	35.6	-55.6	0.	-0. **	57.0	574.3	72.1	9.6	1.000013
76000.0	34.8	-55.7	0.	-0. **	55.7	574.2	73.0	10.0	1.000012
76500.0	34.0	-55.8	0.	-0. **	54.5	574.0	74.0	10.4	1.000012
77000.0	33.2	-56.0	0.	-0. **	53.2	573.8	76.7	10.4	1.000012
77500.0	32.4	-56.1	0.	-0. **	52.0	573.7	80.4	10.0	1.000012
78000.0	31.6	-56.2	0.	-0. **	50.8	573.5	84.1	9.7	1.000011

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

STATION ALTITUDE 3989.0 FEET MSL
21 SEPT.67 0700 HRS MDT
ASCENSION NO. 765

UPPER AIR DATA
0312003906
WHITE SANDS SITE
TABLE X (Cont)

WSTM SITE COORDINATES
E 480,580 FEET
N 185,045 FEET

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
78500.0	30.9	-56.3	0.	-0. **	49.6	573.4	86.1	9.1	1.000011
79000.0	30.2	-56.4	0.	-0. **	48.5	573.2	87.5	8.5	1.000011
79500.0	29.4	-56.5	0.	-0. **	47.4	573.1	88.9	7.8	1.000011
80000.0	28.8	-56.4	0.	-0. **	46.2	573.3	92.9	6.7	1.000010
80500.0	28.1	-55.7	0.	-0. **	45.0	574.2	97.9	5.4	1.000010
81000.0	27.4	-55.0	0.	-0. **	43.8	575.1	103.0	4.1	1.000010
81500.0	26.8	-54.3	0.	-0. **	42.7	576.0	102.2	3.6	1.000009
82000.0	26.2	-53.6	0.	-0. **	41.6	576.9	98.9	3.3	1.000009
82500.0	25.6	-53.0	0.	-0. **	40.5	577.8	95.7	3.0	1.000009
83000.0	25.0	-52.3	0.	-0. **	39.4	578.7	92.7	3.6	1.000009
83500.0	24.4	-51.6	0.	-0. **	38.4	579.6	89.8	4.6	1.000009
84000.0	23.8	-50.9	0.	-0. **	37.4	580.4	86.9	5.6	1.000008
84500.0	23.3	-50.3	0.	-0. **	36.4	581.3	79.6	5.7	1.000008
85000.0	22.8	-49.8	0.	-0. **	35.5	581.9	70.1	5.4	1.000008
85500.0	22.2	-49.6	0.	-0. **	34.7	582.2	60.7	5.1	1.000008
86000.0	21.7	-49.4	0.	-0. **	33.9	582.4	54.8	4.9	1.000008
86500.0	21.3	-49.2	0.	-0. **	33.1	582.7	50.6	4.7	1.000007
87000.0	20.8	-49.0	0.	-0. **	32.3	582.9	46.5	4.6	1.000007
87500.0	20.3	-48.8	0.	-0. **	31.5	583.2	36.8	4.1	1.000007
88000.0	19.9	-48.7	0.	-0. **	30.8	583.4	23.5	3.5	1.000007
88500.0	19.4	-48.5	0.	-0. **	30.1	583.7	10.3	2.8	1.000007
89000.0	19.0	-48.3	0.	-0. **	29.4	583.9	20.1	2.6	1.000007
89500.0	18.5	-48.1	0.	-0. **	28.7	584.2	47.0	2.7	1.000006
90000.0	18.1	-47.9	0.	-0. **	28.0	584.4	74.0	2.8	1.000006
90500.0	17.7	-47.7	0.	-0. **	27.4	584.7	86.6	2.4	1.000006
91000.0	17.3	-47.5	0.	-0. **	26.7	584.9	86.6	1.7	1.000006
91500.0	16.9	-47.3	0.	-0. **	26.1	585.2	86.6	0.9	1.000006
92000.0	16.5	-47.1	0.	-0. **	25.5	585.4	89.9	1.1	1.000006
92500.0	16.2	-46.9	0.	-0. **	24.9	585.7	96.5	2.1	1.000006
93000.0	15.8	-46.7	0.	-0. **	24.3	585.9	103.1	3.1	1.000005

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

STATION ALTITUDE 3989.0 FEET MSL
21 SEPT.67 0700 HRS MDT
ASCENSION NO. 7[illegible]

UPPER AIR DATA
0312003906
WHITE SANDS SITE
TABLE X (Cont)

WSTM SITE COORDINATES
E 488.580 FEET
N 185.045 FEET

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	DEWPOINT	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
93500.0	15.5	-46.5	0.	-0. **	23.8	586.2	102.9	3.4	1.000005
94000.0	15.1	-46.3	0.	-0. **	23.2	586.4	94.3	2.8	1.000005
94500.0	14.8	-46.1	0.	-0. **	22.7	586.7	85.8	2.2	1.000005
95000.0	14.4	-46.0	0.	-0. **	22.1	586.9	82.2	3.1	1.000005
95500.0	14.1	-45.8	0.	-0. **	21.6	587.2	85.8	6.3	1.000005
96000.0	13.8	-45.6	0.	-0. **	21.1	587.4	89.4	9.5	1.000005
96500.0	13.5	-45.4	0.	-0. **	20.6	587.7	88.3	11.2	1.000005
97000.0	13.2	-45.2	0.	-0. **	20.2	587.9	79.5	10.4	1.000004
97500.0	12.9	-45.0	0.	-0. **	19.7	588.1	70.6	9.6	1.000004
98000.0	12.6	-44.8	0.	-0. **	19.2	588.4	64.2	9.3	1.000004
98500.0	12.3	-44.6	0.	-0. **	18.8	588.6	62.9	10.2	1.000004
99000.0	12.0	-44.4	0.	-0. **	18.3	588.9	61.6	11.0	1.000004
99500.0	11.8	-44.2	0.	-0. **	17.9	589.1	57.5	11.3	1.000004
100000.0	11.5	-44.0	0.	-0. **	17.5	589.4	46.4	10.0	1.000004
100500.0	11.2	-43.8	0.	-0. **	17.1	589.6	35.4	8.7	1.000004
101000.0	11.0	-43.6	0.	-0. **	16.7	589.9	32.1	8.1	1.000004
101500.0	10.7	-43.5	0.	-0. **	16.3	590.1	52.2	9.5	1.000004
102000.0	10.5	-43.3	0.	-0. **	15.9	590.4	72.3	10.9	1.000004
102500.0	10.3	-43.1	0.	-0. **	15.5	590.6			1.000003
103000.0	10.0	-42.9	0.	-0. **	15.2	590.9			1.000003
103500.0	9.8	-42.7	0.	-0. **	14.8	591.1			1.000003
104000.0	9.6	-42.5	0.	-0. **	14.5	591.4			1.000003
104500.0	9.4	-41.9	0.	-0. **	14.1	592.2			1.000003
105000.0	9.2	-41.2	0.	-0. **	13.8	593.0			1.000003
105500.0	9.0	-40.6	0.	-0. **	13.4	593.7			1.000003

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

STATION ALTITUDE 3989.0 FEET MSL
21 SEPT.67 0700 HRS MDT
ASCENSION NO. 765

MANDATORY LEVELS
I 312003906
WHITE SANDS SITE
TABLE XI

WSTM SITE COORDINATES
E 488,580 FEET
N 185,045 FEET

PRESSURE	GEOPOTENTIAL	TEMPERATURE		REL.HUM.	WIND DATA	
		AIR	DEWPOINT	PERCENT	DIRECTION	SPEED
MILLIBARS	FEET	DEGREES CENTIGRADE			DEGREES(TN)	KNOTS
850.0	5077.	18.4	13.0	70.	45.6	6.4
800.0	6778.	15.8	10.3	69.	89.8	13.4
750.0	8567.	12.0	7.2	72.	79.6	12.9
700.0	10455.	7.3	6.0	91.	87.1	16.3
650.0	12446.	3.3	-2.2	67.	90.2	12.8
600.0	14561.	-0.8	-5.8	69.	80.5	2.1
550.0	16843.	-1.5	-22.8	18.	352.2	5.5
500.0	19310.	-6.1	-27.1	17.	1.0	11.3
450.0	21997.	-10.2	-31.2	16.	315.6	12.2
400.0	24937.	-16.7	-35.3	18.	327.7	13.9
350.0	28182.	-24.0	-40.2	21.	284.1	18.6
300.0	31810.	-31.5	-45.8	23.	272.3	27.8
250.0	35965.	-40.7	-59.7	11.**	275.7	25.5
200.0	40827.	-52.1	0.	-0.**	255.7	28.7
175.0	43621.	-58.8	0.	-0.**	251.5	29.6
150.0	46738.	-66.5	0.	-0.**	259.6	28.7
125.0	50291.	-73.2	0.	-0.**	275.3	28.0
100.0	54563.	-73.7	0.	-0.**	260.2	11.7
80.0	58866.	-70.5	0.	-0.**	69.7	11.7
70.0	61483.	-68.0	0.	-0.**	75.4	19.7
60.0	64544.	-65.0	0.	-0.**	92.4	15.5
50.0	68221.	-61.5	0.	-0.**	86.9	8.9
40.0	72808.	-56.6	0.	-0.**	66.9	11.2
30.0	78814.	-56.4	0.	-0.**	87.8	8.3
25.0	82639.	-52.3	0.	-0.**	92.9	3.6
20.0	87425.	-48.7	0.	-0.**	29.1	3.7
15.0	93663.	-46.3	0.	-0.**	92.9	2.7
10.0	102570.	-47.8	0.	-0.**		

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

RELEASE TIME (MDT)		SECOND-STAGE IMPACT DISPLACEMENT IN MILES DUE TO WIND								AZI-MUTH (DEG-REES)	THEORETICAL IMPACT FROM LAUNCHER (IN MILES)		
		11-216 FT		216-4000 FT		4000-74168 FT		TOTAL					
RAWIN-SONDE	PIBAL	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W		RANGE	N-S	E-W
0700	0800	3.6S	0.7W	5.9S	8.7E	3.5S	12.0W	13.0S	4.0W	007.9	65.5	65.0N	9.0E
	0830	3.3S	1.5W	4.5S	1.7E	3.5S	12.0W	11.3S	11.8W	001.0	67.7	66.7	1.2
	0900	3.8S	0.4E	0.7S	0.2E	3.5S	12.0W	8.0S	11.4W	001.3	70.3	70.0	1.6
	0915	4.9S	0.1E	0.2S	0.3E	3.5S	12.0W	8.6S	11.6W	001.2	69.5	69.4	1.4
	0930	4.6S	1.6W	0.1N	0.7W	3.5S	12.0W	8.0S	14.3W	358.9	70.1	70.0	1.3W
	0940	2.9S	0.4W	0.7S	1.8W	3.5S	12.0W	7.1S	14.2W	359.0	71.0	70.9	1.2
	0950	4.0S	0.5E	2.7S	0.4E	3.5S	12.0W	10.2S	11.1W	001.6	68.0	67.8	1.9E
	1001	2.3S	1.4E	1.3S	0.5W	3.5S	12.0W	7.1S	11.1W	001.5	71.7	70.9	1.9
1030	1001	2.3S	1.4E	1.3S	0.5W	0.1N	10.6W	3.5S	9.7W	002.5	75.1	74.5	3.3

	AZI-MUTH (DEG-REES)	MILES FROM LAUNCHER		
		RANGE	N-S	E-W
LAUNCHER SETTING (ELEVATION 84.4 DEGREES QE)	013.0	80.0	78.0N	18.0E
NO WIND IMPACT	009.4	79.3	78.0	13.0
PREDICTED SECOND-STAGE IMPACT	360.0	69.0	69.0	0.0
SECOND-STAGE IMPACT, RADAR TRACK	357.0	73.2	73.1	3.8W
PREDICTED BOOSTER IMPACT	014.0	1.8	1.7	0.4E
ACTUAL BOOSTER IMPACT	002.1	1.3	1.2	0.2

TABLE XII. IMPACT PREDICTION DATA
NIKE-HYDAC STV (SR 059)

UNCLASSIFIED
Security Classification

DOCUMENT CONTROL DATA - R&D

(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

1. ORIGINATING ACTIVITY (Corporate author) U. S. Army Electronics Command Fort Monmouth, New Jersey	2a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED 2b. GROUP

3. REPORT TITLE
METEOROLOGICAL DATA REPORT, NIKE-HYDAC STV (SR 059)

4. DESCRIPTIVE NOTES (Type of report and inclusive dates)

5. AUTHOR(S) (Last name, first name, initial)
Kubinski, Stanley

6. REPORT DATE	7a. TOTAL NO. OF PAGES	7b. NO. OF REFS
October 1967	34	NONE

8a. CONTRACT OR GRANT NO.	9a. ORIGINATOR'S REPORT NUMBER(S)
b. PROJECT NO.	DR-255
c. DA Task 1V65Q212A127-02	9b. OTHER REPORT NO(S) (Any other numbers that may be assigned this report)
d.	

10. AVAILABILITY/LIMITATION NOTICES
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11. SUPPLEMENTARY NOTES	12. SPONSORING MILITARY ACTIVITY
	U. S. Army Electronics Command Atmospheric Sciences Laboratory White Sands Missile Range, New Mexico

13. ABSTRACT

Meteorological data gathered for the launching of Nike-Hydac STV (SR 059) are presented for the Ballistics Systems Division, U. S. Air Force, and for ballistic studies. The data appear, along with calculated Ballistic data, in tabualr form.

DD FORM 1 JAN 64 1473

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Security Classification

14. KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
1. Ballistics 2. Meteorology 3. Wind						

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