

UNCLASSIFIED

AD NUMBER
AD867551
NEW LIMITATION CHANGE
TO Approved for public release, distribution unlimited
FROM Distribution authorized to U.S. Gov't. agencies and their contractors; Critical Technology; MAR 1970. Other requests shall be referred to Army Atmospheric Sciences Office, White Sands Missile Range, NM.
AUTHORITY
usaec notice, 13 sep 1971

THIS PAGE IS UNCLASSIFIED

DR-508
March 1970

AD

THIS DOCUMENT IS SUBJECT TO SPECIAL EXPORT CONTROLS AND EACH TRANSMITTAL TO FOREIGN GOVERNMENTS OR FOREIGN NATIONALS MAY BE MADE ONLY WITH PRIOR APPROVAL OF ATMOSPHERIC SCIENCES OFFICE, WHITE SANDS MISSILE RANGE, NEW MEXICO.

AD 867551

METEOROLOGICAL DATA REPORT

NIKE-HYDAC STV-92
(12 March 1970)

BY

GORDON DONAHAY

Reproduced by the
CLEARINGHOUSE
for Federal Scientific & Technical
Information Springfield Va. 22151

ATMOSPHERIC SCIENCES OFFICE
WHITE SANDS MISSILE RANGE, NEW MEXICO

ECOM

UNITED STATES ARMY ELECTRONICS COMMAND

DDC
RECEIVED
APR 16 1970
RECEIVED
C

METEOROLOGICAL DATA REPORT

**NIKE-HYDAC STV-92
(12 March 1970)**

By

Gordon L. Dunaway

DR-503

March 1970

DA Task 1T665702D127-02

**ATMOSPHERIC SCIENCES OFFICE
WHITE SANDS MISSILE RANGE, NEW MEXICO**

This document is subject to special export controls and each transmittal to foreign governments or foreign nationals may be made only with prior approval of Atmospheric Sciences Office, White Sands Missile Range, New Mexico.

ABSTRACT

Metecrological data gathered for launching of NIKE-HYDAC, STV-92, are presented for the Space and Missile Systems Organization, AFMDC, Holloman Air Force Base, New Mexico, and for ballistic studies. The data appear, along with calculated ballistic data, in tabular form.

CONTENTS

	PAGE
ABSTRACT	iii
INTRODUCTION	1
DISCUSSION	1
 TABLES	
I. Theoretical Rocket Performance Values	2
II. Ballistic Factors	3
III. Anemometer Wind Speed and Direction	4
IV. Pilot-Balloon-Measured Wind Data	5
V. Rawinsonde-Measured Wind Data	7
VI. Significant Level Data (Release Time: 1055 MST)	8
VII. Upper Air Data (Release Time: 1055 MST)	10
VIII. Mandatory Levels (Release Time: 1055 MST)	17
IX. Significant Level Data (Release Time: 1423 MST)	18
X. Upper Air Data (Release Time: 1423 MST)	20
XI. Mandatory Levels (Release Time: 1423 MST)	27
XII. Impact Prediction Data	28

INTRODUCTION

Nike-Hydac, STV-92, was launched from Launch Complex 33, left boom of L-361, White Sands Missile Range (WSMR), New Mexico, at 1422 hours MST, 12 March 1970.

Meteorological data used in conjunction with theoretical calculations to predict rocket impact were collected by the Meteorological Support Technical Area, Atmospheric Sciences Office (ASO), WSMR, New Mexico. Ballistics Meteorologists for this firing were Gordon Dunaway and Len E. Carter.

DISCUSSION

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

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

Temperature, pressure, and humidity data, along with upper wind data from 4,000 to approximately 100,000 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 wind-weighting values as a function of altitude were provided by the Atmospheric Sciences Office (ASO) and are the basis for the data appearing in Table I.

PAYLOAD		220.	Pounds.
CORIOLIS DISPLACEMENT	WEST	3.9	Miles
SECOND-STAGE IGNITION	TIME	20.0	Seconds
	ALTITUDE	35000.	Feet MSL
PEAK	TIME	231	Seconds
	ALTITUDE	730,000	Feet MSL
UNIT WIND EFFECT		2.35	Miles/MPH
			Miles/MPH
			Miles/MPH
TOWER TILT EFFECT		14.0	Miles/Degree

TABLE I. THEORETICAL ROCKET PERFORMANCE VALUES
NIKE-HYDAC, STV-92

LAYERS IN FEET ABOVE GROUND	BALLISTIC FACTORS
11- 60	.1265
60- 100	.0844
100- 148	.0535
148- 184	.0410
184- 216	.0235
216- 300	.0592
300- 400	.0520
400- 600	.0790
600- 800	.0530
800- 1000	.0407

LAYERS IN FEET ABOVE GROUND	BALLISTIC FACTORS
1000- 1400	.0742
1400- 2000	.0669
2000- 2500	.0341
2500- 3000	.0227
3000- 3500	.0143
3500- 4000	.0051
4000- 5000	.0051
5000- 9000	.0117
9000- 15000	.0168
15000- 21000	.0160

LAYERS IN FEET ABOVE GROUND	BALLISTIC FACTORS
21000-26000	.0096
26000-31000	.0048
31000-36000	.1288
36000-41000	.0346
41000-46000	.0256
46000-51000	.0152
51000-56000	.0093
56000-61000	.0016
61000-100000	.0012

TABLE II. BALLISTIC FACTORS
NIKE-HYDAC STV-92

AERO- VANE NO. *	MEAN WIND COMPONENTS IN MILES PER HOUR											
	1		2		3		4		5		6	
	1155 MST		1225 MST		1300 MST		1310 MST		1315 MST		1325 MST	
	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W
1	3.0N	1.0E	8.0N	3.0W	7.0N	0.0	5.0N	2.0W	6.0N	2.0W	5.0N	2.0E
2	4.0	2.0	8.0	1.0	7.0	0.0	5.0	0.0	5.0	0.0	5.0	4.0
3	5.0	2.0	8.0	1.0	7.0	0.0	4.0	0.0	6.0	0.0	3.0	4.0
4	4.0	3.0	9.0	0.0	8.0	0.0	6.0	0.0	5.0	0.0	6.0	6.0
5	2.0	2.0	8.0	0.0	6.0	0.0	6.0	0.0	4.0	0.0	4.0	6.0

AERO- VANE NO. *	MEAN WIND COMPONENTS IN MILES PER HOUR											
	8		9		10		11		12		13	
	1345 MST		1350 MST		1400 MST		1410 MST		1418 MST		1422 MST	
	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W
1	8.0N	4.0E	12.0N	3.0E	10.0N	2.0W	15.0N	2.0E	13.0N	1.0E	13.0N	0.0
2	10.0	4.0	12.0	4.0	10.0	2.0	15.0	4.0	12.0	3.0	13.0	0.0
3	12.0	6.0	12.0	4.0	11.0	2.0	15.0	4.0	14.0	3.0	13.0	0.0
4	13.0	6.0	13.0	6.0	12.0	0.0	17.0	5.0	14.0	4.0	13.0	0.0
5	10.0	4.0	14.0	5.0	13.0	0.0	15.0	4.0	12.0	4.0	13.0	0.0

TABLE III. ANEMOMETER WIND SPEED AND DIRECTION
NIKE-HYDAC STV-92

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

LAYERS IN FEET ABOVE GROUND	MEAN WIND COMPONENTS IN MILES PER HOUR													
	1		2		3		4		5		6		7	
	1155 MST		1225 MST		1300 MST		1310 MST		1315 MST		1325 MST		1335 MST	
	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W
216-300	2.0N	1.0E	7.5N	0.0	5.5N	5.5E	6.0N	0.0	6.0N	5.5E	4.0N	5.5E	8.5N	4.5E
300-400	3.5	1.5	7.0	0.0	6.5	3.5	5.5	1.5E	9.5	6.0	4.5	3.5	8.5	1.5
400-600	3.0	3.0	3.0	0.5W	5.0	0.5	4.0	2.5	7.5	2.5	2.5	5.5	10.0	3.0
600-800	1.0S	1.0W	4.5	1.0	5.0	3.0	6.0	5.0	4.0	2.5	4.0	5.5	8.5	1.5
800-1000	1.0N	2.0	7.0	2.0E	5.0	4.5	3.5	6.5	2.5	6.0	3.0	8.5	8.0	2.0
1000-1400	1.0	0.0	3.5	2.5	4.5	3.0	3.5	0.0	6.0	7.0	3.0	7.5	8.5	3.0
1400-2000	0.0	0.5E	6.5	1.0	4.0	0.5	5.5	0.0	6.0	3.5	7.5	3.0	5.5	1.5
2000-2500	1.5N	1.5W	6.0	1.0	6.5	2.0W	5.5	1.0W	9.0	1.5W	10.0	2.5	6.0	1.0
2500-3000	2.0	8.5	4.0	5.0	6.0	2.5	2.0	9.0	5.0	8.0	7.0	2.0W	4.0	1.5W
3000-3500	0.0	10.5	0.5	10.0	4.0	10.5	3.5	11.5	2.5	11.0	6.0	9.5	3.0	5.5
3500-4000	2.5S	6.0	1.5S	6.5	2.0	12.5	8.5	11.5	7.0	11.0	9.0	9.5	2.0	10.5

TABLE IV. PILOT-BALLOON-MEASURED WIND DATA
NIKE-HYDAC STV-92

LAYERS IN FEET ABOVE GROUND	MEAN WIND COMPONENTS IN MILLS PER HOUR											
	8		9		10		11		12		13	
	1345 MST		1350 MST		1400 MST		1410 MST		1418 MST		1422 MST	
	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W
216- 300	10.0N	0.0	11.0N	5.5E	10.0N	2.0E	14.0N	4.0E	12.0N	3.5E	14.0N	1.0E
300- 400	9.5	1.0E	7.0	5.0	9.0	4.0	11.0	5.0	13.0	1.5	13.5	2.5
400- 600	12.0	3.5	8.3	2.5	12.5	3.5	10.5	4.0	17.5	1.5	14.0	2.0
600- 800	15.0	4.5	10.5	1.5	13.0	2.0	12.5	4.0	18.0	1.5	13.5	2.5
800-1000	14.5	3.5	10.5	2.5	13.5	2.0	11.0	2.0	16.0	3.0	12.0	3.5
1000-1400	11.0	5.5	12.0	2.5	14.0	3.0	11.0	0.5	14.5	3.5	12.0	5.0
1400-2000	9.5	4.0	10.0	4.5	13.0	3.5	11.0	3.5	13.0	3.0	13.0	5.0
2000-2500	7.5	1.5	12.5	5.0	12.0	4.0	10.0	4.5	11.5	2.5	12.0	5.0
2500-3000	6.0	2.0W	12.0	2.0	9.5	2.0	10.0	3.0	11.5	2.0	12.5	4.0
3000-3500	4.5	4.5	8.0	4.0W	7.0	3.5W	9.0	2.0	11.0	1.5	12.0	2.5
3500-4000	5.0	9.0	4.5	8.5	6.5	10.0	6.0	5.0W	11.5	2.0	10.0	1.0

TABLE IV. PILOT-BALLOON-MEASURED WIND DATA (CONT)
NIKE-HYDAC STV-92

LAYERS IN FEET ABOVE GROUND	MEAN WIND COMPONENTS IN KNOTS					
	1055 MST		1423 MST			
	N-S	E-W	N-S	E-W	N-S	E-W
4000- 5000	4.0S	7.0W	6.0N	0.0		
5000- 9000	6.0N	10.3	9.5	11.5W		
9000-15000	12.5	35.0	20.0	16.5		
15000-21000	19.0	51.5	21.0	36.3		
21000-26000	26.0	71.5	19.5	53.5		
26000-31000	28.5	77.5	30.5	53.0		
31000-36000	20.0	55.5	23.5	40.5		
36000-41000	14.0	38.5	15.0	41.5		
41000-46000	15.5	42.5	22.0	38.0		
46000-51000	12.0	34.0	19.5	34.0		
51000-56000	7.0	19.0	0.0	26.0		
56000-61000	5.0	13.0	0.0	11.0		

TABLE V. RAWINSONDE-MEASURED WIND DATA
NIKE-HYDAC STV-92

STATION ALTITUDE 3989.00 FEET MSL.
 12 MAR. 70 1055 HRS MST
 ASCENSION NO. 231

SIGNIFICANT LEVEL DATA
 0710020231
 WHITE SANDS

STATION ALTITUDE 3989.00 FEET MSL.
 12 MAR. 70 1055 HRS MST
 ASCENSION NO. 231

WSTW SITE COORDINATES
 488540.00 FEET L
 183045.00 FEET N

TABLE VI

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
880.4	3989.0	7.0	0.0	61.0
870.0	4307.7	3.3	-3.6	61.0
820.0	5073.0	-0.3	-5.5	60.0
778.0	7256.2	-0.2	-9.1	51.0
716.0	8423.3	-4.2	-16.5	38.0
623.0	12863.4	-13.6	-23.1	45.0
537.0	16615.3	-22.1	-29.6	51.0
515.0	17623.3	-23.8	-31.4	50.0
497.0	18477.3	-24.1	-31.9	49.0
431.0	21836.2	-32.7	-41.6	41.0
424.0	22215.8	-32.3	-41.8	39.0
383.0	24729.7	-37.7	-47.4	36.0
378.0	24845.4	-38.4	-49.6	30.0
362.0	25821.1	-39.7	0.	**
355.0	26259.4	-40.7	0.	**
341.0	27147.9	-47.3	0.	**
292.0	30506.7	-49.7	0.	**
267.0	32424.9	-52.0	0.	**
239.0	34771.9	-54.9	0.	**
223.0	36232.5	-54.3	0.	**
207.0	37800.7	-55.3	0.	**
201.0	38419.2	-55.1	0.	**
193.0	39272.3	-55.8	0.	**
186.0	40049.2	-54.6	0.	**
161.0	43081.5	-56.3	0.	**
151.0	44426.5	-55.4	0.	**
137.0	46468.5	-56.1	0.	**
116.0	49939.6	-58.1	0.	**
96.0	53867.7	-58.4	0.	**
78.0	58141.1	-61.9	0.	**

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

STATION ALTITUDE 3989.00 FEET MSL

12 MAR. 70

ASCENSION NO. 231

1055 HRS MST

WHITE SANDS

0710020231

SIGNIFICANT LEVEL DATA

WSTM SITE COORDINATES

488580.00 FEET E

185045.00 FEET N

TABLE VI (Cont)

PRESSURE GEOMETRIC		TEMPERATURE		REL. HUM.
ALTITUDE	MILLIBARS	AIR	DEWPOINT	
MSL FEET		DEGREES	CENTIGRADE	PERCENT
59.0	63899.9	-57.6	0.	-0. **
43.0	70504.0	-57.0	0.	-0. **
41.0	71516.4	-50.0	0.	-0. **
30.0	78213.2	-53.3	0.	-0. **
25.0	82135.9	-48.7	0.	-0. **
18.5	88717.3	-46.4.	0.	-0. **
17.0	90576.1	-46.4	0.	-0. **
13.0	96539.3	-41.4	0.	-0. **
8.4	106422.0	-38.4	0.	-0. **

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

STATION ALTITUDE 3989.00 FEET MSL
12 MAR. 70 1055 HRS MST
ASCENSION NO. 231

UPPER AIR DATA
0710020231
WHITE SANDS

WSIN SITE COORDINATES
488580.00 FEET E
185045.00 FEET N

TABLE VII.

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS			
3989.0	880.4	7.0	0.0	61.0	1092.1	652.6		270.0	2.9	1.000273
4000.0	880.0	6.9	-0.1	61.0	1092.2	652.4		270.0	2.9	1.000273
4500.0	863.7	2.8	-3.8	61.9	1088.4	647.4		270.8	3.5	1.000265
5000.0	847.5	1.7	-4.4	64.1	1072.5	646.1		271.5	4.0	1.000261
5500.0	831.7	0.5	-5.0	66.3	1056.7	644.8		272.3	4.6	1.000257
6000.0	816.1	-0.3	-5.8	66.4	1040.1	643.8		273.0	5.2	1.000252
6500.0	800.7	-0.3	-7.0	60.3	1020.5	643.8		267.3	5.7	1.000246
7000.0	785.6	-0.2	-8.4	54.2	1001.3	643.8		254.0	6.2	1.000240
7500.0	770.8	-0.7	-9.9	49.5	984.1	643.2		246.1	7.0	1.000234
8000.0	756.1	-1.6	-11.6	46.5	968.9	642.1		240.8	7.9	1.000229
8500.0	741.8	-2.5	-13.3	43.5	953.8	640.9		243.6	7.8	1.000224
9000.0	727.7	-3.4	-15.0	40.5	939.1	639.8		248.0	7.8	1.000219
9500.0	713.8	-4.4	-16.6	38.2	924.6	638.6		259.1	8.2	1.000215
10000.0	700.0	-5.7	-17.5	39.1	911.2	637.0		270.7	8.7	1.000211
10500.0	686.3	-7.1	-18.4	40.1	898.0	635.4		284.7	9.3	1.000208
11000.0	673.0	-8.4	-19.3	41.1	884.9	633.8		296.8	10.2	1.000204
11500.0	659.9	-9.7	-20.3	42.1	872.1	632.2		303.6	12.0	1.000201
12000.0	647.0	-11.0	-21.2	43.1	859.5	630.6		307.7	14.2	1.000198
12500.0	634.4	-12.4	-22.2	44.1	847.1	629.0		304.2	17.1	1.000194
13000.0	622.1	-13.7	-23.1	45.1	834.9	627.4		300.4	20.0	1.000191
13500.0	609.5	-14.8	-24.0	45.9	821.8	626.0		295.3	23.2	1.000188
14000.0	597.3	-16.0	-24.9	46.7	808.9	624.5		290.4	26.2	1.000185
14500.0	585.3	-17.2	-25.8	47.5	796.2	623.1		286.0	28.7	1.000182
15000.0	573.5	-18.3	-26.7	48.3	783.8	621.7		282.7	30.8	1.000179
15500.0	561.9	-19.5	-27.6	49.2	771.5	620.3		281.3	32.5	1.000176
16000.0	550.6	-20.7	-28.5	50.0	759.5	618.8		281.3	34.6	1.000173
16500.0	539.5	-21.8	-29.4	50.8	747.7	617.4		283.4	37.3	1.000170
17000.0	528.5	-22.7	-30.3	50.6	735.1	616.3		285.7	39.7	1.000167
17500.0	517.6	-23.6	-31.2	50.1	722.5	615.2		288.8	41.2	1.000164
18000.0	507.0	-23.9	-31.6	49.6	708.5	614.0		291.7	42.9	1.000160

STATION ALTITUDE 3989.00 FEET MSL
12 MAR. 70 1055 HRS MST
ASCENSION NU. 231

UPPER AIR DATA

0710020231
WHITE SANDS

WSFN SITE COORDINATES
488580.00 FEET E
185045.00 FEET N

TABLE VII (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS			
18500.0	496.5	-24.2	-32.0	48.9	694.6	614.5	294.0	45.7	1.000157	
19000.0	486.1	-25.4	-33.4	47.8	683.5	612.9	295.7	48.2	1.000154	
19500.0	475.9	-26.7	-34.9	46.6	672.7	611.3	295.6	49.6	1.000152	
20000.0	465.9	-28.0	-36.3	45.4	662.0	609.7	295.1	51.7	1.000149	
20500.0	456.1	-29.3	-37.8	44.2	651.5	608.1	294.2	54.4	1.000147	
21000.0	446.6	-30.6	-39.2	43.0	641.3	606.5	295.5	54.0	1.000144	
21500.0	437.2	-31.8	-40.7	41.8	631.1	604.9	297.9	52.3	1.000142	
22000.0	428.0	-32.5	-41.7	40.1	619.6	604.0	296.0	59.0	1.000139	
22500.0	418.8	-33.0	-42.5	38.6	607.5	603.5	293.7	65.7	1.000136	
23000.0	409.8	-34.2	-43.8	37.9	597.4	601.9	292.8	62.6	1.000134	
23500.0	400.9	-35.4	-45.0	37.3	587.6	600.4	291.3	51.9	1.000132	
24000.0	392.3	-36.7	-46.3	36.6	577.9	598.8	288.5	66.1	1.000129	
24500.0	383.8	-37.8	-47.8	35.0	568.2	597.4	286.8	64.7	1.000127	
25000.0	375.4	-38.6	-51.3	25.2**	557.7	596.3	286.0	58.6	1.000125	
25500.0	367.2	-39.3	-59.5	9.9**	547.0	595.3	285.0	60.1	1.000122	
26000.0	359.1	-40.1	0	-0.0**	536.9	594.4	285.5	65.2	1.000120	
26500.0	351.2	-42.5	0	-0.0**	530.4	591.4	284.9	68.4	1.000118	
27000.0	343.3	-46.2	0	-0.0**	527.0	586.6	284.1	70.7	1.000117	
27500.0	335.5	-47.6	0	-0.0**	518.1	584.8	283.7	72.4	1.000115	
28000.0	327.8	-47.9	0	-0.0**	507.1	584.4	283.5	73.8	1.000113	
28500.0	320.4	-48.3	0	-0.0**	496.3	583.9	282.7	76.3	1.000111	
29000.0	313.0	-48.6	0	-0.0**	485.8	583.5	281.8	74.0	1.000108	
29500.0	305.9	-49.0	0	-0.0**	475.4	583.0	281.3	76.8	1.000106	
30000.0	298.9	-49.3	0	-0.0**	465.3	582.5	280.8	74.4	1.000104	
30500.0	291.1	-49.7	0	-0.0**	455.4	582.1	281.2	76.7	1.000102	
31000.0	283.4	-50.3	0	-0.0**	446.1	581.3	281.5	82.9	1.000099	
31500.0	278.8	-50.9	0	-0.0**	437.0	580.5	281.7	81.7	1.000097	
32000.0	272.3	-51.5	0	-0.0**	428.1	579.7	281.9	80.4	1.000095	
32500.0	266.1	-52.1	0	-0.0**	419.3	578.9	282.6	83.4	1.000093	
33000.0	259.8	-52.7	0	-0.0**	410.7	578.1	283.3	85.4	1.000091	

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

STATION ALTITUDE 3989.00 FEET MSL
12 MAR. 70 1055 HRS MST
ASCENSION NO. 231

UPPER AIR DATA
0710020231
WHITE SANDS

WSTN SITE COORDINATES
48580.00 FEET E
185045.00 FEET N

TABLE VII (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
33500.0	253.8	-53.3	-0.0	402.3	577.3	284.8	79.5	1.000090
34000.0	247.9	-53.9	-0.0	394.0	576.5	286.3	73.9	1.000088
34500.0	242.1	-54.6	-0.0	385.9	575.7	287.7	72.0	1.000086
35000.0	236.4	-54.8	-0.0	377.3	575.4	289.2	70.1	1.000084
35500.0	230.9	-54.6	-0.0	368.1	575.6	290.3	67.3	1.000082
36000.0	225.5	-54.4	-0.0	359.1	575.9	291.4	64.5	1.000080
36500.0	220.2	-54.5	-0.0	350.8	575.8	291.8	62.4	1.000078
37000.0	215.0	-54.8	-0.0	343.1	575.4	291.9	60.7	1.000076
37500.0	210.0	-55.1	-0.0	335.5	575.0	292.2	58.7	1.000075
38000.0	205.0	-55.2	-0.0	327.8	574.8	292.8	56.6	1.000073
38500.0	200.2	-55.2	-0.0	320.0	574.9	293.2	54.8	1.000071
39000.0	195.5	-55.6	-0.0	313.1	574.3	293.4	53.7	1.000070
39500.0	190.9	-55.4	-0.0	305.6	574.5	293.4	52.6	1.000068
40000.0	186.4	-54.7	-0.0	297.3	575.5	292.6	51.8	1.000066
40500.0	182.1	-54.9	-0.0	290.6	575.3	291.8	51.0	1.000065
41000.0	177.8	-55.1	-0.0	284.1	574.9	290.4	49.9	1.000063
41500.0	173.6	-55.4	-0.0	277.8	574.6	288.9	48.8	1.000062
42000.0	169.5	-55.7	-0.0	271.6	574.2	287.5	49.2	1.000060
42500.0	165.5	-56.0	-0.0	265.5	573.8	286.0	49.9	1.000059
43000.0	161.6	-56.3	-0.0	259.6	573.5	285.1	50.3	1.000058
43500.0	157.8	-56.0	-0.0	253.2	573.8	284.6	50.3	1.000056
44000.0	154.1	-55.7	-0.0	246.9	574.2	284.4	49.5	1.000055
44500.0	150.5	-55.4	-0.0	240.8	574.5	284.9	47.1	1.000054
45000.0	146.9	-55.6	-0.0	235.3	574.3	285.3	44.5	1.000052
45500.0	143.5	-55.8	-0.0	230.0	574.1	285.9	40.9	1.000051
46000.0	140.1	-55.9	-0.0	224.7	573.9	286.4	37.4	1.000050
46500.0	136.8	-56.1	-0.0	219.6	573.6	285.7	36.3	1.000049
47000.0	133.6	-56.4	-0.0	214.7	573.3	285.1	35.1	1.000048
47500.0	130.4	-56.7	-0.0	209.9	572.9	283.9	36.2	1.000047
48000.0	127.3	-57.0	-0.0	205.2	572.5	282.6	37.5	1.000046

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

STATION ALTITUDE 3989.00 FEET MSL

12 MAR. 70

ASCENSION NO. 231

UPPER AIR DATA

0710020231

WHITE SANDS

WSM SITE COORDINATES

408580.00 FEET E

185045.00 FEET N

TABLE VII (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
48500.0	124.3	-57.3	0.	-0.	200.6	572.1		281.7	37.9	1.000045
49000.0	121.3	-57.6	0.	-0.	196.1	571.7		280.9	38.0	1.000044
49500.0	118.5	-57.8	0.	-0.	191.7	571.3		281.0	38.3	1.000043
50000.0	115.7	-58.1	0.	-0.	187.4	571.0		281.9	38.0	1.000042
50500.0	112.9	-58.1	0.	-0.	183.0	571.0		282.0	40.0	1.000041
51000.0	110.2	-58.2	0.	-0.	178.6	570.9		283.0	41.9	1.000040
51500.0	107.6	-58.2	0.	-0.	174.4	570.8		283.6	42.9	1.000039
52000.0	105.0	-58.3	0.	-0.	170.3	570.8		285.3	39.5	1.000038
52500.0	102.5	-58.3	0.	-0.	166.3	570.7		286.8	36.1	1.000037
53000.0	100.1	-58.3	0.	-0.	162.4	570.7		282.9	31.8	1.000036
53500.0	97.7	-58.4	0.	-0.	158.5	570.6		279.1	27.5	1.000035
54000.0	95.4	-58.5	0.	-0.	154.8	570.5		278.9	24.6	1.000034
54500.0	93.1	-58.9	0.	-0.	151.4	569.9		279.3	21.9	1.000034
55000.0	90.9	-59.3	0.	-0.	148.1	569.4		278.5	23.7	1.000033
55500.0	88.7	-59.7	0.	-0.	144.8	568.8		276.8	29.0	1.000032
56000.0	86.6	-60.1	0.	-0.	141.6	568.3		275.3	33.5	1.000032
56500.0	84.5	-60.6	0.	-0.	138.4	567.7		275.2	33.6	1.000031
57000.0	82.4	-61.0	0.	-0.	135.4	567.2		275.1	33.8	1.000030
57500.0	80.5	-61.4	0.	-0.	132.4	566.6		274.2	37.5	1.000029
58000.0	78.5	-61.8	0.	-0.	129.5	566.1		273.1	42.4	1.000029
58500.0	76.7	-61.6	0.	-0.	126.3	566.3		271.6	43.0	1.000028
59000.0	74.8	-61.3	0.	-0.	123.0	566.8		269.4	36.3	1.000027
59500.0	73.0	-60.9	0.	-0.	119.9	567.3		267.7	30.0	1.000027
60000.0	71.3	-60.5	0.	-0.	116.8	567.8		273.4	29.7	1.000026
60500.0	69.6	-60.1	0.	-0.	113.8	568.3		279.1	29.4	1.000025
61000.0	67.9	-59.8	0.	-0.	110.9	568.8		289.3	22.4	1.000025
61500.0	66.3	-59.4	0.	-0.	108.0	569.3		301.1	13.1	1.000024
62000.0	64.7	-59.0	0.	-0.	105.3	569.8		306.0	8.8	1.000023
62500.0	63.1	-58.6	0.	-0.	102.6	570.3		299.4	10.4	1.000023
63000.0	61.6	-58.3	0.	-0.	99.9	570.8		292.7	12.4	1.000022

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

STATION ALTITUDE 3989.00 FEET MSL
12 MAR. 70 1055 HRS MST
ASCENSION NO. 231

UPPER AIR DATA
0710020231
WHYTE SANDS

WSTM SITE COORDINATES
48530.00 FEET E
185045.00 FEET N

TABLE VII (Cont)

GEGMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS			
63500.0	60.2	-57.9	0.	-0. **	97.4	571.3		282.7	11.4	1.000022
64000.0	58.7	-57.6	0.	-0. **	94.9	571.7		272.1	9.3	1.000021
64500.0	57.3	-57.5	0.	-0. **	92.6	571.7		262.9	8.0	1.000021
65000.0	56.0	-57.5	0.	-0. **	90.4	571.8		256.8	8.6	1.000020
65500.0	54.6	-57.5	0.	-0. **	88.3	571.9		250.7	9.2	1.000020
66000.0	53.4	-57.4	0.	-0. **	86.2	571.9		231.2	9.2	1.000019
66500.0	52.1	-57.4	0.	-0. **	84.1	572.0		205.4	9.0	1.000019
67000.0	50.9	-57.3	0.	-0. **	82.1	572.0		182.8	8.8	1.000018
67500.0	49.7	-57.3	0.	-0. **	80.1	572.1		189.6	9.9	1.000018
68000.0	48.5	-57.2	0.	-0. **	78.2	572.2		196.4	11.0	1.000017
68500.0	47.3	-57.2	0.	-0. **	76.4	572.2		209.8	13.7	1.000017
69000.0	46.2	-57.1	0.	-0. **	74.5	572.3		226.6	17.2	1.000017
69500.0	45.1	-57.1	0.	-0. **	72.8	572.3		240.0	20.5	1.000016
70000.0	44.1	-57.0	0.	-0. **	71.0	572.4		245.9	23.5	1.000016
70500.0	43.0	-57.0	0.	-0. **	69.3	572.5		251.9	26.5	1.000015
71000.0	42.0	-53.6	0.	-0. **	66.7	571.0		251.8	25.4	1.000015
71500.0	41.0	-50.1	0.	-0. **	64.1	581.5		251.5	24.2	1.000014
72000.0	40.1	-50.2	0.	-0. **	62.7	581.4		248.7	21.6	1.000014
72500.0	39.2	-50.5	0.	-0. **	61.3	581.0		244.2	17.9	1.000014
73000.0	38.3	-50.7	0.	-0. **	59.9	580.7		239.8	14.5	1.000013
73500.0	37.4	-51.0	0.	-0. **	58.6	580.4		237.2	13.3	1.000013
74000.0	36.5	-51.2	0.	-0. **	57.3	580.1		234.6	12.2	1.000013
74500.0	35.7	-51.5	0.	-0. **	56.1	579.7		232.8	11.3	1.000012
75000.0	34.9	-51.7	0.	-0. **	54.8	579.4		236.3	12.0	1.000012
75500.0	34.0	-52.0	0.	-0. **	53.6	579.1		239.7	12.8	1.000012
76000.0	33.3	-52.2	0.	-0. **	52.5	578.8		243.2	13.5	1.000012
76500.0	32.5	-52.5	0.	-0. **	51.3	578.5		244.1	15.3	1.000011
77000.0	31.7	-52.7	0.	-0. **	50.2	578.1		244.9	17.0	1.000011
77500.0	31.0	-52.9	0.	-0. **	49.1	577.8		245.7	18.8	1.000011
78000.0	30.3	-53.2	0.	-0. **	48.0	577.5		247.7	20.5	1.000011

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

UPPER AIR DATA
0710020231
WHITE SANDS
WSTM SITE COORDINATES
488580.00 FEET E
185045.00 FEET N

STATION ALTITUDE 3989.00 FEET MSL
12 MAR. 70
1055 HRS MST
ASCENSION NO. 231

TABLE VII (cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS			
78500.0	29.6	-53.0	0.	-0. **	46.8	577.8	250.3	250.3	22.0	1.000010
79000.0	28.9	-52.4	0.	-0. **	45.6	578.6	252.8	252.8	23.6	1.000010
79500.0	28.3	-51.8	0.	-0. **	44.5	579.3	253.9	253.9	24.3	1.000010
80000.0	27.6	-51.2	0.	-0. **	43.3	580.1	253.5	253.5	24.1	1.000010
80500.0	27.0	-50.6	0.	-0. **	42.2	580.9	253.0	253.0	23.8	1.000009
81000.0	26.4	-50.0	0.	-0. **	41.2	581.6	253.3	253.3	23.6	1.000009
81500.0	25.7	-49.4	0.	-0. **	40.1	582.4	255.5	255.5	23.5	1.000009
82000.0	25.2	-48.9	0.	-0. **	39.1	583.1	257.7	257.7	23.3	1.000009
82500.0	24.6	-48.6	0.	-0. **	38.1	583.5	259.8	259.8	23.2	1.000008
83000.0	24.0	-48.4	0.	-0. **	37.3	583.7	260.5	260.5	25.6	1.000008
83500.0	23.5	-48.2	0.	-0. **	36.4	584.0	261.2	261.2	27.9	1.000008
84000.0	23.0	-48.0	0.	-0. **	35.5	584.2	262.0	262.0	30.3	1.000008
84500.0	22.4	-47.9	0.	-0. **	34.7	584.4	261.5	261.5	31.1	1.000008
85000.0	21.9	-47.7	0.	-0. **	33.9	584.7	260.8	260.8	31.6	1.000008
85500.0	21.4	-47.5	0.	-0. **	33.1	584.9	260.0	260.0	32.0	1.000007
86000.0	20.9	-47.3	0.	-0. **	32.3	585.1	258.2	258.2	31.9	1.000007
86500.0	20.5	-47.2	0.	-0. **	31.6	585.3	255.7	255.7	31.5	1.000007
87000.0	20.0	-47.0	0.	-0. **	30.8	585.6	253.2	253.2	31.2	1.000007
87500.0	19.6	-46.8	0.	-0. **	30.1	585.8	251.5	251.5	29.7	1.000007
88000.0	19.1	-46.7	0.	-0. **	29.4	586.0	250.5	250.5	27.2	1.000007
88500.0	18.7	-46.5	0.	-0. **	28.7	586.2	249.5	249.5	24.7	1.000006
89000.0	18.3	-46.4	0.	-0. **	28.1	586.3	248.7	248.7	23.5	1.000006
89500.0	17.9	-46.4	0.	-0. **	27.4	586.3	248.4	248.4	24.3	1.000006
90000.0	17.5	-46.4	0.	-0. **	26.8	586.3	248.0	248.0	25.1	1.000006
90500.0	17.1	-46.4	0.	-0. **	26.2	586.3	247.5	247.5	25.4	1.000006
91000.0	16.7	-46.0	0.	-0. **	25.6	586.8	246.3	246.3	23.9	1.000006
91500.0	16.3	-45.6	0.	-0. **	25.0	587.3	245.2	245.2	22.5	1.000006
92000.0	15.9	-45.2	0.	-0. **	24.4	587.9	243.8	243.8	21.1	1.000005
92500.0	15.6	-44.8	0.	-0. **	23.8	588.4	238.3	238.3	21.9	1.000005
93000.0	15.2	-44.4	0.	-0. **	23.2	589.0	232.7	232.7	22.7	1.000005

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

UPPER AIR DATA
0710020231
WHITE SANDS

STATION ALTITUDE 3989.00 FEET MSL
12 MAR. 70
ASCENSION NO. 231

WSTM SITE COORDINATES
488580.00 FEET E
185045.00 FEET N

TABLE VII (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
93500.0	14.9	-43.9	0.	**	22.7	589.5	227.1	23.5	1.000005	
94000.0	14.6	-43.5	0.	**	22.1	590.0	226.1	23.1	1.000005	
94500.0	14.2	-43.1	0.	**	21.6	590.6	225.9	22.5	1.000005	
95000.0	13.9	-42.7	0.	**	21.1	591.1	225.6	21.8	1.000005	
95500.0	13.6	-42.3	0.	**	20.6	591.6	227.3	23.3	1.000005	
96000.0	13.3	-41.9	0.	**	20.1	592.2	230.0	25.6	1.000004	
96500.0	13.0	-41.4	0.	**	19.6	592.7	232.7	28.0	1.000004	
97000.0	12.7	-41.3	0.	**	19.1	592.9	234.4	28.5	1.000004	
97500.0	12.5	-41.1	0.	**	18.7	593.1	235.3	26.8	1.000004	
98000.0	12.2	-41.0	0.	**	18.3	593.3	236.1	25.1	1.000004	
98500.0	11.9	-40.8	0.	**	17.9	593.5	237.2	24.4	1.000004	
99000.0	11.7	-40.7	0.	**	17.5	593.7	239.1	26.5	1.000004	
99500.0	11.4	-40.5	0.	**	17.1	593.9	241.0	28.5	1.000004	
100000.0	11.2	-40.3	0.	**	16.7	594.1	243.0	30.5	1.000004	
100500.0	10.9	-40.2	0.	**	16.3	594.3	243.5	29.3	1.000004	
101000.0	10.7	-40.0	0.	**	16.0	594.5	244.1	28.1	1.000004	
101500.0	10.4	-39.9	0.	**	15.6	594.7	244.6	26.8	1.000003	
102000.0	10.2	-39.7	0.	**	15.2	594.9	246.3	27.8	1.000003	
102500.0	10.0	-39.6	0.	**	14.9	595.1	248.2	29.7	1.000003	
103000.0	9.8	-39.4	0.	**	14.6	595.3	250.1	31.6	1.000003	
103500.0	9.6	-39.3	0.	**	14.2	595.5			1.000003	
104000.0	9.3	-39.1	0.	**	13.9	595.7			1.000003	
104500.0	9.1	-39.0	0.	**	13.6	595.8			1.000003	
105000.0	8.9	-38.8	0.	**	13.3	596.0			1.000003	
105500.0	8.7	-38.7	0.	**	13.0	596.2			1.000003	
106000.0	8.6	-38.5	0.	**	12.7	596.4			1.000003	

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

STATION ALTITUDE 3989.00 FEET MSL
12 MAR. 70
ASCENSION NO. 231

MANDATORY LEVELS
0710020231
WHITE SANDS

WSM SITE COORDINATES
488580.00 FEET E
185045.00 FEET N

TABLE VIII

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4924.	1.8	-4.3	64.	271.4	4.0
800.0	6520.	-0.3	-7.1	60.	266.7	5.7
750.0	8212.	-2.0	-12.3	45.	241.6	7.9
700.0	10001.	-5.7	-17.5	39.	270.9	8.7
650.0	11889.	-10.7	-21.0	43.	308.4	13.6
600.0	13888.	-15.8	-24.7	47.	291.3	25.7
550.0	16021.	-20.7	-28.5	50.	281.4	34.8
500.0	18314.	-24.0	-31.8	49.	293.3	44.8
450.0	20808.	-30.1	-38.7	43.	294.7	54.6
400.0	23529.	-35.6	-45.2	37.	291.0	62.3
350.0	26537.	-43.0	0.	-0.**	284.8	68.7
300.0	29876.	-49.3	0.	-0.**	280.9	74.7
250.0	33762.	-53.7	0.	-0.**	285.7	75.7
200.0	38446.	-55.2	0.	-0.**	293.2	54.8
175.0	41244.	-55.3	0.	-0.**	289.4	49.2
150.0	44463.	-55.4	0.	-0.**	284.9	46.8
125.0	48264.	-57.2	0.	-0.**	281.9	37.9
100.0	52877.	-58.3	0.	-0.**	282.8	31.7
80.0	57455.	-61.5	0.	-0.**	274.0	38.6
70.0	60175.	-60.2	0.	-0.**	277.4	29.5
60.0	63347.	-57.9	0.	-0.**	281.8	11.2
50.0	67126.	-57.3	0.	-0.**	187.5	9.6
40.0	71791.	-50.3	0.	-0.**	248.4	21.3
30.0	77911.	-53.3	0.	-0.**	248.8	21.1
25.0	81804.	-48.7	0.	-0.**	258.2	23.2
20.0	86635.	-47.0	0.	-0.**	253.2	31.2
15.0	92915.	-44.1	0.	-0.**	228.0	23.3
10.0	101950.	-39.6	0.	-0.**	248.0	29.6

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

WSTM SITE COORDINATES
488580.00 FEET E
185045.00 FEET N

SIGNIFICANT LEVEL DATA

0710020232
WHITE SANDS

TABLE IX

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
879.4	3989.0	9.9	-0.3	49.0
868.0	4342.5	6.1	-5.9	42.0
797.0	6613.3	0.	-6.0	64.0
775.0	7348.2	-1.3	-9.4	54.0
726.0	9043.7	-6.0	-12.6	60.0
718.0	9329.1	-5.4	-16.6	41.0
695.0	10165.8	-7.1	-20.0	35.0
563.0	15435.2	-19.5	-27.6	49.0
557.0	15697.1	-19.3	-27.9	47.0
429.0	21888.9	-34.5	-45.8	39.0
396.0	23708.8	-39.8	-48.4	40.0
388.0	24167.5	-39.9	-49.9	34.0
375.0	24933.1	-40.1	0.	-0. **
346.0	26729.3	-43.0	0.	-0. **
327.0	27981.0	-43.4	0.	-0. **
268.0	32324.0	-49.9	0.	-0. **
248.0	33996.3	-49.4	0.	-0. **
221.0	36468.6	-52.1	0.	-0. **
191.0	39583.7	-51.5	0.	-0. **
172.0	41807.0	-55.0	0.	-0. **
163.0	42942.9	-53.3	0.	-0. **
137.0	46599.4	-57.0	0.	-0. **
90.0	55326.2	-59.1	0.	-0. **
83.0	56991.0	-61.7	0.	-0. **
70.0	60472.4	-61.7	0.	-0. **
62.0	62979.3	-57.3	0.	-0. **
56.0	65090.2	-60.1	0.	-0. **
35.0	74967.0	-51.7	0.	-0. **
32.0	76877.9	-54.1	0.	-0. **
26.0	81339.7	-48.4	0.	-0. **

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

STATION ALTITUDE 3989.00 FEET MSL
 12 MAR. 70
 ASCENSION NO. 232

SIGNIFICANT LEVEL DATA
 OY10020232
 WHITE SANDS

WSTM SITE COORDINATES
 488580.00 FEET F
 185045.00 FEET N

TABLE IX (Cont)

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
17.5 90061.4	-43.1	0.	-0. **
10.5 101420.9	-44.5	0.	-0. **
9.9 102735.3	-41.5	0.	-0. **

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

STATION ALTITUDE 3989.00 FEET MSL

12 MAR. 70

ASCENSION NO. 232

UPPER AIR DATA

0710020232

WHITE SANDS

WSTM SITE COORDINATES

988500.00 FEET E

105045.00 FEET N

TABLE X

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES(TN)	SPEED KNOTS	
3989.0	879.4	9.9	-0.3	49.0	1079.7	655.9	20.0	8.0	1.000269
4000.0	879.0	9.8	-0.5	48.8	1079.8	655.8	20.1	8.0	1.000269
4500.0	862.9	5.7	-5.8	43.5	1076.4	650.8	22.4	9.1	1.000259
5000.0	846.8	4.3	-5.6	48.4	1061.4	649.2	24.0	10.3	1.000256
5500.0	831.1	3.0	-5.6	53.2	1046.6	647.6	27.2	11.4	1.000253
6000.0	815.6	1.6	-5.7	58.1	1032.2	646.1	28.4	11.3	1.000250
6500.0	800.4	0.3	-6.0	62.9	1017.9	644.5	20.0	10.7	1.000247
7000.0	785.3	-0.7	-7.8	58.7	1002.6	643.3	23.9	10.1	1.000241
7500.0	770.5	-1.7	-9.7	54.5	987.6	642.0	12.0	9.1	1.000235
8000.0	755.8	-3.1	-10.6	56.3	973.8	640.3	356.1	7.9	1.000231
8500.0	741.4	-4.5	-11.5	58.1	960.2	638.6	333.9	8.4	1.000227
9000.0	727.2	-5.9	-12.5	59.8	946.9	637.0	314.1	9.1	1.000223
9500.0	713.2	-5.7	-17.3	39.8	928.6	635.7	305.3	10.9	1.000215
10000.0	699.5	-6.8	-19.4	36.2	914.2	635.7	299.6	12.6	1.000211
10500.0	685.8	-7.9	-20.5	35.4	900.2	634.4	297.9	14.2	1.000207
11000.0	672.2	-9.1	-21.1	37.2	886.3	633.0	301.1	16.0	1.000204
11500.0	658.9	-10.2	-21.8	38.5	872.7	631.6	304.8	18.0	1.000200
12000.0	645.9	-11.4	-22.4	39.9	859.3	630.1	307.6	20.2	1.000197
12500.0	633.1	-12.6	-23.2	41.2	846.1	628.7	310.6	21.9	1.000194
13000.0	620.6	-13.8	-23.9	42.5	833.1	627.3	313.6	23.4	1.000191
13500.0	608.3	-14.9	-24.6	43.9	820.4	625.8	316.9	24.3	1.000187
14000.0	596.2	-16.1	-25.4	45.2	807.8	624.4	320.0	24.9	1.000184
14500.0	584.4	-17.3	-26.1	46.5	795.5	623.0	322.6	25.2	1.000181
15000.0	572.9	-18.5	-26.9	47.8	783.4	621.5	323.8	25.4	1.000178
15500.0	561.5	-19.5	-27.7	48.5	770.8	620.3	323.8	25.4	1.000174
16000.0	549.9	-20.0	-28.7	46.6	756.7	619.6	322.9	24.9	1.000172
16500.0	538.5	-21.3	-29.9	46.0	744.6	618.1	321.4	24.6	1.000169
17000.0	527.2	-22.5	-31.2	45.3	732.6	616.6	319.1	24.5	1.000166
17500.0	516.2	-23.7	-32.5	44.7	720.9	615.0	318.3	24.7	1.000163
18000.0	505.5	-25.0	-33.8	44.0	709.4	613.3	317.3	25.5	1.000160

UPPER AIR DATA
0710020232
WHITE SANDS
WSTM SITE COORDINATES
488580.00 FEET F
185045.00 FEET N

STATION ALTITUDE 3989.00 FEET MSL
12 MAR. 70
1423 HRS MST
ASCENSION NO. 232

TABLE X (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			DIRECTION DEGREES(TN)	SPEED KNOTS			
18500.0	494.9	-26.2	-35.1	43.4	698.0	612.0	316.1	27.1	1.000157	
19000.0	484.6	-27.4	-36.4	42.7	686.9	610.5	313.0	28.5	1.000155	
19500.0	474.5	-28.6	-37.7	42.1	676.0	608.9	309.4	30.2	1.000152	
20000.0	464.6	-29.9	-38.9	41.4	665.2	607.4	305.1	32.6	1.000149	
20500.0	454.9	-31.1	-40.2	40.8	654.6	605.9	301.5	35.1	1.000147	
21000.0	445.4	-32.3	-41.5	40.1	644.3	604.3	298.3	37.6	1.000145	
21500.0	436.1	-33.5	-42.8	39.5	634.1	602.8	297.6	39.6	1.000142	
22000.0	426.9	-34.8	-44.0	39.1	624.0	601.1	296.3	41.1	1.000140	
22500.0	417.6	-36.3	-45.3	39.3	614.2	599.3	294.1	41.4	1.000138	
23000.0	408.5	-37.7	-46.6	39.6	604.6	597.5	292.0	42.6	1.000135	
23500.0	399.7	-39.2	-47.9	39.9	595.1	595.6	289.9	44.3	1.000133	
24000.0	390.9	-39.9	-49.3	36.2	583.8	594.7	287.0	47.0	1.000130	
24500.0	382.3	-40.0	-54.8	19.2**	571.2	594.6	284.4	49.7	1.000127	
25000.0	373.9	-40.2	0.	-0. **	559.2	594.3	282.8	52.0	1.000125	
25500.0	365.6	-41.0	0.	-0. **	548.7	593.3	281.6	54.1	1.000122	
26000.0	357.5	-41.8	0.	-0. **	538.4	592.2	280.7	56.0	1.000120	
26500.0	349.6	-42.6	0.	-0. **	528.4	591.2	280.4	57.2	1.000118	
27000.0	341.8	-43.1	0.	-0. **	517.6	590.6	280.4	58.1	1.000115	
27500.0	334.2	-43.2	0.	-0. **	506.4	590.4	281.1	60.3	1.000113	
28000.0	326.7	-43.4	0.	-0. **	495.5	590.2	281.8	62.9	1.000110	
28500.0	319.3	-44.2	0.	-0. **	485.9	589.2	281.6	61.7	1.000108	
29000.0	312.1	-44.9	0.	-0. **	476.4	588.2	281.4	60.7	1.000106	
29500.0	305.0	-45.7	0.	-0. **	467.2	587.3	281.8	62.3	1.000104	
30000.0	298.1	-46.4	0.	-0. **	458.1	586.3	282.2	63.7	1.000102	
30500.0	291.4	-47.2	0.	-0. **	449.2	585.3	283.0	64.0	1.000100	
31000.0	284.8	-47.9	0.	-0. **	440.5	584.4	284.2	64.7	1.000098	
31500.0	278.3	-48.7	0.	-0. **	432.0	583.4	286.2	66.3	1.000096	
32000.0	272.0	-49.4	0.	-0. **	423.6	582.4	289.1	66.7	1.000094	
32500.0	265.8	-49.8	0.	-0. **	414.8	581.9	292.6	66.3	1.000092	
33000.0	259.7	-49.7	0.	-0. **	405.0	582.1	295.6	64.7	1.000090	

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

STATION ALTITUDE 3989.00 FEET MSL

12 MAR. 70

ASCENSION NO. 232

UPPER AIR DATA

0710020232

WHITE SANDS

WSTM SITE COORDINATES

488580.00 FEET E

185045.00 FEET N

TABLE X (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS			
33500.0	253.8	-49.5	0.	**	395.4	582.3	298.6	63.0	1.000088	
34000.0	248.0	-49.4	0.	**	386.1	582.4	300.5	62.5	1.000086	
34500.0	242.2	-50.0	0.	**	378.1	581.7	302.3	61.8	1.000084	
35000.0	236.7	-50.5	0.	**	370.3	581.0	305.1	59.5	1.000082	
35500.0	231.2	-51.0	0.	**	362.7	580.3	303.8	57.4	1.000081	
36000.0	225.9	-51.6	0.	**	355.2	579.6	303.7	56.6	1.000079	
36500.0	220.7	-52.1	0.	**	347.8	578.9	303.9	55.7	1.000077	
37000.0	215.6	-52.0	0.	**	339.6	579.1	301.4	54.0	1.000076	
37500.0	210.6	-51.9	0.	**	331.6	579.2	299.6	52.2	1.000074	
38000.0	205.7	-51.8	0.	**	323.8	579.3	297.9	50.4	1.000072	
38500.0	200.9	-51.7	0.	**	316.2	579.4	296.1	48.7	1.000070	
39000.0	196.3	-51.6	0.	**	308.7	579.6	293.9	47.2	1.000069	
39500.0	191.8	-51.5	0.	**	301.4	579.7	292.0	45.7	1.000067	
40000.0	187.3	-52.2	0.	**	295.3	578.8	291.6	44.5	1.000066	
40500.0	182.9	-52.9	0.	**	289.4	577.8	291.2	43.2	1.000064	
41000.0	178.7	-53.7	0.	**	283.7	576.8	290.8	41.6	1.000063	
41500.0	174.5	-54.5	0.	**	278.1	575.7	290.4	40.0	1.000062	
42000.0	170.4	-54.7	0.	**	271.8	575.5	290.8	40.5	1.000061	
42500.0	166.5	-54.0	0.	**	264.6	576.5	291.3	41.3	1.000059	
43000.0	162.6	-53.4	0.	**	257.7	577.3	291.3	42.7	1.000057	
43500.0	158.7	-53.9	0.	**	252.2	576.6	291.5	44.4	1.000056	
44000.0	155.0	-54.4	0.	**	246.9	575.9	291.3	46.1	1.000055	
44500.0	151.4	-54.9	0.	**	241.6	575.3	290.8	47.8	1.000054	
45000.0	147.8	-55.4	0.	**	236.3	574.6	291.1	48.1	1.000053	
45500.0	144.3	-55.9	0.	**	231.5	573.9	292.0	47.4	1.000052	
46000.0	141.0	-56.4	0.	**	226.6	573.3	292.9	46.0	1.000050	
46500.0	137.6	-56.9	0.	**	221.8	572.6	293.9	49.8	1.000049	
47000.0	134.4	-57.1	0.	**	216.7	572.3	294.9	42.3	1.000048	
47500.0	131.2	-57.2	0.	**	211.7	572.2	296.2	42.0	1.000047	
48000.0	128.1	-57.	0.	**	206.8	572.0	297.3	41.4	1.000046	

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

STATION ALTITUDE 3989.00 FEET MSL
 12 MAR 70 1423 HRS MST
 ASCENSION NO. 232

UPPER AIR DATA
 0710020232
 WHITE SANDS

WSTM SITE COORDINATES
 48580.00 FEET E
 185045.00 FEET N

TABLE X (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
48500.0	125.0	-57.5	0.	201.9	571.9	298.1	40.2	1.000045
49000.0	122.0	-57.6	0.	197.3	571.7	298.6	39.6	1.000044
49500.0	119.1	-57.7	0.	192.7	571.5	297.9	42.5	1.000043
50000.0	116.3	-57.8	0.	188.2	571.4	297.1	45.5	1.000042
50500.0	113.5	-57.9	0.	183.8	571.2	298.4	45.6	1.000041
51000.0	110.8	-58.1	0.	179.5	571.1	299.6	45.8	1.000040
51500.0	108.2	-58.2	0.	175.4	570.9	299.6	46.2	1.000039
52000.0	105.6	-58.3	0.	171.3	570.7	299.0	46.8	1.000038
52500.0	103.1	-58.4	0.	167.3	570.6	298.7	45.5	1.000037
53000.0	100.7	-58.5	0.	163.4	570.4	298.8	41.4	1.000036
53500.0	98.3	-58.7	0.	159.6	570.3	298.2	36.7	1.000036
54000.0	95.9	-58.8	0.	155.9	570.1	292.9	29.0	1.000035
54500.0	93.7	-58.9	0.	152.3	569.9	287.7	21.2	1.000034
55000.0	91.4	-59.0	0.	148.8	569.8	284.6	21.1	1.000033
55500.0	89.2	-59.4	0.	145.4	569.3	281.6	21.5	1.000032
56000.0	87.1	-60.2	0.	142.5	568.3	278.6	21.9	1.000032
56500.0	85.0	-60.9	0.	139.6	567.2	275.7	22.3	1.000031
57000.0	83.0	-61.7	0.	136.7	566.2	275.9	26.6	1.000030
57500.0	81.0	-61.7	0.	133.4	566.2	277.9	33.0	1.000030
58000.0	79.0	-61.7	0.	130.2	566.2	277.9	35.5	1.000029
58500.0	77.1	-61.7	0.	127.0	566.2	275.3	33.3	1.000028
59000.0	75.2	-61.7	0.	124.0	566.2	271.3	30.5	1.000028
59500.0	73.4	-61.7	0.	121.0	566.2	259.0	23.4	1.000027
60000.0	71.6	-61.7	0.	118.0	566.2	246.7	17.2	1.000026
60500.0	69.9	-61.7	0.	115.2	566.3	234.3	12.7	1.000026
61000.0	68.2	-60.8	0.	111.9	567.4	222.0	8.7	1.000025
61500.0	66.6	-59.9	0.	108.8	568.6	219.2	5.8	1.000024
62000.0	65.0	-59.0	0.	105.8	569.8	231.4	4.5	1.000024
62500.0	63.5	-58.1	0.	102.8	571.0	243.7	3.2	1.000023
63000.0	61.9	-57.3	0.	100.0	572.0	264.4	0.2	1.000022

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

STATION ALTITUDE 3989.00 FEET MSL

12 MAR. 70

ASCNSION NO. 232

UPPER AIR DATA

0710020232

WHITE SANDS

WSTN SITE COORDINATES

488580.00 FEET E

185045.00 FEET N

TABLE X (Cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	WIND DATA		INDEX OF REFRACTION	
		AIR DEGREES	DEWPOINT CENTIGRADE			DIRECTION DEGREES(TN)	SPEED KNOTS		
63500.0	60.5	-58.0	0.	**	97.9	571.2	285.2	13.3	1.000022
64000.0	59.0	-58.7	0.	**	95.9	570.3	291.3	16.1	1.000021
64500.0	57.6	-59.3	0.	**	93.9	569.4	283.0	16.8	1.000021
65000.0	56.2	-60.0	0.	**	91.9	568.5	274.6	17.5	1.000020
65500.0	54.9	-59.8	0.	**	89.7	568.8	265.5	17.1	1.000020
66000.0	53.6	-59.3	0.	**	87.4	569.4	256.4	16.7	1.000019
66500.0	52.4	-58.9	0.	**	85.2	569.9	250.2	16.3	1.000019
67000.0	51.1	-58.5	0.	**	83.0	570.5	249.4	16.1	1.000018
67500.0	49.9	-58.1	0.	**	80.9	571.1	248.5	15.9	1.000018
68000.0	48.8	-57.6	0.	**	78.8	571.6	247.7	14.8	1.000018
68500.0	47.6	-57.2	0.	**	76.8	572.2	247.0	13.3	1.000017
69000.0	46.5	-56.8	0.	**	74.9	572.8	248.1	12.3	1.000017
69500.0	45.4	-56.3	0.	**	73.0	573.3	257.5	13.7	1.000016
70000.0	44.3	-55.9	0.	**	71.1	573.9	266.9	15.0	1.000016
70500.0	43.3	-55.5	0.	**	69.3	574.5	267.6	16.2	1.000015
71000.0	42.3	-55.1	0.	**	67.5	575.0	265.1	17.4	1.000015
71500.0	41.3	-54.6	0.	**	65.8	575.6	264.6	18.6	1.000015
72000.0	40.3	-54.2	0.	**	64.1	576.1	266.5	19.9	1.000014
72500.0	39.4	-53.8	0.	**	62.5	576.7	265.8	20.3	1.000014
73000.0	38.4	-53.4	0.	**	60.9	577.2	252.8	16.8	1.000014
73500.0	37.5	-52.9	0.	**	59.4	577.8	239.7	13.2	1.000013
74000.0	36.6	-52.5	0.	**	57.9	578.4	235.6	11.9	1.000013
74500.0	35.8	-52.1	0.	**	56.4	578.9	232.4	10.9	1.000013
75000.0	34.9	-51.7	0.	**	55.0	579.4	231.1	11.3	1.000012
75500.0	34.1	-52.4	0.	**	53.9	578.6	230.8	12.6	1.000012
76000.0	32.3	-53.0	0.	**	52.8	577.7	232.8	14.2	1.000012
76500.0	32.6	-53.6	0.	**	51.7	576.9	239.2	16.2	1.000012
77000.0	31.8	-53.9	0.	**	50.6	576.5	245.5	18.2	1.000011
77500.0	31.1	-53.3	0.	**	49.3	577.3	247.2	19.7	1.000011
78000.0	30.4	-52.7	0.	**	48.0	578.2	249.0	21.1	1.000011

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

STATION ALTITUDE 3989.00 FEET MSL
 12 MAR. 70 1423 HRS MST
 ASCENSION NO. 232

UPPER AIR DATA
 0710020232
 WHITE SANDS

TABLE X (Cont.)

GEOMETRIC ALTITUDE MFT FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
78500.0	29.7	-52.0	0.	**	46.8	579.0	248.5	21.3	1.000010	
79000.0	29.0	-51.4	0.	**	45.5	579.8	246.5	20.7	1.000010	
79500.0	28.3	-50.8	0.	**	44.4	580.7	244.6	20.1	1.000010	
80000.0	27.7	-50.1	0.	**	43.2	581.5	243.5	20.5	1.000010	
80500.0	27.0	-49.5	0.	**	42.1	582.3	242.4	20.9	1.000009	
81000.0	26.4	-48.8	0.	**	41.0	583.2	241.5	21.3	1.000009	
81500.0	25.8	-48.3	0.	**	40.0	583.9	242.0	22.2	1.000009	
82000.0	25.2	-48.0	0.	**	39.0	584.3	242.5	23.1	1.000009	
82500.0	24.7	-47.7	0.	**	38.1	584.7	243.0	24.1	1.000008	
83000.0	24.1	-47.4	0.	**	37.2	585.1	243.9	25.2	1.000008	
83500.0	23.6	-47.1	0.	**	36.3	585.4	244.7	26.3	1.000008	
84000.0	23.0	-46.8	0.	**	35.5	585.8	246.3	27.7	1.000008	
84500.0	22.5	-46.5	0.	**	34.6	586.2	249.1	29.5	1.000008	
85000.0	22.0	-46.2	0.	**	33.8	586.6	251.9	31.3	1.000008	
85500.0	21.5	-45.9	0.	**	33.0	587.0	251.8	31.4	1.000007	
86000.0	21.0	-45.6	0.	**	32.2	587.4	249.0	29.9	1.000007	
86500.0	20.6	-45.3	0.	**	31.5	587.8	246.2	28.4	1.000007	
87000.0	20.1	-45.0	0.	**	30.7	588.2	247.8	28.0	1.000007	
87500.0	19.7	-44.7	0.	**	30.0	588.6	251.8	28.3	1.000007	
88000.0	19.2	-44.4	0.	**	29.3	589.0	255.7	28.5	1.000007	
88500.0	18.8	-44.0	0.	**	28.6	589.4	252.3	26.0	1.000006	
89000.0	18.4	-43.7	0.	**	27.9	589.8	246.5	22.6	1.000006	
89500.0	18.0	-43.4	0.	**	27.2	590.1	240.7	19.2	1.000006	
90000.0	17.5	-43.1	0.	**	26.6	590.5	242.9	18.6	1.000006	
90500.0	17.2	-43.2	0.	**	26.0	590.5	245.1	18.3	1.000006	
91000.0	16.8	-43.2	0.	**	25.4	590.4	249.4	18.0	1.000006	
91500.0	16.4	-43.3	0.	**	24.9	590.4	243.9	17.9	1.000006	
92000.0	16.0	-43.3	0.	**	24.3	590.3	238.4	17.7	1.000005	
92500.0	15.7	-43.4	0.	**	23.8	590.2	233.8	17.7	1.000005	
93000.0	15.3	-43.5	0.	**	23.3	590.1	240.8	19.1	1.000005	

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

STATION ALTITUDE 3989.00 FEET MSL

12 MAP. 70

ASCENSION NO. 232

UPPER AIR DATA

071020232

WHITE SANDS

WSTM SITE COORDINATES

488580.00 FEET E

185045.00 FEET N

TABLE X (Cont.)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
93500.0	15.0	-43.5	0.	-0. **	22.7	590.0	246.2	20.5	1.000005	
94000.0	14.7	-43.6	0.	-0. **	22.2	590.0	251.1	22.1	1.000005	
94500.0	14.3	-43.6	0.	-0. **	21.8	589.9	250.1	24.1	1.000005	
95000.0	14.0	-43.7	0.	-0. **	21.3	589.8	249.1	26.1	1.000005	
95500.0	13.7	-43.8	0.	-0. **	20.8	589.7	248.6	27.7	1.000005	
96000.0	13.4	-43.8	0.	-0. **	20.4	589.6	249.6	28.5	1.000005	
96500.0	13.1	-43.9	0.	-0. **	19.9	589.6	250.5	29.3	1.000004	
97000.0	12.8	-44.0	0.	-0. **	19.5	589.5	251.5	30.4	1.000004	
97500.0	12.5	-44.0	0.	-0. **	19.0	589.4	252.2	32.8	1.000004	
98000.0	12.2	-44.1	0.	-0. **	18.6	589.3	252.9	35.3	1.000004	
98500.0	12.0	-44.1	0.	-0. **	18.2	589.2	253.7	37.7	1.000004	
99000.0	11.7	-44.2	0.	-0. **	17.8	589.2			1.000004	
99500.0	11.4	-44.3	0.	-0. **	17.4	589.1			1.000004	
100000.0	11.2	-44.3	0.	-0. **	17.0	589.0			1.000004	
100500.0	10.9	-44.4	0.	-0. **	16.7	588.9			1.000004	
101000.0	10.7	-44.4	0.	-0. **	16.3	588.9			1.000004	
101500.0	10.5	-44.3	0.	-0. **	15.9	589.0			1.000004	
102000.0	10.2	-43.2	0.	-0. **	15.5	590.5			1.000003	
102500.0	10.0	-42.0	0.	-0. **	15.1	591.9			1.000003	

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

STATION ALTITUDE 3989.00 FEET MSL
12 MAR. 70 1423 HRS MST
ASCENSION NO. 232

MANDATORY LEVELS
0710020232
WHITE SANDS

HSTM SITE COORDINATES
488580.00 FEET E
185045.00 FEET N

TABLE XI

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4903.	4.6	-5.6	47.	24.4	10.1
800.0	6512.	0.3	-6.0	63.	27.9	10.7
750.0	8199.	-3.7	-11.0	57.	347.1	8.1
700.0	9976.	-6.7	-19.3	38.	299.7	12.5
650.0	11859.	-11.0	-22.2	39.	306.8	19.6
600.0	13858.	-15.8	-25.1	45.	319.3	24.8
550.0	15992.	-20.0	-28.7	47.	322.9	24.9
500.0	18285.	-25.6	-34.5	44.	316.6	26.5
450.0	20761.	-31.7	-40.9	40.	299.7	36.5
400.0	23454.	-39.1	-47.8	40.	290.0	44.2
350.0	26438.	-42.6	0.	-0.**	280.4	57.2
300.0	29831.	-46.2	0.	-0.**	282.1	63.5
250.0	33764.	-49.5	0.	-0.**	299.8	62.7
200.0	38523.	-51.7	0.	-0.**	295.7	48.4
175.0	41355.	-54.4	0.	-0.**	290.4	40.2
150.0	44598.	-55.1	0.	-0.**	290.6	48.4
125.0	48391.	-57.5	0.	-0.**	298.1	40.2
100.0	53805.	-58.6	0.	-0.**	298.8	40.2
80.0	57578.	-61.7	0.	-0.**	276.9	36.1
70.0	60292.	-61.7	0.	-0.**	295.2	12.9
60.0	63462.	-58.2	0.	-0.**	291.7	14.8
50.0	67212.	-58.1	0.	-0.**	248.6	16.0
40.0	71867.	-54.1	0.	-0.**	268.9	20.2
30.0	77934.	-52.3	0.	-0.**	249.4	21.8
25.0	81866.	-47.9	0.	-0.**	242.7	23.5
20.0	86729.	-44.9	0.	-0.**	248.5	28.1
15.0	93074.	-43.5	0.	-0.**	248.1	20.5
10.0	102006.	-42.0	0.	-0.**		

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

RELEASE TIME (MST)		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		4000-61000 FT		TOTAL					
		RAWIN- SONDE	PIBAL	N-S	E-W	N-S	E-W	N-S	E-W		N-S	E-W	RANGE
1055	1155	2.8N	1.4E	1.5N	0.3W	8.6N	22.7W	12.9N	21.6W	344.1	55.8	53.7N	15.3W
1055	1225	6.3N	1.2W	5.9N	0.2E	8.6N	22.7W	20.8N	23.7W	344.2	64.0	61.6N	17.4W
1055	1300	5.5N	0.0	5.3N	1.9E	8.6N	22.7W	19.4N	20.8W	346.5	61.9	60.2N	14.5
1055	1310	3.9N	0.6W	5.4N	0.8E	8.6N	22.7W	17.9N	22.5W	344.6	60.9	58.7N	16.2W
1055	1315	4.2N	0.3W	8.2N	5.5E	8.6N	22.7W	21.0N	17.5W	349.7	62.8	61.8N	11.2W
1055	1325	3.6N	2.8E	5.5N	5.1E	8.6N	22.7W	17.7N	14.8W	351.7	59.1	58.5N	8.5W
1055	1335	8.0N	5.7E	9.1N	2.3E	8.6N	22.7W	25.7N	14.7W	352.8	67.0	66.5N	8.4W
1055	1345	7.6N	3.5E	12.6N	3.1E	8.6N	22.7W	28.8N	16.1W	352.0	70.3	69.6N	9.9W
1055	1350	9.5N	3.0E	11.7N	3.6E	8.6N	22.7W	29.8N	16.1W	352.1	71.3	70.6N	9.8W
1055	1400	8.1N	1.0W	13.6N	3.2E	8.6N	22.7W	30.3N	20.5W	348.7	71.3	71.1N	14.2W
1055	1410	11.7N	2.6E	13.3N	3.7E	8.6N	22.7W	33.6N	16.4W	352.3	75.1	74.4N	10.1W
1055	1418	10.3N	1.9E	16.9N	2.8E	8.6N	22.7W	35.8N	18.0W	351.3	77.5	76.6N	11.7W
1423*	1422*	10.1N	0.0	15.2N	3.8E	9.3N	20.2W	34.6N	16.4W	352.4	76.1	75.4N	10.1W

TABLE XII. IMPACT PREDICTION DATA
NIKE-HYDAC STV-92

* Post-Shoot Data

	AZI- MUTH (DE- GREES)	MILES FROM LAUNCHER		
		RANGE	N-S	E-W
LAUNCHER SETTING (ELEVATION 87.0 DEGREES QE)	014.0	42.0	40.8N	10.2E
NO WIND IMPACT	008.8	41.3	40.8N	6.3E
PREDICTED SECOND-STAGE IMPACT	352.5	71.0	70.4N	9.3W
SECOND-STAGE IMPACT, RADAR TRACK	349.8	80.0	78.7N	14.1W
PREDICTED BOOSTER IMPACT	060.0	1.0	0.5N	0.9E
ACTUAL BOOSTER IMPACT	N/A	N/A	N/A	N/A

TABLE XII. IMPACT PREDICTION DATA
NIKE-HYDAC STV-92

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 Ft. Monmouth, New Jersey		3a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED	
		3b. GROUP	
2. REPORT TITLE METEOROLOGICAL DATA REPORT, NIKE-HYDAC STV-92 DR-508			
4. DESCRIPTIVE NOTES (Type of report and inclusive dates)			
5. AUTHOR(S) (First name, middle initial, last name) Gordon Dunaway			
6. REPORT DATE March 1970		7a. TOTAL NO. OF PAGES 36	7b. NO. OF REFS
8a. CONTRACT OR GRANT NO.		8b. ORIGINATOR'S REPORT NUMBER(S) DR-508	
a. PROJECT NO.			
c. DA Task 17665702D127-02		9b. OTHER REPORT NO(S) (Any other numbers that may be assigned this report)	
d.			
10. DISTRIBUTION STATEMENT This document is subject to special export controls and each transmittal to foreign governments or foreign nationals may be made only with prior approval of Atmospheric Sciences Office White Sands Missile Range, New Mexico.			
11. SUPPLEMENTARY NOTES		12. SPONSORING MILITARY ACTIVITY U. S. Army Electronics Command Atmospheric Sciences Office White Sands Missile Range, New Mexico	
13. ABSTRACT Meteorological data gathered for launching of NIKE-HYDAC, STV-92, are presented for the Space and Missile Systems Organization, AFMDC, Holloman Air Force Base, New Mexico, and for ballistic studies. The data appear, along with calculated ballistic data, in tabular form. () ↑			

DD FORM 1473

REPLACES DD FORM 1473, 1 JAN 63, WHICH IS OBSOLETE FOR ARMY USE.

UNCLASSIFIED

Security Classification