AD-A079 995 ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2
12821A LANCE, MISSILE NUMBER 4819, ROUND NUMBER 335 NCL, 13 AUG--ETC(U)
AUG 79

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LEVEL II

METEOROLOGICAL DATA REPORT

12821A LANCE
Missile No. 4819
Round No. 335 NCL
13 August 1979

by

White Sands Meteorological Team

ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

ECOM 80 1 30 045
UNITED STATES ARMY ELECTRONICS COMMAND

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1. Ballistics
2. Meteorology
3. Wind

T2821A

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

Meteorological data gathered for the Launching of ~~T2821A~~ LANCE, Missile Number 4819, Round Number 335 NCL, are presented by tabular forms.

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CONTENTS

INTRODUCTION

12821A LANCE , Missile Number 4819 , Round Number 335NCL, was launched from LC-33 , White Sands Missile Range (WSMR), New Mexico, at 1500-MDT, 13 August 1979 . The scheduled launch time was 1500 MDT.

DISCUSSION

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

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature (°C), relative humidity, dew point (°C), density (gm/m^3), wind direction and speed, and cloud cover were made at the EC-30 Met Site at T-0 minutes.

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

b. Upper Air

(1) Low level wind data were obtained from Single Theodolite pibal observation at:

SITE AND ALTITUDE		
Holloman AFB	1450 MDT	2190 Meters
Holloman AFB	1500 MDT	3660 Meters

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

SITE AND TIME
Holloman 1350 MST
Jallen 1350 MST

TABLE 1. Surface Observations taken at 1500 MDT, 13 August 1979, at EC-30, 12821A LANCE, Missile Number 4819, Round Number 335 NCL.

ELEVATION	3957	FT/MSL
PRESSURE	880.3	MBS
TEMPERATURE	29.0	°C
RELATIVE HUMIDITY	52	%
DEW POINT	18.1	°C
DENSITY	1004	GM/M^3
WIND SPEED	Calm	KTS
WIND DIRECTION		DEGREES
CLOUD COVER	2	cb
CLOUD COVER	2	ac
CLOUD COVER	5	ci

PILOT BALLOON MEASURED WIND DATA

TABLE 2

RELEASED FROM Holloman DATE 13 August 1979 TIME 1450 MDT

RELEASE POINT COORDINATES (WSTM) NO SURVEY

MISSILE TYPE 12821A Lance MISSILE NO. 4819 ROUND NO. 335 NCL

MISSILE LAUNCHED FROM RATSCAT DATE 13 August 1979 TIME 1500 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

HEIGHT - METERS AGL

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
SFC	330	02
30	330	02
60	332	02
90	335	02
120	337	02
150	339	01
180	340	01
210	340	01
240	343	01
270	345	01
300	348	01
330	348	01
360	349	01
390	350	01
420	330	01
450	320	01
480	312	01
510	300	01

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
540	278	01
570	275	02
600	251	02
630	238	02
660	230	02
690	210	02
720	205	02
750	206	02
780	207	02
810	208	03
840	208	03
870	209	03
900	212	03
930	212	03
960	212	04
990	213	04
1020	213	04
1050	218	04

RELEASED FROM Holloman DATE 13 August 1979 TIME 1450 MDT

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
1080	218	04
1110	222	05
1140	225	05
1170	228	06
1200	230	06
1230	232	06
1260	238	06
1290	239	07
1320	241	07
1350	242	07
1380	240	07
1410	238	07
1440	238	07
1470	236	07
1500	235	07
1530	235	07
1560	232	07
1590	232	07
1620	230	07
1650	230	07
1680	230	07
1710	230	06

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
1740	230	06
1770	230	06
1800	230	06
1830	230	06
1860	231	06
1890	231	06
1920	232	06
1950	234	06
1980	235	06
2010	239	07
2040	240	07
2070	242	07
2100	246	07
2130	248	07
2160	249	08
2190	251	08

PILOT BALLOON MEASURED WIND DATA

TABLE 3

RELEASED FROM Holloman DATE 13 August 1979 TIME 1500 MDT

RELEASED POINT COORDINATED (WSTM) NO SURVEY

MISSILE TYPE 12821A Lance MISSILE NO. 4819 ROUND NO. 335 NCL

MISSILE LAUNCHED FROM RATSCAT DATE 13 August 1979 TIME 1500 MDT

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH

HEIGHT - METERS AGL

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
SFC	330	02
30	331	02
60	335	02
90	337	02
120	341	02
150	350	02
180	350	02
210	352	02
240	358	02
270	360	02
300	004	02
330	010	02
360	015	02
390	020	02
420	028	02
450	036	02
480	040	02
510	050	02

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
540	060	02
570	078	02
600	084	02
630	090	02
660	098	02
690	100	02
720	110	02
750	116	02
780	125	02
810	140	02
840	140	02
870	148	02
900	150	02
930	160	02
960	161	02
990	170	02
1020	178	02
1050	190	02

RELEASED FROM Holloman DATE 13 August 1979 TIME 1500 MDT

HEIGTH AGL	DIRECTION DEGREES	SPEED KTS
1080	193	02
1110	196	03
1140	200	03
1170	202	04
1200	210	04
1230	212	04
1260	214	04
1290	216	05
1320	220	05
1350	220	05
1380	220	05
1410	220	05
1440	220	05
1470	220	05
1500	220	05
1530	220	05
1560	220	05
1590	220	05
1620	220	05
1650	220	05
1680	220	05
1710	220	05
1740	218	05
1770	218	05
1800	218	05

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
1830	217	06
1860	216	06
1890	215	06
1920	214	06
1950	213	06
1980	213	06
2010	213	06
2040	213	07
2070	213	07
2100	214	07
2130	214	07
2160	214	07
2190	214	07
2220	214	07
2250	214	07
2280	214	07
2310	214	08
2340	214	08
2370	214	08
2400	212	08
2430	212	08
2460	211	09
2490	211	09
2520	210	09
2550	210	09

RELEASED FROM Holloman DATE 13 August 1979 TIME 1500 MDT

HEIGTH AGL	DIRECTION DEGREES	SPEED KTS
2580	210	09
2610	210	10
2640	208	10
2670	207	10
2700	207	10
2730	206	10
2760	205	10
2790	204	11
2820	203	11
2850	202	11
2880	200	10
2910	200	10
2940	200	10
2970	200	10
3000	200	10
3030	200	10
3060	200	10
3090	200	10
3120	200	10
3150	200	10
3180	201	10
3210	202	11
3240	202	11
3270	203	11
3300	204	11

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
3330	205	11
3360	205	11
3390	205	11
3420	205	12
3450	205	12
3480	205	12
3510	205	13
3540	205	13
3570	205	13
3600	205	13
3630	205	13
3660	205	14

STATION ALTITUDE 4126.59 FEET MSL
13 AUG. 79 1350 HRS MST
ASCENSION NO. 427

SIGNIFICANT LEVEL DATA
22590,0427
HOLLOMAN

GEODETIC COORDINATES
32.68865 LAT DEG
106.09965 LON DEG

TABLE 4

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
876.4	4126.6	27.0	15.7	50.0
850.0	5009.8	22.8	13.0	54.0
791.4	7036.2	16.8	11.5	71.0
773.8	7666.1	15.6	9.1	65.0
770.9	7770.9	14.8	9.8	71.0
761.2	8124.0	15.6	5.8	52.0
726.0	9440.0	13.4	2.3	47.0
700.0	10445.3	11.0	2.1	54.0
685.5	11018.5	9.9	-2.4	42.0
667.1	11760.0	8.2	1.4	62.0
623.4	13569.4	4.5	-1.3	66.0
597.2	14730.0	2.1	-1.7	76.0
545.6	17105.5	-2.6	-4.8	85.0
510.4	18848.1	-6.5	-7.4	95.0
500.0	19377.5	-7.2	-9.1	86.0
480.6	20379.6	-8.9	-10.8	86.0
472.8	20807.7	-8.7	-13.0	71.0
462.8	21351.9	-10.0	-14.4	70.0
457.2	21650.6	-10.7	-17.5	57.0
439.5	22566.1	-12.9	-17.2	70.0
424.7	23515.1	-13.6	-19.5	61.0
400.0	25007.6	-16.3	-21.5	64.0
363.0	27390.5	-21.0	-27.0	58.0
336.0	29257.6	-24.4	-36.5	32.0
300.0	31929.3	-31.2	-45.0	24.0
274.2	34015.0	-36.5	-47.4	31.0
262.8	34979.3	-38.8	-49.7	30.0
250.0	36099.8	-42.5		
200.0	40942.5	-54.0		
153.8	46336.4	-66.9		
150.0	46384.1	-67.4		
137.6	48545.5	-62.2		
115.0	52117.0	-65.0		
101.6	54532.0	-68.5		
100.0	54896.6	-67.7		
88.8	57275.1	-64.3		
82.8	58668.7	-64.0		
70.0	62128.1	-58.7		
56.4	66503.6	-54.5		
50.0	69191.6	-56.3		

STATION ALTITUDE 4126.59 FEET MSL
13 AUG. 79 1350 HRS MST
ASCENSION NO. 427

SIGNIFICANT LEVEL DATA
2250010427
HOLLOMAN

GEODETIC COORDINATES
32.06865 LAT DEG
106.09965 LON DEG

TABLE 4 Cont.

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT
37.8	75113.8	-52.6		
33.2	77852.4	-53.1		

STATION ALTITUDE 4126.59 FEET MSL
13 AUG. 79 1350 HRS MST
ASCENSION NO. 427

UPPER AIR DATA
225001427
HOLLOMAN

GEODETIC COORDINATES
32.68865 LAT DEG
106.09965 LON DEG

TABLE 5

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
4126.6	876.4	27.0	15.7	50.0	1009.3	677.9	270.0	2.9	1.000300
4500.0	865.1	25.2	14.6	51.7	1002.6	675.4	267.4	2.2	1.000294
5000.0	850.3	22.8	13.0	54.9	994.0	672.5	329.5	1.9	1.000287
5500.0	835.4	21.3	12.8	58.1	981.6	670.8	357.0	2.3	1.000283
6000.0	820.8	19.9	12.5	62.3	969.4	669.1	308.2	1.9	1.000280
6300.0	806.5	18.4	12.0	65.5	957.3	667.4	264.7	2.8	1.000276
7000.0	792.4	15.9	11.6	70.7	945.5	665.7	221.4	4.1	1.000272
7500.0	778.4	15.9	9.7	66.6	932.6	664.3	219.7	5.5	1.000263
8000.0	764.6	15.3	7.3	58.7	918.7	663.4	217.5	5.5	1.000251
8500.0	751.0	15.0	4.3	50.6	904.1	662.7	228.4	3.6	1.000241
9000.0	737.6	14.1	3.5	48.7	890.8	661.6	240.9	6.0	1.000235
9500.0	724.4	13.3	2.3	47.4	877.8	660.5	243.2	6.5	1.000229
10000.0	711.4	12.1	2.2	50.9	865.6	659.2	229.5	6.8	1.000226
10500.0	698.5	10.9	1.7	52.9	853.6	657.8	217.6	7.5	1.000223
11000.0	686.0	9.9	-2.2	42.4	841.7	656.4	209.0	8.5	1.000212
11500.0	673.5	8.6	.3	55.0	829.2	655.3	208.7	9.2	1.000214
12000.0	661.2	7.7	1.0	62.5	817.0	654.1	208.9	9.4	1.000214
12500.0	649.1	6.7	.3	63.6	805.0	652.9	204.1	9.8	1.000210
13000.0	637.2	5.7	-.4	64.7	793.2	651.7	196.0	10.4	1.000206
13500.0	625.5	4.7	-1.2	65.8	781.6	650.5	187.1	10.9	1.000202
14000.0	613.9	3.6	-1.4	69.6	770.0	649.2	181.9	11.5	1.000199
14500.0	602.5	2.6	-1.5	73.9	758.6	648.0	186.4	11.5	1.000196
15000.0	591.2	1.6	-2.0	77.0	747.2	646.8	191.9	11.8	1.000193
15500.0	580.1	.6	-2.6	78.9	736.9	645.5	198.0	12.6	1.000189
16000.0	569.2	-.4	-3.3	80.8	726.7	644.4	199.5	13.4	1.000186
16500.0	558.3	-1.4	-3.9	82.7	716.8	643.2	199.3	14.2	1.000182
17000.0	548.1	-2.4	-4.6	84.6	707.0	642.0	200.3	15.4	1.000179
17500.0	537.6	-3.5	-5.3	87.3	697.5	640.7	201.4	16.7	1.000176
18000.0	527.4	-4.6	-6.0	90.1	688.2	639.5	201.2	18.2	1.000173
18500.0	517.3	-5.7	-6.7	93.0	678.0	638.0	201.0	19.5	1.000169
19000.0	507.4	-6.7	-7.7	92.4	668.7	636.7	200.0	20.5	1.000166
19500.0	497.6	-7.4	-9.3	86.0	659.6	635.4	200.0	21.6	1.000161
20000.0	488.0	-8.3	-10.2	86.0	650.4	634.2	201.3	22.8	1.000158
20500.0	478.5	-8.8	-11.4	81.8	642.5	633.0	201.1	23.9	1.000154
21000.0	469.2	-9.2	-13.5	70.6	634.1	631.5	200.4	24.9	1.000149
21500.0	460.1	-10.3	-15.9	63.8	625.0	630.0	199.3	25.7	1.000145
22000.0	451.1	-11.4	-17.4	61.4	616.1	628.5	197.4	26.3	1.000142
22500.0	442.2	-12.6	-17.2	68.0	607.4	627.0	195.9	27.6	1.000140
23000.0	433.5	-13.2	-18.1	66.4	598.8	625.5	194.7	29.5	1.000137
23500.0	425.0	-13.6	-19.4	61.2	590.7	624.0	193.5	31.4	1.000134

STATION ALTITUDE 4126.59 FEET MSL
13 AUG. 79 1350 HRS MST
ASCENSION NO. 427

UPPER AIR DATA
2250010427
HOLLOMAN

GEODETIC COORDINATES
32.88865 LAT DEG
106.09965 LON DEG

TABLE 5 Cont

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24000.0	416.5	-14.5	-20.1	62.0	559.3	626.9	192.0	33.0	1.000132
24500.0	408.2	-15.4	-20.8	63.0	551.1	625.8	189.5	33.8	1.000129
25000.0	400.1	-16.3	-21.5	64.0	542.1	624.7	185.7	33.8	1.000127
25500.0	392.1	-17.3	-22.6	62.8	533.3	623.5	182.4	34.2	1.000124
26000.0	384.2	-18.3	-23.8	61.5	524.6	622.2	179.6	34.7	1.000122
26500.0	376.4	-19.2	-25.0	60.2	516.0	621.0	178.1	35.5	1.000120
27000.0	368.6	-20.2	-26.1	59.0	507.6	619.8	177.5	36.6	1.000117
27500.0	361.4	-21.2	-27.5	56.5	499.3	618.6	177.4	38.0	1.000115
28000.0	354.0	-22.1	-29.8	49.5	490.9	617.4	177.5	39.6	1.000112
28500.0	346.7	-23.0	-32.2	42.6	482.7	616.3	178.5	40.9	1.000110
29000.0	339.6	-23.9	-34.6	35.8	474.5	615.1	179.6	42.1	1.000108
29500.0	332.6	-25.0	-37.1	31.3	466.6	613.8	181.1	41.3	1.000106
30000.0	325.5	-25.3	-38.7	29.8	459.4	612.2	182.8	40.4	1.000104
30500.0	318.8	-27.6	-40.3	28.3	452.1	610.6	183.4	39.6	1.000102
31000.0	312.1	-28.8	-41.9	26.8	445.0	609.0	183.5	38.8	1.000100
31500.0	305.6	-30.1	-43.5	25.3	438.0	607.4	182.1	38.1	1.000098
32000.0	299.2	-31.4	-45.1	24.2	431.0	605.8	180.7	37.5	1.000097
32500.0	292.3	-32.6	-45.6	25.9	424.0	604.2	179.1	36.9	1.000095
33000.0	286.5	-33.9	-46.1	27.6	417.2	602.6	177.6	36.3	1.000094
33500.0	280.4	-35.2	-46.7	29.3	410.4	601.0	176.4	35.8	1.000092
34000.0	274.4	-36.5	-47.4	30.9	403.8	599.4	175.1	35.4	1.000090
34500.0	268.4	-37.7	-48.6	30.5	397.0	597.9	174.2	36.0	1.000089
35000.0	262.6	-38.9	-50.0	29.5**	390.4	596.3	173.5	36.6	1.000087
35500.0	256.8	-40.5	-56.4	16.1**	384.5	594.6	174.1	37.7	1.000086
36000.0	251.1	-42.2	-70.9	2.7**	378.7	592.1	175.2	39.0	1.000084
36500.0	245.4	-43.5			372.6	590.4	176.9	40.0	1.000083
37000.0	239.8	-44.6			366.6	588.9	178.6	41.0	1.000081
37500.0	234.4	-45.8			359.6	587.4	180.1	42.7	1.000080
38000.0	229.0	-47.0			352.8	585.8	180.9	44.8	1.000079
38500.0	223.8	-48.2			346.3	584.3	181.0	46.6	1.000077
39000.0	218.7	-49.4			340.5	582.8	180.7	48.1	1.000076
39500.0	213.7	-50.6			334.5	581.2	180.3	49.3	1.000075
40000.0	208.9	-51.8			328.7	579.7	179.9	48.7	1.000073
40500.0	204.1	-52.9			322.9	578.1	179.4	48.1	1.000072
41000.0	199.4	-54.1			317.2	576.5	179.2	47.6	1.000071
41500.0	194.6	-55.3			311.3	575.0	179.2	47.1	1.000069
42000.0	190.0	-56.5			305.5	573.4	179.3	46.8	1.000068
42500.0	185.4	-57.7			299.8	571.8	179.7	46.6	1.000067
43000.0	180.9	-58.9			294.2	570.2	178.4	45.7	1.000066
43500.0	176.6	-60.1			288.6	568.6	178.1	44.5	1.000064

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

STATION ALTITUDE 4126.59 FEET MSL
13 AUG. 79 1350 HRS MST
ASCENSION NO. 427

UPPER AIR DATA
2250010427
HOLLOMAN

GEODETIC COORDINATES
32.68865 LAT DEG
106.09965 LON DEG

TABLE 5 Cont.

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
44000.0	172.3	-61.3			283.4	567.0	177.8	44.1	1.000063
44500.0	168.2	-62.5			278.2	565.4	177.0	44.0	1.000062
45000.0	164.1	-63.7			273.0	563.8	177.6	44.1	1.000061
45500.0	160.2	-64.9			268.0	562.2	177.9	44.4	1.000060
46000.0	156.3	-66.1			263.0	560.6	178.7	44.9	1.000059
46500.0	152.5	-67.1			257.9	559.3	180.3	46.0	1.000057
47000.0	148.8	-67.5			252.0	558.7	181.7	46.8	1.000056
47500.0	145.0	-67.7			246.0	558.4	181.5	44.9	1.000055
48000.0	141.4	-67.9			240.1	558.1	181.2	43.0	1.000053
48500.0	137.9	-68.2			234.4	557.8	182.2	40.1	1.000052
49000.0	134.5	-67.9			228.3	558.1	184.2	36.5	1.000051
49500.0	131.2	-67.6			222.3	558.5	186.4	33.1	1.000050
50000.0	127.9	-67.3			216.5	558.9	188.4	29.8	1.000048
50500.0	124.7	-67.0			210.8	559.4	190.9	26.6	1.000047
51000.0	121.6	-66.7			205.2	559.8	188.4	23.5	1.000046
51500.0	118.6	-66.4			199.8	560.2	178.8	20.8	1.000045
52000.0	115.7	-66.1			194.6	560.6	170.3	19.8	1.000043
52500.0	112.8	-66.4			190.1	560.2	162.8	20.5	1.000042
53000.0	110.0	-66.9			185.6	559.5	159.1	20.8	1.000041
53500.0	107.3	-67.4			181.5	558.8	162.6	19.6	1.000040
54000.0	104.6	-67.9			177.6	558.1	167.3	18.6	1.000040
54500.0	102.0	-68.4			173.6	557.4	174.5	18.0	1.000039
55000.0	99.5	-67.6			168.6	555.6	180.3	17.7	1.000038
55500.0	97.0	-66.8			163.8	553.6	178.1	17.4	1.000036
56000.0	94.6	-66.1			159.2	553.5	175.9	17.2	1.000035
56500.0	92.3	-65.4			154.6	553.5	178.4	15.6	1.000034
57000.0	90.0	-64.7			150.3	553.5	178.6	13.4	1.000033
57500.0	87.8	-64.3			146.4	553.5	181.3	11.2	1.000033
58000.0	85.7	-64.1			142.6	553.2	173.7	9.0	1.000032
58500.0	83.6	-64.0			139.2	553.4	166.3	6.8	1.000031
59000.0	81.6	-63.5			135.5	554.1	147.7	5.7	1.000030
59500.0	79.5	-62.7			131.8	553.1	124.4	6.4	1.000029
60000.0	77.7	-62.0			128.1	553.1	110.3	7.5	1.000029
60500.0	75.8	-61.2			124.6	557.2	115.4	6.6	1.000028
61000.0	74.0	-60.4			121.1	556.2	123.2	5.8	1.000027
61500.0	72.2	-59.7			117.8	559.2	129.9	6.2	1.000026
62000.0	70.4	-58.9			114.5	570.2	135.5	6.7	1.000026
62500.0	68.8	-58.4			111.5	571.3	130.3	7.3	1.000025
63000.0	67.1	-57.9			108.7	571.3	134.6	7.8	1.000024
63500.0	65.6	-57.4			105.9	572.2	134.3	7.9	1.000024

UPPER AIR DATA
2250010427
HOLLOMAN

STATION ALTITUDE 4126.59 FEET MSL
13 AUG. 79 1350 HRS MST
ASCENSION NO. 427

GEODETIC COORDINATES
32.88365 LAT DEG
106.09965 LON DEG

TABLE 5 Cont.

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
64000.0	64.0	-57.0			103.2	576.6	139.6	7.1	1.000023
64500.0	62.5	-56.5			100.5	575.4	144.7	6.2	1.000022
65000.0	61.0	-56.0			97.9	574.0	151.6	7.3	1.000022
65500.0	59.6	-55.6			95.4	574.7	121.4	8.9	1.000021
66000.0	58.2	-55.1			93.0	575.3	116.6	11.8	1.000021
66500.0	56.8	-54.6			90.6	575.9	115.1	15.7	1.000020
67000.0	55.5	-54.7			88.5	575.7	115.4	19.0	1.000020
67500.0	54.2	-55.1			86.6	575.3	120.3	19.5	1.000019
68000.0	52.9	-55.5			84.7	574.8	125.3	20.1	1.000019
68500.0	51.7	-55.8			82.8	574.3	128.0	20.3	1.000018
69000.0	50.5	-56.2			81.0	573.9	127.8	19.8	1.000018
69500.0	49.3	-56.1			79.1	573.9	127.6	19.3	1.000018
70000.0	48.1	-55.3			77.1	574.4	125.6	19.1	1.000017
70500.0	47.0	-55.5			75.2	574.8	122.7	19.0	1.000017
71000.0	45.9	-55.2			73.4	575.2	119.6	19.1	1.000016
71500.0	44.8	-54.9			71.6	575.6	116.2	19.9	1.000016
72000.0	43.8	-54.5			69.8	576.0	110.6	20.7	1.000016
72500.0	42.8	-54.2			68.1	576.4	115.5	21.6	1.000015
73000.0	41.8	-53.9			66.4	576.8	111.0	22.3	1.000015
73500.0	40.8	-53.6			64.7	577.2	106.8	23.2	1.000014
74000.0	39.8	-53.3			63.1	577.6	103.5	24.0	1.000014
74500.0	38.9	-53.0			61.6	578.1	102.6	24.1	1.000014
75000.0	38.0	-52.7			60.0	578.5	102.5	24.1	1.000013
75500.0	37.1	-52.7			58.7	578.5			1.000013
76000.0	36.3	-52.3			57.3	578.4			1.000013
76500.0	35.4	-52.9			56.0	578.2			1.000012
77000.0	34.6	-52.9			54.7	578.1			1.000012
77500.0	33.8	-53.0			53.5	578.0			1.000012

STATION ALTITUDE 4126.59 FEET MSL
13 AUG. 79 1350 HRS MST
ASCENSION NO. 427

MANDATORY LEVELS
2650010427
HOLLOMAN

GEODETIC COORDINATES
32.88865 LAT DEG
106.09965 LON DEG

TABLE 6

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
850.0	5006.	22.8	13.0	54.	320.2	1.9
800.0	6727.	17.7	11.8	66.	240.7	5.1
750.0	8530.	14.9	4.7	50.	229.2	5.7
700.0	10435.	11.0	2.1	54.	218.0	7.4
650.0	12451.	6.8	**	64.	204.8	9.7
600.0	14595.	2.4	-1.6	79.	187.3	11.5
550.0	16887.	-2.2	-4.5	84.	200.3	15.2
500.0	19351.	-7.2	-9.1	86.	200.4	21.3
450.0	22020.	-11.6	-17.3	62.	197.3	26.4
400.0	24966.	-16.3	-21.3	64.	185.7	33.8
350.0	28224.	-22.6	-31.1	46.	176.0	40.3
300.0	31876.	-31.2	-45.0	24.	180.9	37.6
250.0	36021.	-42.5			175.4	39.2
200.0	40844.	-54.0			179.2	47.7
175.0	43614.	-60.6			178.0	44.2
150.0	46708.	-67.4			181.3	46.7
125.0	50308.	-67.0			190.5	27.0
100.0	54727.	-67.7			180.1	17.8
80.0	59190.	-62.9			130.4	0.1
70.0	61915.	-58.7			136.5	0.8
60.0	65114.	-55.7			124.5	0.3
50.0	68931.	-53.3			127.7	19.6
40.0	73613.	-53.3			103.9	23.9

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

STATION ALTITUDE 4051.00 FEET MSL
13 AUG. 79 1350 HRS MST
ASCENSION NO. 79

SIGNIFICANT LEVEL DATA
2650J0079
JALLEN

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

TABLE 7

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
879.3	4051.0	28.8	16.4	47.0
859.4	4379.3	24.4	13.3	50.0
850.0	5528.5	23.0	13.6	54.0
794.7	7011.3	17.4	11.9	70.0
700.0	10466.6	10.9	.5	46.0
632.0	13246.1	6.3	-4.7	45.0
583.3	15387.3	.8	-4.9	64.0
559.6	16481.1	-.9	-4.9	74.0
548.4	17011.4	-2.2	-4.5	64.0
500.0	19409.7	-6.5	-9.5	79.0
482.4	20327.1	-9.4	-9.9	96.0
466.7	21167.6	-10.6	-12.1	89.0
461.4	21457.4	-9.8	-19.5	45.0
432.2	23107.9	-13.1	-16.3	77.0
400.0	25037.5	-16.6	-21.1	68.0
364.2	27387.7	-21.1	-25.6	67.0
345.2	28635.2	-23.1	-30.4	51.0
300.0	31987.3	-30.9	-40.7	37.0
271.0	34313.6	-36.9	-49.3	26.0
250.0	36183.1	-41.2		
200.0	40993.9	-53.6		
156.8	46002.7	-66.1		
150.0	46869.2	-66.1		
137.8	48374.5	-68.8		
112.6	52558.5	-65.5		
100.0	54970.8	-66.3		
83.2	58685.5	-65.5		
70.0	62110.3	-58.8		
66.5	63251.4	-55.7		
50.0	69263.6	-54.8		
30.0	80170.4	-50.5		
20.0	88995.0	-46.7		
16.2	93604.1	-45.6		
12.9	98716.5	-40.2		

STATION ALTITUDE 4051.00 FEET MSL
13 AUG. 79 1350 HRS MST
ASCENSION NO. 79

UPPER AIR DATA
2250[illegible]079
JALLEN

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

TABLE 8

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
4051.0	879.3	28.8	16.4	47.0	1006.3	679.7	190.0	6.0	1.000302
4500.0	833.0	24.1	13.3	50.7	1007.7	674.0			1.000290
5000.0	850.8	23.1	13.2	53.8	990.9	672.6			1.000287
5500.0	836.0	21.7	13.0	57.6	981.2	671.2			1.000284
6000.0	821.4	20.3	12.7	61.8	963.7	669.6			1.000281
6500.0	807.1	18.8	12.3	65.9	950.4	668.0			1.000277
7000.0	793.0	17.4	11.9	69.9	944.4	666.5			1.000273
7500.0	779.9	16.5	10.3	66.9	931.1	665.0			1.000264
8000.0	765.0	15.5	5.7	63.7	916.0	663.8			1.000256
8500.0	751.3	14.6	7.1	60.5	900.0	662.5			1.000248
9000.0	737.9	13.7	5.4	57.3	892.2	661.3	226.0	7.3	1.000240
9500.0	724.6	12.7	3.7	54.2	879.0	660.1	223.0	7.5	1.000233
10000.0	711.9	11.8	2.0	51.0	867.1	658.8	227.2	8.2	1.000226
10500.0	699.1	10.8	.3	48.0	854.7	657.6	232.5	8.5	1.000220
11000.0	686.4	10.0	-.6	47.4	841.7	656.6	239.8	8.6	1.000215
11500.0	675.9	9.2	-1.6	46.9	829.0	655.6	237.3	7.7	1.000211
12000.0	661.6	8.4	-2.5	46.3	816.4	654.6	231.2	7.2	1.000206
12500.0	649.6	7.5	-3.4	45.8	804.0	653.6	221.3	7.3	1.000202
13000.0	637.7	6.7	-4.3	45.3	791.8	652.6	215.1	7.7	1.000198
13500.0	626.0	5.6	-4.1	49.6	780.2	651.5	211.3	8.3	1.000196
14000.0	614.4	4.3	-3.1	58.7	769.3	649.6	208.4	8.5	1.000195
14500.0	603.0	2.9	-2.4	67.6	758.5	648.3	205.6	8.8	1.000194
15000.0	591.8	1.5	-2.0	76.9	748.0	646.6	201.8	9.8	1.000193
15500.0	580.8	.4	-2.2	83.0	737.5	645.4	196.7	11.0	1.000191
16000.0	569.9	-.3	-3.6	78.4	725.3	644.5	199.1	13.0	1.000185
16500.0	559.2	-.9	-4.9	74.4	715.6	643.7	199.6	16.8	1.000181
17000.0	548.8	-2.2	-4.5	83.8	705.2	642.5	200.6	19.7	1.000179
17500.0	538.2	-3.1	-5.5	83.0	694.2	641.1	200.6	22.1	1.000175
18000.0	527.9	-4.0	-6.6	81.9	684.4	640.0	199.1	23.3	1.000171
18500.0	517.8	-4.9	-7.6	80.9	674.7	638.9	196.6	24.0	1.000168
19000.0	508.0	-5.6	-8.7	79.9	665.2	637.6	193.2	24.2	1.000164
19500.0	498.2	-6.3	-9.5	80.7	655.2	636.3	190.7	24.9	1.000161
20000.0	488.6	-6.4	-9.7	89.9	646.4	634.6	188.5	25.6	1.000159
20500.0	479.1	-9.6	-10.4	94.6	637.6	633.1	192.4	25.8	1.000156
21000.0	469.8	-10.4	-11.6	90.4	629.5	632.2	196.2	26.2	1.000152
21500.0	460.6	-9.9	-19.3	45.8	620.9	632.5	196.4	26.5	1.000143
22000.0	451.6	-10.9	-18.0	55.5	613.1	631.3	200.3	26.8	1.000142
22500.0	442.7	-11.9	-17.1	65.2	604.5	630.1	197.6	26.7	1.000140
23000.0	434.1	-12.9	-16.4	74.9	596.1	629.0	195.0	26.8	1.000139
23500.0	425.5	-13.8	-17.2	75.2	587.7	627.8	193.2	28.1	1.000136

AX WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 4051.00 FEET MSL
13 AUG. 79 1650 HRS MST
ASCENSION NO. 79

UPPER AIR DATA
2250[illegible]
GALLEN

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

TABLE 8 Cont.

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24000.0	417.0	-14.7	-18.5	72.8	561.4	626.7	191.5	29.6	1.000133
24500.0	406.7	-15.6	-19.7	70.5	552.2	625.5	190.0	31.5	1.000130
25000.0	400.6	-16.5	-21.0	68.2	545.2	624.4	188.5	33.2	1.000128
25500.0	392.5	-17.5	-22.0	67.9	534.4	623.2	186.7	33.5	1.000125
26000.0	384.6	-18.5	-23.0	67.6	523.6	622.0	185.5	34.0	1.000123
26500.0	376.9	-19.5	-20.9	67.4	517.0	620.8	184.0	35.0	1.000120
27000.0	369.2	-20.4	-24.9	67.1	506.6	619.6	184.0	36.1	1.000118
27500.0	361.8	-21.4	-26.1	65.0	500.1	618.4	183.5	37.3	1.000116
28000.0	354.4	-22.1	-26.0	58.8	491.5	617.4	183.4	38.4	1.000113
28500.0	347.1	-22.9	-29.9	52.7	482.9	616.5	184.2	39.6	1.000111
29000.0	339.9	-24.0	-31.5	49.5	473.0	615.1	184.7	40.7	1.000108
29500.0	332.9	-25.1	-33.0	47.4	467.3	613.7	184.9	41.8	1.000106
30000.0	325.9	-26.3	-34.6	45.3	459.6	612.2	184.4	43.0	1.000104
30500.0	319.1	-27.5	-36.1	43.2	452.4	610.7	183.5	44.3	1.000102
31000.0	312.5	-28.6	-37.7	41.1	445.1	609.3	183.5	44.5	1.000101
31500.0	306.0	-29.8	-39.3	39.0	437.9	607.8	184.0	44.1	1.000099
32000.0	299.5	-31.0	-40.9	36.8	430.9	606.3	184.1	44.2	1.000097
32500.0	293.2	-32.3	-42.6	34.5	423.9	604.7	184.1	44.5	1.000095
33000.0	286.9	-33.5	-44.4	32.2	417.0	603.1	183.1	45.3	1.000094
33500.0	280.7	-34.9	-46.2	29.8	410.3	601.5	181.9	46.2	1.000092
34000.0	274.7	-36.1	-48.1	27.5	403.7	599.8	181.0	45.4	1.000090
34500.0	268.8	-37.3	-50.5	23.3**	397.0	598.3	180.1	44.4	1.000089
35000.0	262.9	-38.5	-54.6	16.2**	390.3	596.6	179.7	45.3	1.000087
35500.0	257.1	-39.7	-60.2	9.1**	383.7	595.2	179.5	46.6	1.000086
36000.0	251.5	-40.9	-72.1	1.9**	377.2	593.7	179.1	48.7	1.000084
36500.0	245.8	-42.1			370.7	592.1	178.9	51.0	1.000083
37000.0	240.3	-43.4			364.4	590.4	178.5	51.5	1.000081
37500.0	234.8	-44.7			358.1	588.8	177.7	51.6	1.000080
38000.0	229.5	-46.0			352.0	587.1	177.9	51.1	1.000078
38500.0	224.3	-47.3			346.0	585.4	178.4	50.3	1.000077
39000.0	219.2	-48.6			340.1	583.7	179.1	50.0	1.000076
39500.0	214.2	-49.9			334.3	582.1	180.0	50.1	1.000074
40000.0	209.3	-51.2			328.6	580.4	180.7	50.0	1.000073
40500.0	204.6	-52.5			323.0	578.7	181.3	49.6	1.000072
41000.0	199.9	-53.8			317.5	577.0	181.8	49.5	1.000071
41500.0	195.1	-55.0			311.7	575.3	182.1	50.0	1.000069
42000.0	190.5	-56.3			305.9	573.7	182.1	50.2	1.000068
42500.0	186.9	-57.5			300.3	572.1	181.3	50.0	1.000067
43000.0	181.4	-58.7			294.8	570.5	180.3	49.6	1.000066
43500.0	177.1	-60.0			289.3	568.8	179.4	47.4	1.000064

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

STATION ALTITUDE 4051.00 FEET MSL
15 AUG. 79 1359 HRS MST
ASCENSION NO. 79

UPPER AIR DATA
[illegible]
DALLET

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

TABLE 8 Cont.

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
44000.0	172.3	-61.2			234.0	567.2	176.1	45.3	1.000063
44500.0	168.7	-62.4			278.8	566.3	177.5	44.2	1.000062
45000.0	164.6	-63.6			275.7	565.9	177.0	43.2	1.000061
45500.0	160.7	-64.9			262.7	564.2	177.5	42.9	1.000060
46000.0	156.8	-66.1			269.8	563.9	178.5	42.9	1.000059
46500.0	152.9	-65.1			257.3	563.9	179.5	42.2	1.000057
47000.0	149.2	-65.3			251.2	563.5	180.4	40.6	1.000056
47500.0	145.5	-67.1			245.9	562.2	181.5	39.1	1.000055
48000.0	141.8	-67.9			240.7	561.8	181.8	37.6	1.000054
48500.0	138.3	-68.7			235.7	561.4	182.5	36.1	1.000052
49000.0	134.9	-68.4			229.5	561.4	183.5	32.4	1.000051
49500.0	131.5	-68.0			223.4	560.0	189.2	28.6	1.000050
50000.0	128.3	-67.6			217.4	559.5	190.5	26.6	1.000048
50500.0	125.1	-67.2			211.5	559.1	189.5	25.6	1.000047
51000.0	122.0	-66.8			205.9	558.6	188.9	24.9	1.000046
51500.0	119.0	-66.4			200.4	558.2	179.8	25.2	1.000045
52000.0	116.0	-66.0			195.1	557.8	172.9	25.9	1.000043
52500.0	113.1	-65.5			189.8	557.3	172.0	25.1	1.000042
53000.0	110.3	-65.6			185.2	557.2	171.8	24.1	1.000041
53500.0	107.6	-65.8			180.3	557.0	172.8	23.3	1.000040
54000.0	105.0	-66.0			175.3	556.7	174.3	22.5	1.000039
54500.0	102.4	-66.1			172.3	560.5	175.4	21.6	1.000038
55000.0	99.9	-66.3			168.2	560.5	175.2	20.5	1.000037
55500.0	97.4	-66.2			163.9	560.5	175.0	19.3	1.000037
56000.0	95.0	-66.1			159.8	556.5	175.1	15.9	1.000036
56500.0	92.7	-65.0			155.5	560.0	170.2	12.8	1.000035
57000.0	90.4	-65.9			151.9	560.9	165.1	9.5	1.000034
57500.0	88.1	-65.8			148.0	561.5	161.9	7.2	1.000033
58000.0	86.0	-65.6			144.3	561.2	155.8	4.9	1.000032
58500.0	83.8	-65.5			140.7	561.0	154.3	4.5	1.000031
59000.0	81.8	-64.6			136.8	562.0	160.9	5.9	1.000030
59500.0	79.8	-63.9			132.9	563.0	169.9	7.4	1.000030
60000.0	77.9	-62.9			129.1	564.8	171.2	6.5	1.000029
60500.0	76.0	-62.0			125.4	565.1	172.8	5.4	1.000028
61000.0	74.2	-61.0			121.8	567.4	173.8	4.8	1.000027
61500.0	72.4	-60.1			118.3	568.6	172.0	4.7	1.000026
62000.0	70.6	-59.1			115.0	569.9	168.9	4.7	1.000026
62500.0	68.9	-57.9			111.8	571.0	167.8	5.8	1.000025
63000.0	67.3	-56.4			108.2	570.5	167.9	6.9	1.000024
63500.0	65.7	-55.7			105.3	574.3	168.8	8.0	1.000023

STATION ALTITUDE 4051.00 FEET MSL
13 AUG 79 1330 MRS MST
ASCENSION NO. 79

UPPER AIR DATA
2250030075
CALLEN

GEODETIC COORDINATES
33.1o712 LAT DEG
106.49511 LON DEG

TABLE 8 Cont.

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
60000.0	54.2	-55.6			102.8	574.6	140.5	8.5	1.000023
60500.0	52.7	-55.5			100.5	574.7	136.7	8.9	1.000022
61000.0	51.2	-55.4			97.9	574.8	134.9	9.8	1.000022
61500.0	49.9	-55.4			95.6	574.9	130.5	11.1	1.000021
62000.0	48.4	-55.3			93.3	575.0	127.1	12.4	1.000021
62500.0	47.0	-55.2			91.1	575.1	121.8	14.5	1.000020
63000.0	45.7	-55.1			89.0	575.2	117.5	16.7	1.000020
63500.0	44.4	-55.1			86.8	575.3	115.5	18.6	1.000019
64000.0	43.1	-55.0			84.8	575.4	113.4	19.9	1.000019
64500.0	41.9	-54.9			82.8	575.5	121.2	21.0	1.000018
65000.0	40.6	-54.8			80.8	575.6	123.0	22.1	1.000018
65500.0	39.4	-54.7			78.9	575.8	125.4	23.2	1.000018
66000.0	38.3	-54.5			77.0	575.1	127.1	24.2	1.000017
66500.0	37.2	-54.3			75.1	575.3	129.3	24.9	1.000017
67000.0	36.1	-54.1			73.3	575.6	129.2	24.6	1.000016
67500.0	35.0	-53.9			71.6	575.8	119.0	24.4	1.000016
68000.0	34.0	-53.7			69.8	577.1	118.9	23.5	1.000016
68500.0	33.0	-53.5			68.2	577.3	114.3	21.6	1.000015
69000.0	32.0	-53.3			66.5	577.6	111.2	19.7	1.000015
69500.0	31.0	-53.1			64.9	577.9	107.3	18.6	1.000014
70000.0	30.1	-52.9			63.4	578.1	103.1	18.3	1.000014
70500.0	29.1	-52.7			61.8	578.4	98.7	18.1	1.000014
71000.0	28.2	-52.5			60.4	578.6	95.3	19.1	1.000013
71500.0	27.3	-52.3			58.9	578.9	93.3	21.3	1.000013
72000.0	26.5	-52.1			57.5	579.2	91.7	23.5	1.000013
72500.0	25.6	-51.9			56.1	579.4	91.6	25.4	1.000012
73000.0	24.8	-51.7			54.8	579.7	91.4	26.7	1.000012
73500.0	24.0	-51.5			53.4	579.9	91.7	28.1	1.000012
74000.0	23.2	-51.4			52.2	580.2	92.0	29.2	1.000012
74500.0	22.4	-51.2			50.9	580.4	92.2	29.6	1.000011
75000.0	21.7	-51.0			49.7	580.7	92.5	30.1	1.000011
75500.0	21.0	-50.8			48.5	581.0	92.2	30.5	1.000011
76000.0	20.2	-50.6			47.3	581.2	90.0	30.4	1.000011
76500.0	19.5	-50.4			46.2	581.5	89.0	30.4	1.000010
77000.0	18.9	-50.1			45.1	581.8	87.4	30.4	1.000010
77500.0	18.2	-49.9			44.0	582.1	85.0	29.1	1.000010
78000.0	17.6	-49.7			43.0	582.3	83.0	27.8	1.000010
78500.0	17.0	-49.5			42.0	582.6	81.5	26.5	1.000009
79000.0	16.3	-49.3			41.0	582.9	82.1	25.6	1.000009
79500.0	15.7	-49.1			40.0	583.2	83.4	24.7	1.000009

STATION ALTITUDE 4051.00 FEET MSL
13 AUG. 79 1350 HRS MST
ASCENSION NO. 79

UPPER AIR DATA
2250000079
JALLEN

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

TABLE 8 Cont.

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
64000.0	25.2	-48.9			39.1	583.5	64.7	23.8	1.000009
64500.0	24.8	-48.8			38.2	583.7	66.8	24.7	1.000008
65000.0	24.0	-48.4			37.2	584.0	69.0	26.5	1.000008
65500.0	23.5	-48.2			36.4	584.3	90.9	28.4	1.000008
66000.0	23.0	-48.0			35.5	584.6	92.0	30.0	1.000008
66500.0	22.4	-47.8			34.7	584.9	92.3	31.4	1.000008
67000.0	21.9	-47.6			33.8	585.1	92.6	32.7	1.000008
67500.0	21.4	-47.3			33.0	585.4	92.9	34.0	1.000007
68000.0	20.9	-47.1			32.3	585.7	93.4	34.6	1.000007
68500.0	20.5	-46.9			31.5	586.0	93.8	35.1	1.000007
69000.0	20.0	-46.7			30.8	586.2	94.2	35.7	1.000007
69500.0	19.5	-46.6			30.1	586.4	94.2	37.0	1.000007
70000.0	19.1	-46.5			29.4	586.6	94.1	38.4	1.000007
70500.0	18.7	-46.3			28.7	586.7	94.0	39.8	1.000006
71000.0	18.3	-46.2			28.0	586.9	94.6	41.4	1.000006
71500.0	17.8	-46.1			27.4	587.0	96.6	43.4	1.000006
72000.0	17.4	-46.0			26.8	587.2	98.2	45.3	1.000006
72500.0	17.1	-45.9			26.1	587.3	99.7	47.2	1.000006
73000.0	16.7	-45.8			25.5	587.5	101.5	47.6	1.000006
73500.0	16.3	-45.6			25.0	587.6	103.0	48.1	1.000006
74000.0	15.9	-45.3			24.4	588.1	104.6	48.6	1.000005
74500.0	15.6	-44.8			23.8	588.7	104.7	48.5	1.000005
75000.0	15.2	-44.3			23.2	588.8	104.4	48.3	1.000005
75500.0	14.9	-43.8			22.6	589.9	104.0	48.1	1.000005
76000.0	14.6	-43.4			22.1	590.5			1.000005
76500.0	14.2	-42.9			21.6	591.2			1.000005
77000.0	13.9	-42.4			21.0	591.8			1.000005
77500.0	13.6	-41.9			20.5	592.4			1.000005
78000.0	13.3	-41.5			20.0	593.0			1.000004
78500.0	13.0	-41.0			19.5	593.6			1.000004

STATION ALTITUDE 4051.00 FEET MS.
13 AUG. 79 1330 HRS MST
ASCENSION NO. 79

MANDATORY LEVELS
225003079
CALLEN

GEODETIC COORDINATES
33.16712 LAT DEG
108.49511 LON DEG

TABLE 9

PRESSURE	GEOPOTENTIAL	TEMPERATURE		REL.HUM.	WIND DATA	
		AIR	DEWPOINT	PERCENT	DIRECTION	SPEED
MILLIBARS	FEET	DEGREES CENTIGRADE			DEGREES(TN)	KNOTS
850.0	5020.	23.0	13.2	54.	9999.0	9999.0XX
800.0	6746.	18.1	12.1	68.	9999.0	9999.0XX
750.0	8553.	14.5	6.9	60.	9999.0	9999.0XX
700.0	10457.	10.9	[illegible]	48.	232.0	6.5
650.0	12474.	7.6	-3.0	45.	221.7	7.3
600.0	14622.	2.5	-2.3	70.	204.7	9.0
550.0	16914.	-2.0	-4.6	68.	200.5	19.5
500.0	19369.	-6.5	-9.5	79.	191.2	24.7
450.0	22058.	-11.1	-17.6	57.	199.9	26.8
400.0	24997.	-15.6	-21.1	66.	188.4	35.2
350.0	28251.	-22.6	-29.1	55.	183.9	39.1
300.0	31900.	-30.9	-40.7	37.	184.1	44.2
250.0	36057.	-41.2			179.0	49.2
200.0	40896.	-53.8			181.8	46.5
175.0	43567.	-60.5			176.0	40.3
150.0	46764.	-66.1			180.2	41.0
125.0	50363.	-67.2			189.5	25.6
100.0	54803.	-65.3			175.2	20.6
80.0	59251.	-64.0			189.1	7.1
70.0	61969.	-58.5			180.0	4.9
60.0	65134.	-53.4			131.4	10.8
50.0	69004.	-54.8			124.4	24.6
40.0	73707.	-52.9			103.4	18.3
30.0	79629.	-50.5			90.2	30.4
25.0	83745.	-48.8			85.0	29.7
20.0	88576.	-46.7			94.2	35.7
15.0	94864.	-44.0			104.2	46.2

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

XX WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.