

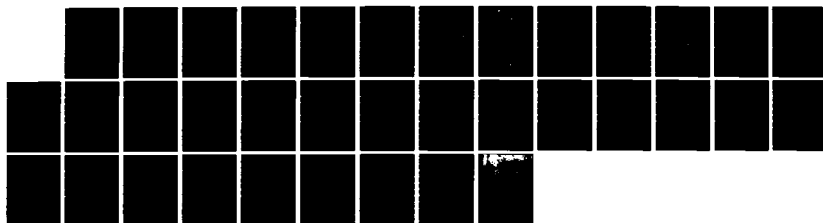
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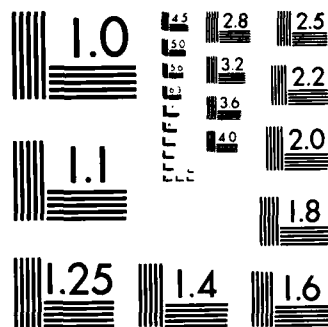
99316A MLRS MISSILE NUMBERS FV3-03 FV3-11 FV3-23 ROUND
NUMBERS 482/AT2-46. (U) ARMY ELECTRONICS RESEARCH AND
DEVELOPMENT COMMAND WSMR NM AMM. D C KELLER JUL 83
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METEOROLOGICAL DATA REPORT
19316A MLRS
Missile Number FV3-03, FV3-11, FV3-23
Round Number 482/AT2-46, 483/AT-2-47, 484/AT2-48
28 July 1983

by

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ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

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UNITED STATES ARMY ELECTRONICS COMMAND

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 19316A MLRS, Missile Number FV3-03, FV3-11, FV3-23, Round Number 482/AT2-46, 483/AT-2-47, 484/AT2-48 are presented in tabular form.		

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INTRODUCTION

19316A MLRS, Missile Numbers FV3-03, FV3-11, and FV3-23, Round Numbers 482/AT2-46, 483/AT2-47, and 484/AT2-48, were launched from Brillo, White Sands Missile Range (WSMR), New Mexico, at 1030:57, 1031:02, and 1031:07 MDT, 28 Jul 83. The scheduled launch times were 1030:00, 1030:04.5, and 1030:09 MDT.

DISCUSSION

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

1. Observations

a. Surface

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

(2) Anemometer data were provided from existing tower mounted anemometers at Brillo. 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 Pilot-balloon observations at:

SITE AND ALTITUDE

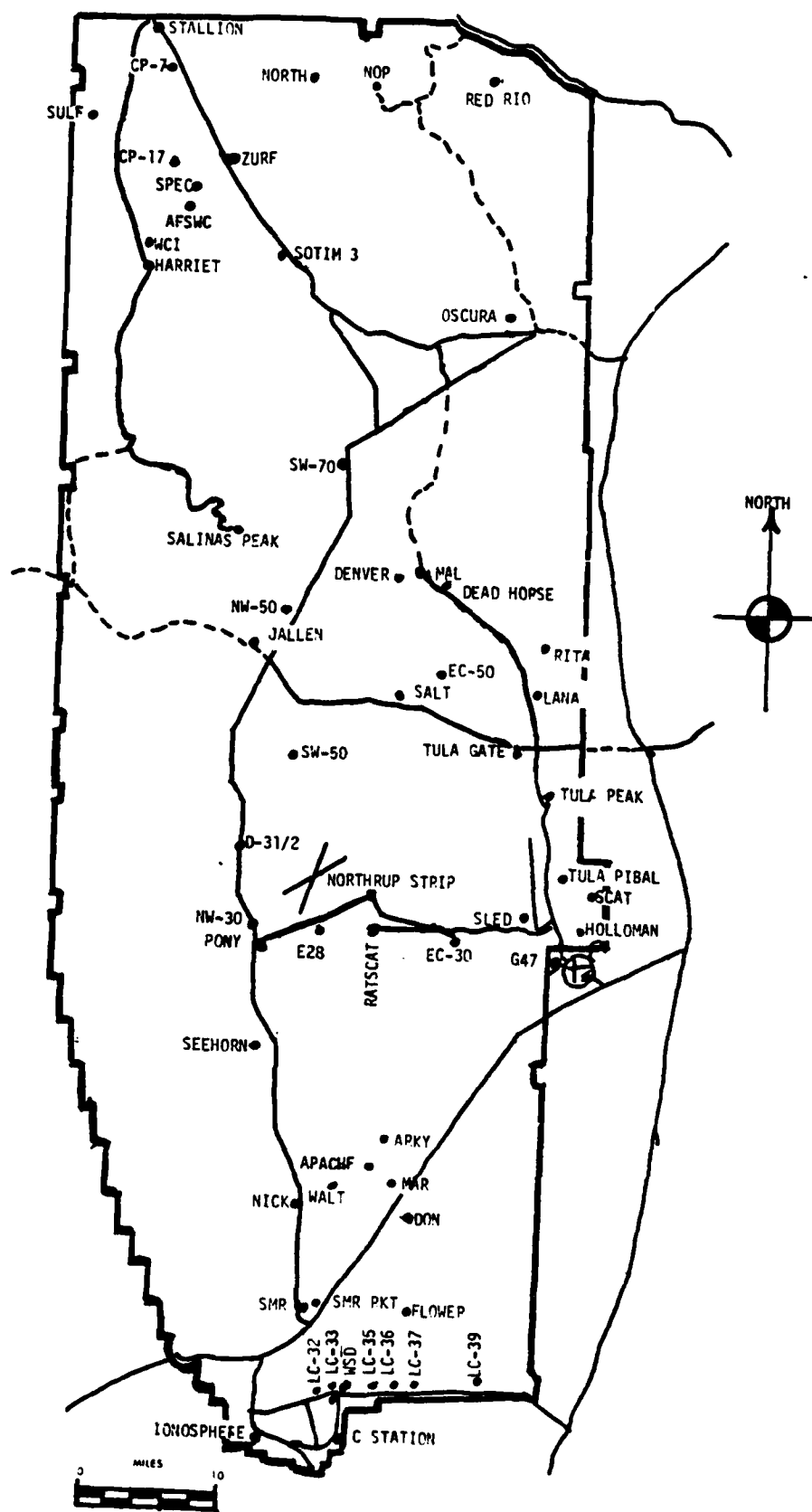
D3 $\frac{1}{2}$	2 Km
MAL	2 Km

(2) Air structure data (rawinsonde) were collected at the following met sites.

SITE AND TIME

NW-30	0730 MDT
E-28	0800 MDT
E-28	1045 MDT

WSMR METEOROLOGICAL SITES



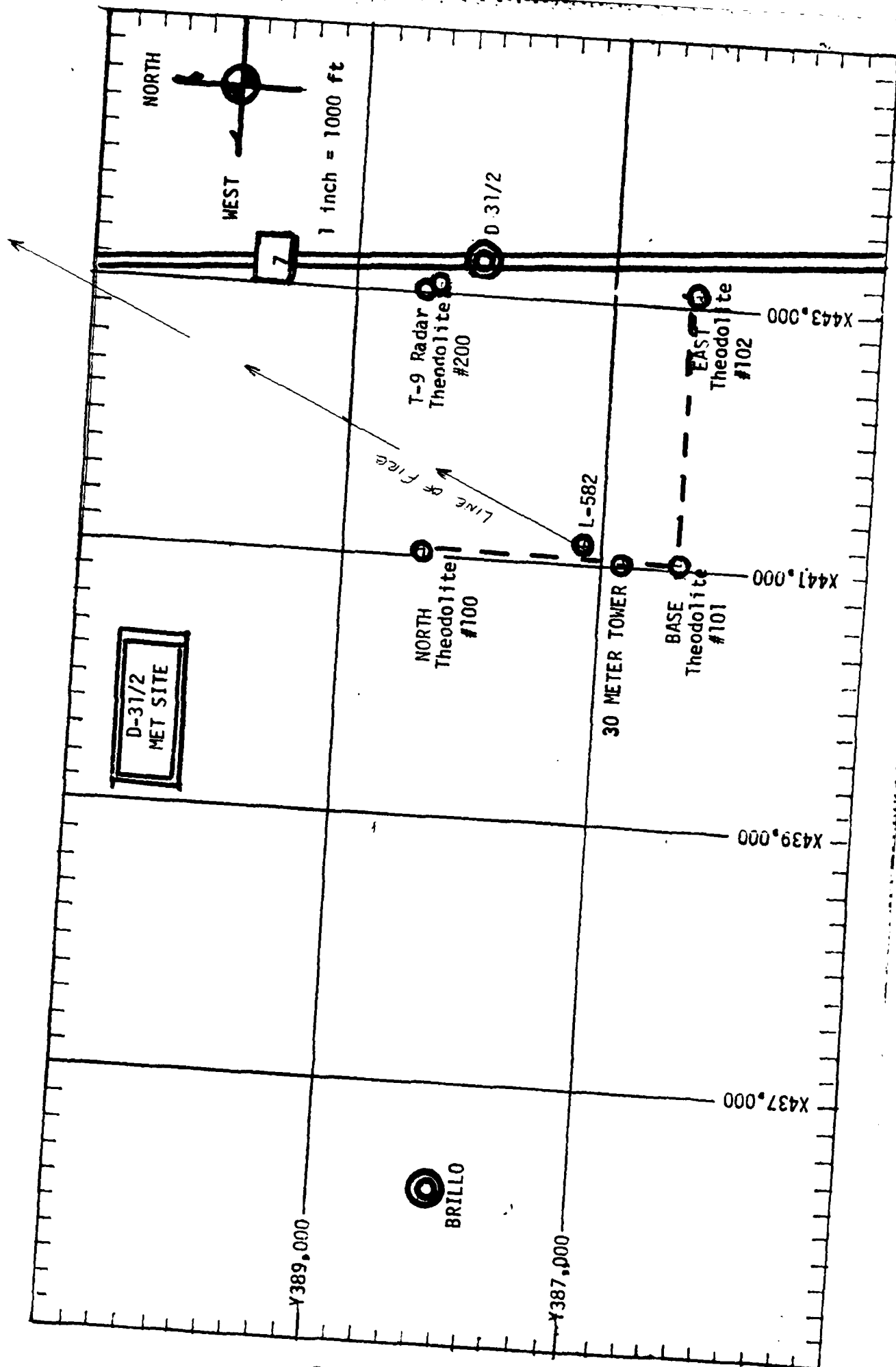


TABLE 1

STATION Brillo

DATE 28 JUL 83

$\hat{y} = 443093.12$ $y = 386316.94$ $H = 3962.25$

$$H = 3962.25$$
[illegible][illegible]

PSYCHOMETRIC COMPUTATION

TIME:	MDT	1030	
DRY BULB TEMP.		88.5	
WET BULB TEMP.		75.2	
WET BULB DEPR.		13.3	
DEW POINT		70.7	
RELATIVE HUMID.		56	

TABLE 2

Anemometer Data - 30 FT. Level of 30 Meter Tower

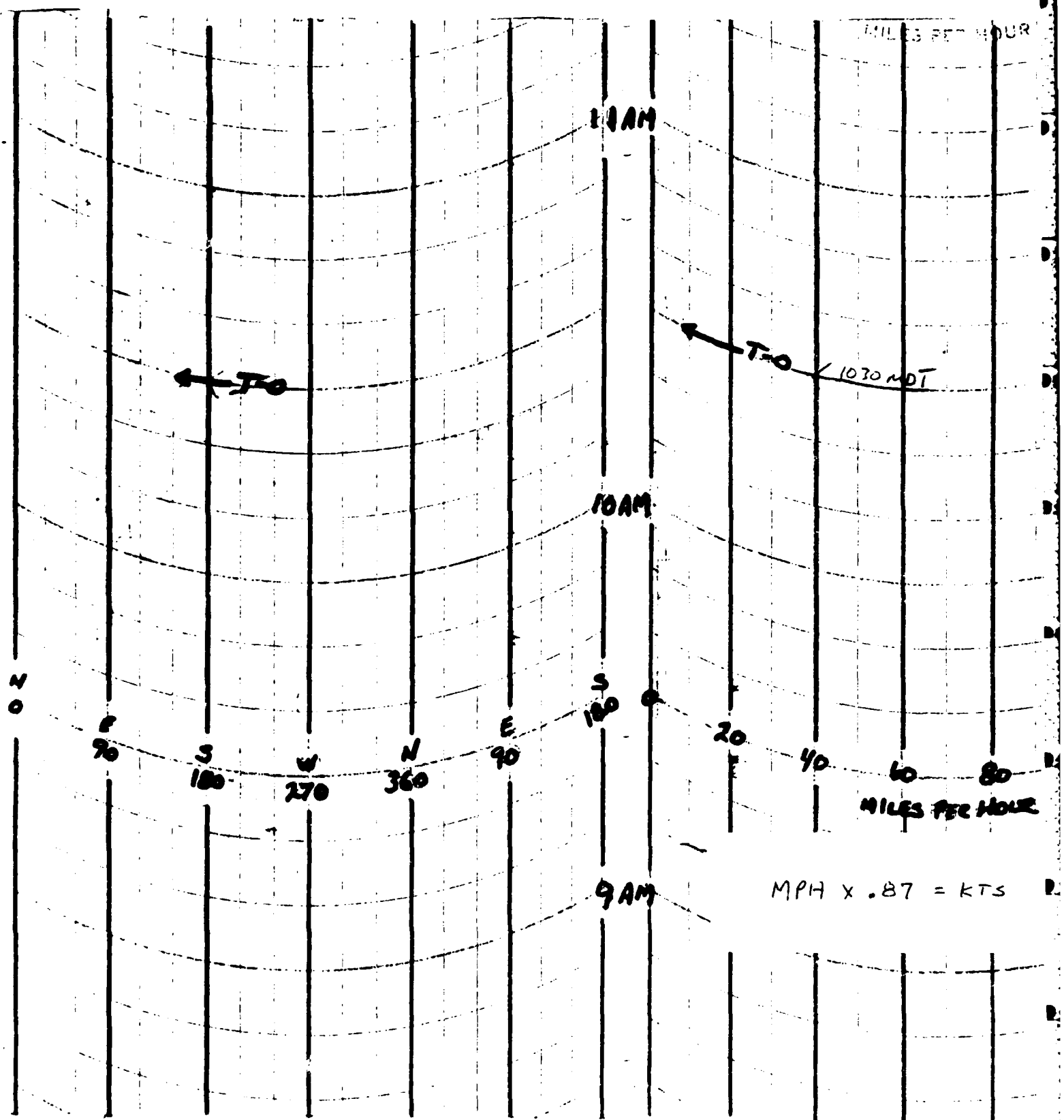
$$X = 441,018.71 \quad Y = 336,849.19 \quad H = 4,004.30 \text{ (BASE)}$$


TABLE 3

Anemometer Data = 10 * T. Level at 30 Meter Tower

X= 441,018.71 Y= 386,849.00 H= 4,004.50 (LAGE)

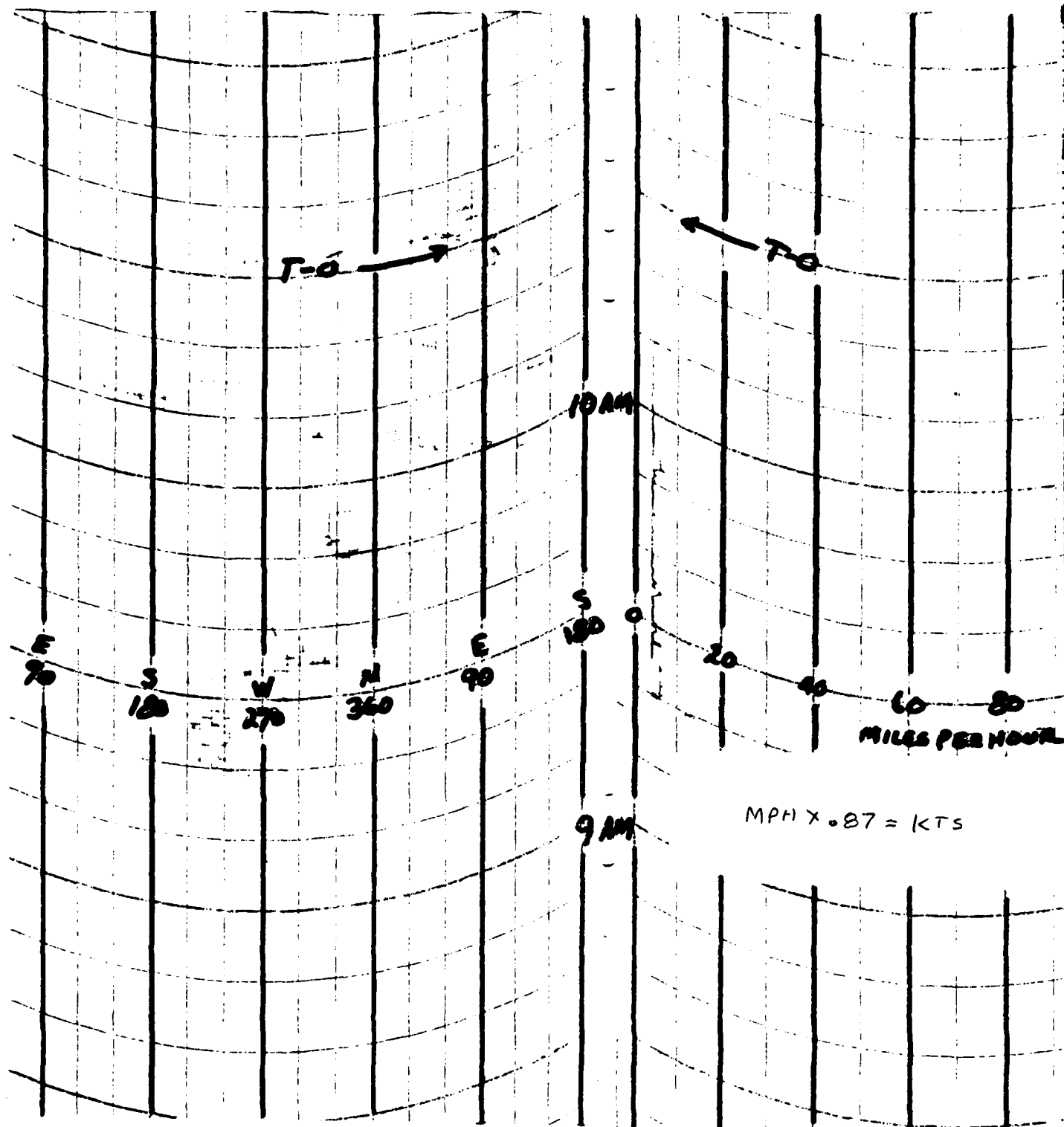
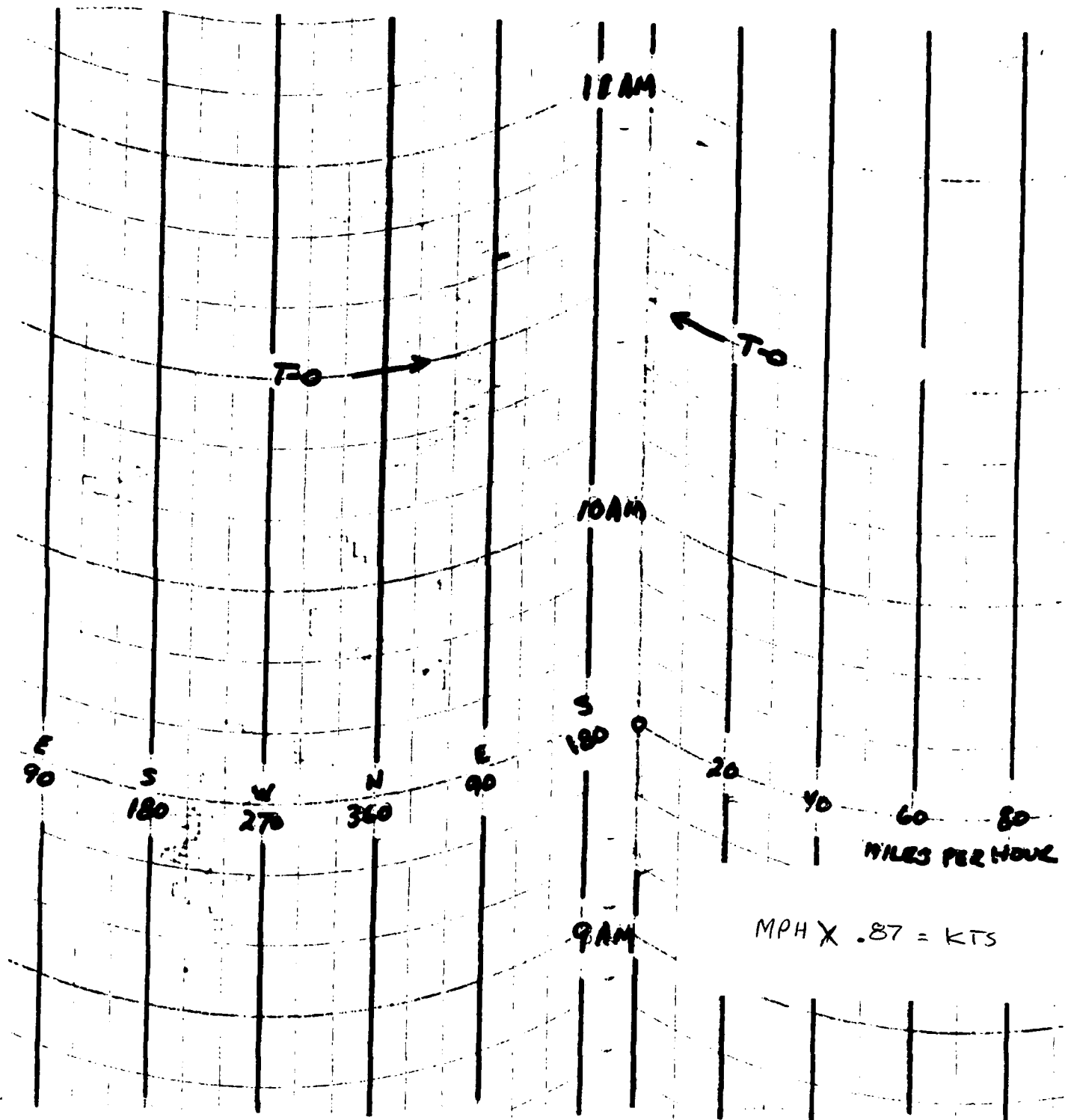


TABLE 4

Anemometer Data - 890110Z

X= 441,018.71 Y= 330,433.19



T-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 28 July 1983

SITE: D3½

TIME: 1030 MDT

WSTM COORDINATES:

X= 443,093.12

Y= 386,316.94

H= 3,962.25

SITE: MAL

TIME 1045 MDT

WSTM COORDINATES:

X= 509,421.05

Y= 495,563.18

H= 4,126.81

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	100	03
150	116	05
210	121	05
270	123	04
330	124	03
390	109	02
500	067	01
650	013	03
800	014	03
950	340	05
1150	329	07
1350	330	11
1550	348	16
1750	353	15
2000	353	18

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	290	07
150	320	16
210	326	19
270	326	20
330	326	22
390	323	22
500	318	21
650	349	21
800	358	24
950	340	26
1150	340	28
1350	336	25
1550	336	20
1750	331	16
2000	329	21

All data obtained from Single Theodolite Tracked pilot-balloon observations.

AIMING AND T-TIME COMPUTER MET MESSAGES
28 July 1983

NW-30 0730 MDT

METCM1329065

281350122881

00391002	29690881
01386006	29650871
02389005	29530846
03010004	29420808
04636008	29200762
05603014	29050719
06616017	28470677
07603016	27880638
08614013	27510599
09064006	27200563
10094005	27040529
11171004	26710497
12355007	26280451
13413011	25640395
14426011	25010346
15394013	24220301
16365020	23460261
17374017	22560225
18440025	21840193
19389021	21220165
20398024	20740140
21376020	20400119
22225004	20460101
23180012	20490085
24204011	21120073
25153012	21270062
26164025	21380053

E-28 0800 MDT

METCM1329064

281400119885

00000000	29770885
01561001	29710875
02470007	29670851
03619003	29530812
04006010	29210766
05623013	28800723
06618017	28380681
07611013	28010641
08620010	27680603
09091004	27370567
10127005	27040532
11237004	26730500
12382007	26280454
13415010	25670398
14412011	25020348
15405016	24240303
16377018	23450263
17386017	22580227
18436021	21880194
19372018	21290166
20405024	20700141
21393019	20400120
22337012	20420101
23197009	20470006
24203012	21100073
25167010	21350062
26149023	21490053

E-28 1045 MDT

METCM1329064

281680119886

00000000	30240886
01571002	30100876
02595001	29900851
03575006	29560813
04597010	29200767
05624014	28820724
06631015	28380682
07026011	28050642
08084005	27800604
09234005	27450568
10270007	27110533
11440003	26840501
12454003	26310455
13401009	25720399
14374012	25100349
15375014	24290304
16381018	23510264
17387018	22700228
18415021	21900195
19366019	21210167
20370023	20720142
21372021	20490120
22355009	20340102
23185009	20480086
24183012	21090073
25143013	21370062
26181024	21600053

STATION ALTITUDE 4010.40 FEET MSL
29 JULY 83
ASCENSION NO. 13

SIGNIFICANT LEVEL DATA
2090220013
NW 30

GEODLTIC COORDINATES
32.88497 LAT DEG
106.49714 LON DEG

TABLE 7

PRESSURE	GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
880.6	4010.4	21.7	13.1
875.9	4163.2	21.8	12.9
850.0	5017.4	20.1	10.5
825.7	5941.6	21.0	10.5
762.0	8103.4	15.3	6.1
758.2	8243.9	19.4	9.9
725.0	9504.6	16.2	7.2
700.0	10483.7	14.4	5.5
687.3	10990.3	11.6	3.6
670.6	11664.0	8.9	1.6
639.6	12943.4	4.5	-2.1
622.1	13684.8	2.7	-2.6
596.0	14822.2	.7	-4.5
581.8	15458.9	.0	-0.0
575.4	15749.8	-1.4	-7.1
555.8	16657.2	-2.4	-7.3
539.0	17459.2	-2.5	-8.0
530.8	17858.6	-3.9	-8.9
527.5	18021.0	-3.0	-9.9
511.4	18825.9	-5.2	-9.1
500.0	19407.8	-6.3	-10.3
487.5	20058.3	-7.6	-12.5
450.4	21573.0	-10.0	-12.6
420.3	23613.0	-14.5	-16.3
400.0	25043.6	-16.6	-19.5
376.6	26526.9	-19.6	-24.0
363.6	27383.8	-21.0	-26.5
352.0	28170.9	-22.0	-28.4
323.4	29764.4	-26.4	-31.8
318.8	30540.6	-27.9	-33.7
309.5	31239.2	-29.9	-36.0
300.0	31967.1	-31.6	-40.0
257.6	35462.7	-39.1	-48.7
250.0	36135.3	-41.6	
214.4	39101.6	-49.7	
200.0	40082.3	-53.8	
150.0	46920.6	-64.9	
141.0	48163.7	-65.4	
123.2	50060.6	-68.2	
112.2	52688.8	-70.0	

GEODLTIC COORDINATES
 32-88497 LAT DEG
 106-49714 LON DEG

SIGNIFICANT LEVEL DATA
 2090220013
 NW 30

TABLE 7 Con't

STATION ALTITUDE 4010.40 FEET MSL
 28 JULY 83 0730 MDT
 ASCENSION NO. 13

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
100.0 54059.9	-68.0		
83.0 50640.6	-69.6		
74.8 60723.7	-62.5		
70.0 62079.0	-61.2		
50.0 69008.0	-59.4		
50.8 73797.4	-53.2		

STATION ALTITUDE 4010.40 FEET MSL
28 JULY 83
ASCENSION NO. 13

0730 MDT

UPPER AIR DATA
2090220013
NW 30
TABLE 8

GEODETIC COORDINATES
32.88497 LAT DEG
106.49714 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL.HUM. PERCENT	DNFSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
4010.4	880.6	21.7	58.0	1033.7	671.1	220.0	1.9	1.000296
4500.0	865.6	21.1	55.8	1018.4	670.4	227.6	1.7	1.000288
5000.0	850.5	20.1	54.1	1004.5	669.1	237.4	1.5	1.000280
5500.0	835.7	20.6	52.2	985.3	669.7	249.4	1.4	1.000275
6000.0	821.1	20.6	51.2	968.1	669.6	272.3	1.6	1.000270
6500.0	806.6	19.3	51.9	955.5	668.1	358.6	4.4	1.000265
7000.0	792.4	18.1	52.5	943.0	666.6	.1	6.4	1.000259
7500.0	778.5	16.8	53.2	930.6	665.0	300.0	8.0	1.000253
8000.0	764.8	15.6	53.9	918.5	663.5	358.4	8.5	1.000248
8500.0	751.3	18.8	54.2	891.4	667.6	352.6	9.2	1.000251
9000.0	738.1	17.5	54.6	879.8	666.0	343.5	10.1	1.000245
9500.0	725.1	16.2	55.0	868.4	664.5	342.1	11.6	1.000239
10000.0	712.2	15.3	55.0	855.8	663.3	342.3	13.2	1.000234
10500.0	699.6	14.3	55.1	843.7	662.1	343.7	14.9	1.000229
11000.0	687.1	11.6	58.0	837.0	658.8	344.2	16.4	1.000224
11500.0	674.6	9.6	59.5	828.0	656.3	343.6	17.7	1.000218
12000.0	662.3	7.7	60.5	818.4	654.1	342.7	17.8	1.000213
12500.0	650.2	6.0	61.3	808.6	652.0	341.5	17.3	1.000208
13000.0	638.2	4.4	62.5	798.7	650.0	341.8	15.9	1.000204
13500.0	626.4	3.1	66.5	787.4	648.6	342.4	14.5	1.000201
14000.0	614.8	2.1	68.0	775.6	647.4	343.6	13.2	1.000197
14500.0	603.3	1.3	68.0	763.7	646.3	347.2	11.3	1.000193
15000.0	592.6	.5	66.9	751.6	645.3	354.4	8.9	1.000189
15500.0	580.9	-.2	64.1	739.5	644.4	8.9	6.9	1.000184
16000.0	569.9	-1.7	66.1	729.6	642.6	28.1	5.8	1.000181
16500.0	559.1	-2.2	68.3	717.3	642.0	33.7	5.4	1.000178
17000.0	548.6	-2.4	67.7	704.2	641.7	39.6	5.3	1.000175
17500.0	538.2	-2.6	66.2	691.4	641.5	44.9	5.6	1.000171
18000.0	527.9	-3.1	60.2	679.6	640.9	53.7	5.4	1.000167
18500.0	517.3	-4.3	67.9	669.6	639.5	65.7	5.1	1.000165
19000.0	506.0	-5.5	73.7	659.8	638.0	76.7	4.6	1.000163
19500.0	495.2	-6.5	72.3	649.5	636.8	88.7	4.2	1.000159
20000.0	484.6	-7.5	68.4	639.5	635.6	109.8	3.9	1.000155
20500.0	474.1	-8.3	71.8	629.1	634.6	132.9	4.3	1.000153
21000.0	469.8	-9.1	76.1	618.7	633.7	157.9	4.5	1.000151
21500.0	460.7	-9.9	80.4	608.5	632.7	179.3	5.4	1.000148
22000.0	451.7	-10.9	82.0	598.8	631.5	201.1	7.0	1.000145
22500.0	442.8	-11.9	83.1	589.3	630.3	213.3	9.0	1.000143
23000.0	434.1	-12.9	84.2	580.0	629.0	221.0	10.2	1.000140
23500.0	425.6	-13.9	85.3	570.9	627.8	225.6	10.8	1.000137

STATION ALTITUDE 4010.40 F ET MSL
28 JULY 83
ASCENSION NO. 13

0730 MDT

UPPER AIR DATA
2090220013
NW 30

GEODETTIC COORDINATES
32.88497 LAT DEG
106.49714 LON DEG

TABLE 8 Con't

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	
24000.0	417.1	-14.8	84.8	561.7	626.6	228.0	10.5	1.000134
24500.0	408.8	-15.7	81.5	552.4	625.5	229.7	10.7	1.000131
25000.0	400.7	-16.5	78.3	543.3	624.5	230.8	11.4	1.000129
25500.0	392.6	-17.5	73.7	534.5	623.2	234.3	11.3	1.000126
26000.0	384.8	-18.5	69.0	525.9	621.9	238.9	11.0	1.000123
26500.0	377.0	-19.5	64.3	517.5	620.7	238.1	10.3	1.000120
27000.0	369.4	-20.4	62.3	508.7	619.6	238.4	9.7	1.000118
27500.0	361.9	-21.1	60.3	499.9	618.7	235.0	9.8	1.000115
28000.0	354.5	-21.8	57.1	491.0	617.9	235.9	10.1	1.000113
28500.0	347.2	-22.9	56.8	483.1	616.5	238.0	10.7	1.000111
29000.0	340.1	-24.3	58.1	475.8	614.7	240.9	11.5	1.000109
29500.0	333.0	-25.7	59.3	468.6	613.0	240.9	12.5	1.000107
30000.0	326.1	-26.9	59.1	461.1	611.5	238.5	13.4	1.000105
30500.0	319.3	-27.8	57.2	453.3	610.3	233.2	14.4	1.000103
31000.0	312.6	-29.2	49.1	446.4	608.6	228.4	15.8	1.000101
31500.0	306.1	-30.5	44.3	439.3	606.9	224.3	17.5	1.000099
32000.0	299.6	-31.7	42.9	432.1	605.5	220.1	19.0	1.000097
32500.0	293.1	-32.7	41.8	424.7	604.1	216.2	20.4	1.000096
33000.0	286.8	-33.8	40.6	417.4	602.7	211.6	21.3	1.000094
33500.0	280.6	-34.9	39.5	410.2	601.4	207.4	22.1	1.000092
34000.0	274.6	-36.0	38.3	403.2	600.0	206.0	21.6	1.000091
34500.0	268.6	-37.0	37.2	396.3	598.7	205.1	20.8	1.000089
35000.0	262.8	-38.1	36.1	389.5	597.3	206.1	19.4	1.000087
35500.0	257.2	-39.2	33.1**	383.0	595.9	206.1	18.3	1.000086
36000.0	251.5	-41.1	7.0**	377.6	593.5	205.0	17.6	1.000084
36500.0	245.4	-42.6		371.5	591.5	201.0	17.1	1.000083
37000.0	240.3	-44.0		365.3	589.8	195.6	16.7	1.000081
37500.0	234.9	-45.3		359.2	588.0	196.7	16.7	1.000080
38000.0	229.6	-46.7		353.3	586.3	199.9	16.7	1.000079
38500.0	224.5	-48.1		347.4	584.5	212.3	17.4	1.000077
39000.0	219.4	-49.4		341.6	582.7	222.9	18.9	1.000076
39500.0	214.4	-50.6		335.5	581.2	230.7	20.9	1.000075
40000.0	209.4	-51.7		329.4	579.8	236.5	22.9	1.000073
40500.0	204.6	-52.7		323.3	578.4	240.5	24.3	1.000072
41000.0	199.8	-53.8		317.4	576.9	244.4	25.3	1.000071
41500.0	195.0	-54.8		311.1	575.7	249.1	25.4	1.000069
42000.0	190.4	-55.7		305.0	574.5	251.6	25.2	1.000068
42500.0	185.8	-56.6		299.0	573.2	251.9	24.8	1.000067
43000.0	181.4	-57.6		293.1	572.0	248.9	21.9	1.000065
43500.0	177.0	-58.5		287.3	570.8	242.2	17.8	1.000064

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

STATION ALTITUDE 1010738 FET MSL
28 JULY 83
ASCENSION NO. 15

UPPER AIR DATA
2000220015
NW 30

GEODETIC COORDINATES
32.88497 LAT DEG
106.49714 LON DEG

TABLE 8 Con't

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 (TH)	SPEED KNOTS	INDEX OF REFRACTION
44000.0	172.8	-59.4		281.7	569.5	229.7	17.6	1.000063
44500.0	163.7	-60.4		276.1	568.3	217.6	19.1	1.000061
45000.0	164.6	-61.3		270.7	567.0	215.5	22.8	1.000060
45500.0	160.7	-62.2		265.4	565.8	214.3	26.1	1.000059
46000.0	150.8	-63.2		260.2	564.5	213.0	25.3	1.000058
46500.0	153.1	-64.1		255.1	563.3	212.6	24.9	1.000057
47000.0	149.4	-64.9		250.0	562.2	215.8	25.7	1.000056
47500.0	145.7	-65.1		244.1	561.9	219.3	26.1	1.000054
48000.0	142.2	-65.3		238.3	561.6	223.8	25.9	1.000053
48500.0	138.6	-65.9		233.0	560.9	225.0	25.1	1.000052
49000.0	135.2	-66.6		228.1	559.9	223.0	23.5	1.000051
49500.0	131.9	-67.4		223.2	558.8	219.3	21.7	1.000050
50000.0	128.6	-68.1		218.5	557.8	214.2	19.8	1.000049
50500.0	125.4	-68.5		213.4	557.3	214.1	19.0	1.000048
51000.0	122.2	-68.8		208.4	556.8	214.8	18.7	1.000046
51500.0	119.2	-69.2		203.5	556.4	215.4	20.4	1.000045
52000.0	116.2	-69.5		198.8	555.9	216.1	21.0	1.000044
52500.0	113.3	-69.9		194.1	555.4	216.9	19.4	1.000043
53000.0	110.4	-69.7		189.1	555.6	216.1	16.8	1.000042
53500.0	107.7	-69.3		184.0	556.2	212.4	13.2	1.000041
54000.0	105.0	-68.8		179.0	556.8	204.1	9.2	1.000040
54500.0	102.4	-68.4		174.2	557.4	180.8	5.4	1.000039
55000.0	99.8	-68.0		169.5	558.0	114.0	4.0	1.000038
55500.0	97.3	-68.2		165.4	557.7	71.5	7.7	1.000037
56000.0	94.9	-68.5		161.5	557.4	73.8	10.9	1.000036
56500.0	92.5	-68.7		157.6	557.1	77.6	13.9	1.000035
57000.0	90.2	-68.9		153.8	556.8	85.7	13.6	1.000034
57500.0	87.9	-69.1		150.1	556.5	96.4	12.9	1.000033
58000.0	85.7	-69.3		146.5	556.2	102.1	11.5	1.000033
58500.0	83.6	-69.5		143.0	555.9	107.1	9.8	1.000032
59000.0	81.5	-68.4		138.7	557.5	111.5	9.5	1.000031
59500.0	79.5	-66.7		134.2	559.8	115.0	9.9	1.000030
60000.0	77.6	-65.0		129.8	562.1	122.5	10.2	1.000029
60500.0	75.6	-63.3		125.5	564.4	132.1	10.6	1.000028
61000.0	73.8	-62.2		121.9	565.8	133.4	10.9	1.000027
61500.0	72.0	-61.0		118.7	566.4	127.2	11.0	1.000026
62000.0	70.3	-61.3		115.5	567.1	120.0	11.1	1.000026
62500.0	68.0	-61.1		112.7	567.3	110.2	11.1	1.000025
63000.0	66.9	-61.0		109.9	567.5	101.4	11.4	1.000024
63500.0	65.3	-60.8		107.2	567.7	96.5	11.2	1.000024

STATION ALTITUDE 4010.40 FEET MSL
28 JULY 83
ASCENSION NO. 13 0730 MDT

UPPER AIR DATA
2090220013
NW 30

GEODLTIC COORDINATES
32.88497 LAT DEG
106.49714 LON DEG

TABLE 8 Con't

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
64000.0	63.8	-60.7		104.0	567.8	91.5	11.1	1.000023
64500.0	62.2	-60.6		102.0	568.0	87.0	11.8	1.000023
65000.0	60.7	-60.4		99.5	568.2	83.1	12.6	1.000022
65500.0	59.3	-60.3		97.0	568.4	78.4	14.4	1.000022
66000.0	57.9	-60.2		94.7	568.5	74.6	16.6	1.000021
66500.0	56.5	-60.1		92.3	568.7	77.9	18.6	1.000021
67000.0	55.1	-59.9		90.1	568.9	83.9	20.8	1.000020
67500.0	53.8	-59.8		87.8	569.0	88.4	22.9	1.000020
68000.0	52.5	-59.7		85.7	569.2	91.8	24.8	1.000019
68500.0	51.2	-59.5		83.0	569.4	94.2	26.3	1.000019
69000.0	50.0	-59.4		81.5	569.6	95.3	26.1	1.000018
69500.0	48.6	-58.8		79.4	570.4	96.8	25.9	1.000018
70000.0	47.7	-58.1		77.3	571.3	105.5	24.9	1.000017
70500.0	46.6	-57.5		75.2	572.1	114.8	24.5	1.000017
71000.0	45.5	-56.8		73.2	573.0	111.7	24.4	1.000016
71500.0	44.4	-56.2		71.3	573.9	103.1	24.8	1.000016
72000.0	43.4	-55.5		69.4	574.7			1.000015
72500.0	42.3	-54.9		67.6	575.6			1.000015
73000.0	41.3	-54.2		65.8	576.4			1.000015
73500.0	40.4	-53.6		64.0	577.3			1.000014

STATION ALTITUDE 4010.40 FEET MSL
24 JULY 83 0730 MDT
ASCENSION NO. 13

MANDATORY LEVELS
2090220013
NW 30

GEODETIC COORDINATES
32.88497 LAT DEG
106.49714 LON DEG

TABLE 9

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	5014.	20.1	10.5	54.	237.7	1.5	
800.0	6733.	18.8	8.8	52.	360.0	5.5	
750.0	8544.	18.6	9.2	54.	351.6	9.2	
700.0	10474.	14.4	5.5	55.	343.7	14.8	
650.0	12497.	6.0	-9	61.	341.5	17.3	
600.0	14628.	1.0	-4.2	68.	343.8	10.6	
550.0	16910.	-2.4	-7.5	68.	38.7	5.3	
500.0	19381.	-6.3	-10.3	73.	86.1	4.3	
450.0	22064.	-11.0	-13.5	82.	203.8	7.4	
400.0	25002.	-16.6	-19.5	78.	230.8	11.5	
350.0	28258.	-22.4	-28.7	56.	236.4	10.4	
300.0	31904.	-31.6	-40.0	43.	220.5	18.9	
250.0	36056.	-41.6			204.7	17.4	
200.0	40883.	-53.8			244.1	25.3	
175.0	43665.	-59.0			236.2	17.2	
150.0	46794.	-64.9			215.2	25.5	
125.0	50415.	-68.5			214.2	19.0	
100.0	54790.	-68.0			124.3	3.8	
80.0	59174.	-67.1			113.9	9.8	
70.0	61866.	-61.2			119.0	11.1	
60.0	65012.	-60.4			81.1	13.2	
50.0	68749.	-59.4			95.2	26.1	
40.0	73398.	-53.3					

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

STATION ALTITUDE 5412.75 F ET MSL
28 JULY 83
ASCENSION ILO.

SIGNIFICANT LEVEL DATA
2090290039
EAST-28/CHEERY
TABLE 10

GEODETIC COORDINATES
32.89927 LAT DEG
136.40591 LON DEG

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
845.4	22.7	53.0
866.2	21.6	56.0
850.0	22.0	52.0
799.0	20.0	46.0
770.0	17.9	48.0
700.0	11.5	50.0
670.4	8.3	68.0
601.4	2.6	62.0
584.8	1.5	60.0
535.7	-2.9	60.0
511.9	-5.6	67.0
500.0	-6.1	71.0
459.5	-10.3	81.0
400.0	-16.5	71.0
358.5	-21.4	53.0
300.0	-31.5	43.0
260.9	-39.0	35.0
250.0	-41.6	
219.0	-49.5	
200.0	-53.8	
187.2	-55.5	
172.2	-58.1	
150.0	-65.8	
146.7	-66.4	
142.7	-65.1	
140.0	-66.2	
131.2	-67.0	
122.8	-69.1	
114.6	-70.5	
110.8	-68.5	
101.2	-68.2	
100.0	-69.3	
91.7	-70.7	
80.4	-68.7	
80.7	-65.1	
70.0	-60.8	
60.6	-60.2	
50.0	-57.7	
35.2	-51.3	
30.0	-50.0	

STATION ALTITUDE 3,12.75 FEET MSL
 28 JULY 83 0800 MDT
 ASCENSION NO. 39

SIGNIFICANT LEVEL DATA
 2090290039
 EAST-28/CHERRY
 TABLE 10 Con't

GEODETIC COORDINATES
 32.89927 LAT DEG
 136.40591 LON DEG

PRESSURE	GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
20.0	88824.6	-46.6	
16.0	93741.7	-45.3	
12.7	98923.7	-38.6	

STATION ALTITUDE 5912.75 FEET MSL
28 JULY 83
ASCENSION NO. 39 0800 MDT

UPPER AIR DATA
2090290039
FAST-20/CHLIRY
TABLE 11

GEODETTIC COORDINATES
32.89927 LAT DEG
136.40591 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
							DIRECTION DEGREES(TN)	SPEED KNOTS	
5912.7	803.4	22.7	12.6	53.0	1036.0	672.2	0	0	1.000294
4000.0	892.7	22.5	12.6	53.4	1033.4	672.0	260.0	.2	1.000294
4500.0	867.4	21.7	12.5	55.8	1018.5	671.0	260.0	1.6	1.000290
5000.0	852.3	21.9	11.8	52.6	1000.0	671.3	260.0	2.9	1.000283
5500.0	837.5	21.5	10.9	50.6	984.3	670.7	260.0	4.2	1.000276
6000.0	822.9	21.0	9.8	48.9	969.2	670.0	301.2	2.4	1.000269
6500.0	808.6	20.4	8.8	47.3	954.4	669.3	353.8	3.7	1.000263
7000.0	794.5	19.7	7.9	46.2	940.2	668.4	359.8	6.7	1.000257
7500.0	780.5	18.7	7.2	47.2	927.1	667.2	2.7	8.6	1.000252
8000.0	765.8	17.6	6.6	48.4	914.3	665.9	4.3	9.8	1.000247
8500.0	753.1	16.4	5.9	49.9	901.8	664.5	1.4	10.6	1.000243
9000.0	733.7	15.2	5.2	51.4	889.6	663.1	355.9	11.3	1.000239
9500.0	720.5	14.0	4.5	52.9	877.5	661.6	349.8	12.2	1.000234
10000.0	713.6	12.8	3.8	54.4	865.7	660.2	347.1	13.8	1.000230
10500.0	700.9	11.6	3.1	55.9	854.0	658.7	345.9	15.3	1.000226
11000.0	688.2	10.2	3.0	60.7	842.5	657.2	345.8	16.5	1.000224
11500.0	675.7	8.9	2.8	65.8	831.2	655.6	346.0	16.1	1.000221
12000.0	663.4	7.7	2.1	67.4	819.4	654.3	346.3	15.1	1.000217
12500.0	651.2	6.8	1.0	66.4	807.3	653.0	346.6	13.8	1.000212
13000.0	639.2	5.8	-2.2	65.4	795.4	651.8	346.3	13.1	1.000207
13500.0	627.4	4.8	-1.3	64.3	783.7	650.6	345.7	12.7	1.000202
14000.0	615.9	3.8	-2.5	63.3	772.1	649.4	346.3	11.8	1.000197
14500.0	604.6	2.9	-3.6	62.3	760.8	648.2	348.8	9.5	1.000193
15000.0	593.3	2.1	-4.6	61.0	748.9	647.2	356.3	6.1	1.000189
15500.0	582.2	1.3	-5.6	60.0	737.2	646.2	20.9	3.8	1.000184
16000.0	571.3	.3	-6.5	60.0	725.9	645.1	52.7	3.5	1.000181
16500.0	560.5	-6.6	-7.4	60.0	714.8	643.9	62.8	4.5	1.000177
17000.0	550.0	-1.6	-8.3	60.0	703.9	642.7	58.9	5.1	1.000174
17500.0	533.6	-2.5	-9.2	60.0	693.1	641.6	59.7	5.3	1.000170
18000.0	529.3	-3.6	-9.8	61.8	682.7	640.3	70.4	4.9	1.000167
18500.0	519.2	-4.3	-10.3	64.8	672.6	638.9	88.3	4.4	1.000164
19000.0	509.3	-5.7	-10.7	67.9	662.1	637.7	114.6	4.4	1.000162
19500.0	499.5	-6.1	-10.5	71.1	650.4	637.2	133.7	4.4	1.000159
20000.0	489.9	-7.1	-11.0	73.4	640.1	636.1	155.1	4.7	1.000157
20500.0	480.4	-8.0	-11.6	75.6	630.0	634.9	173.9	5.3	1.000154
21000.0	471.1	-9.0	-12.1	77.9	620.0	633.8	193.7	6.3	1.000151
21500.0	462.0	-9.9	-12.7	80.1	610.3	632.6	208.8	6.9	1.000149
22000.0	452.9	-10.9	-13.0	80.1	600.5	631.5	219.9	6.8	1.000146
22500.0	444.0	-11.8	-14.7	78.6	590.7	630.4	230.4	6.7	1.000142
23000.0	435.2	-12.7	-15.8	77.2	581.1	629.2	226.3	8.3	1.000139

STATION ALTITUDE 312.75 F ET MSL
28 JULY 83 0800 MDT
ASCENSION NO. 39

UPPER AIR DATA
2090290039
EAST-28/CHLRY
TABLE 11 Con'd

GEODETTIC COORDINATES
32.89927 LAT DEG
136.40591 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS		WIND DATA		INDEX OF REFRACTION
		AIR DEGREE	DEWPOINT CENTIGRADE					DIRECTION ULGRLLS(TN)	SPEED KNOTS	
23500.0	420.6	-13.6	-16.9	75.7	571.7	628.1		225.8	9.4	1.000136
24000.0	410.2	-14.5	-18.0	74.3	562.4	627.0		228.2	10.1	1.000134
24500.0	409.9	-15.4	-19.1	72.8	553.3	625.9		233.0	9.8	1.000131
25000.0	401.8	-16.3	-20.2	71.3	544.4	624.7		238.5	9.3	1.000128
25500.0	393.8	-17.2	-21.0	68.4	535.4	623.6		237.9	9.3	1.000126
26000.0	385.8	-18.1	-23.0	65.1	526.5	622.4		236.3	9.4	1.000123
26500.0	370.0	-19.0	-24.5	61.7	517.8	621.3		232.7	9.7	1.000120
27000.0	370.4	-19.9	-26.0	58.4	509.2	620.2		229.0	9.9	1.000118
27500.0	362.9	-20.9	-27.5	55.0	500.8	619.0		224.9	10.0	1.000115
28000.0	355.5	-21.9	-28.9	52.5	492.6	617.7		228.9	10.0	1.000113
28500.0	340.1	-23.1	-30.3	51.3	484.7	616.2		233.9	10.3	1.000111
29000.0	340.9	-24.3	-31.6	50.2	476.9	614.8		236.0	11.2	1.000109
29500.0	333.8	-25.4	-33.0	49.0	469.2	613.3		235.9	11.9	1.000107
30000.0	325.0	-26.6	-34.3	47.8	461.7	611.8		233.9	12.4	1.000105
30500.0	320.0	-27.8	-35.7	46.6	454.3	610.3		231.9	12.8	1.000103
31000.0	313.4	-29.0	-37.0	45.5	447.1	608.8		230.0	13.1	1.000101
31500.0	300.9	-30.2	-38.4	44.3	439.9	607.3		229.9	15.3	1.000099
32000.0	300.5	-31.4	-39.3	43.1	432.9	605.8		229.4	17.4	1.000098
32500.0	294.0	-32.6	-41.1	41.9	425.7	604.3		226.4	18.5	1.000096
33000.0	287.7	-33.7	-42.5	40.6	418.6	602.8		223.4	19.1	1.000094
33500.0	281.5	-34.9	-43.8	39.4	411.6	601.4		219.0	18.5	1.000092
34000.0	275.4	-36.1	-45.2	38.1	404.7	599.9		215.7	18.0	1.000091
34500.0	269.5	-37.3	-46.6	36.9	397.9	598.4		214.6	17.5	1.000089
35000.0	263.7	-38.4	-47.9	35.6	391.3	596.9		212.7	17.3	1.000088
35500.0	257.9	-39.7	-51.9	25.7**	384.9	595.3		210.2	17.5	1.000086
36000.0	252.3	-41.0	-62.8	7.4**	378.6	593.5		208.3	17.9	1.000084
36500.0	246.6	-42.4			372.4	591.8		206.9	18.4	1.000083
37000.0	241.1	-43.8			366.1	590.0		205.0	18.0	1.000082
37500.0	235.7	-45.1			360.0	588.3		203.3	17.5	1.000080
38000.0	230.4	-46.5			354.0	586.5		207.8	17.2	1.000079
38500.0	225.2	-47.8			348.2	584.8		213.7	17.0	1.000078
39000.0	220.1	-49.2			342.4	583.0		226.4	17.4	1.000076
39500.0	215.0	-50.4			336.3	581.5		236.8	18.5	1.000075
40000.0	210.1	-51.5			330.1	580.0		243.1	19.9	1.000074
40500.0	205.2	-52.6			324.1	578.6		245.6	21.3	1.000072
41000.0	200.5	-53.7			318.2	577.1		245.8	22.6	1.000071
41500.0	195.8	-54.3			311.7	576.3		246.3	22.1	1.000069
42000.0	191.2	-55.0			305.3	575.5		240.2	21.3	1.000068
42500.0	186.7	-55.6			299.0	574.6		244.7	20.2	1.000067
43000.0	182.3	-56.3			292.9	573.7		239.7	19.3	1.000065

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

STATION ALTITUDE 5912.75 F ET MSL
28 JULY 83
ASCENSION NO. 39

UPPER AIR DATA
2090290039
FAST-28/CHERRY
TABLE 11 Con'd

GEODETIC COORDINATES
32.89927 LAT DEG
136.40591 LON DEG

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	FT/SEC	DIRECTION ULGRLS(TN)	SPEED KNOTS	
43500.0	170.0	-57.1			286.9	572.7		231.8	18.7	1.000064
44000.0	173.8	-57.0			281.1	571.7		221.7	18.0	1.000063
44500.0	169.6	-58.9			275.8	570.2		209.6	17.6	1.000061
45000.0	165.5	-60.3			270.9	568.4		203.0	17.7	1.000060
45500.0	161.5	-61.7			266.0	566.5		199.8	17.7	1.000059
46000.0	157.6	-63.1			261.3	564.7		201.9	18.5	1.000058
46500.0	153.8	-64.4			256.6	562.8		206.6	19.7	1.000057
47000.0	150.0	-65.8			252.1	561.0		212.7	21.0	1.000056
47500.0	146.3	-66.3			246.4	560.3		220.2	22.6	1.000055
48000.0	142.7	-65.1			239.0	561.9		226.3	23.9	1.000053
48500.0	139.2	-66.3			234.4	560.3		231.6	24.3	1.000052
49000.0	135.8	-66.6			228.9	559.9		235.1	24.5	1.000051
49500.0	132.4	-66.9			223.6	559.5		233.7	23.6	1.000050
50000.0	129.1	-67.5			218.7	558.7		231.4	22.6	1.000049
50500.0	125.9	-68.3			214.1	557.6		224.8	21.2	1.000048
51000.0	122.8	-69.1			209.6	556.5		218.2	20.2	1.000047
51500.0	119.7	-69.6			204.8	555.8		216.0	19.9	1.000046
52000.0	116.7	-70.1			200.2	555.1		214.0	19.5	1.000045
52500.0	113.7	-70.0			195.1	555.2		214.4	18.6	1.000043
53000.0	110.9	-68.5			188.8	557.3		214.8	17.8	1.000042
53500.0	108.1	-68.4			184.0	557.4		210.0	15.8	1.000041
54000.0	105.4	-68.3			179.3	557.5		203.9	13.8	1.000040
54500.0	102.8	-68.3			174.8	557.7		196.7	12.0	1.000039
55000.0	100.2	-69.1			171.1	556.5		187.2	10.4	1.000038
55500.0	97.7	-69.7			167.3	555.7		170.8	8.6	1.000037
56000.0	95.2	-70.1			163.4	555.2		147.3	7.8	1.000036
56500.0	92.9	-70.5			159.6	554.6		132.1	8.2	1.000036
57000.0	90.5	-70.4			155.5	554.7		123.9	8.9	1.000035
57500.0	88.2	-69.8			151.2	555.6		118.4	9.1	1.000034
58000.0	86.0	-69.2			146.9	556.4		114.6	8.4	1.000033
58500.0	83.4	-68.2			142.6	557.7		110.6	8.2	1.000032
59000.0	81.8	-66.2			137.7	560.5		108.2	9.0	1.000031
59500.0	79.8	-64.8			133.4	562.4		106.8	9.9	1.000030
60000.0	77.9	-64.0			129.7	563.4		110.7	11.5	1.000029
60500.0	76.0	-63.3			126.1	564.4		113.6	13.1	1.000028
61000.0	74.1	-62.5			122.6	565.4		111.2	12.4	1.000027
61500.0	72.3	-61.8			119.2	566.4		108.3	11.7	1.000027
62000.0	70.6	-61.0			115.9	567.4		112.3	10.9	1.000026
62500.0	68.9	-60.7			112.9	567.8		118.0	10.1	1.000025
63000.0	67.2	-60.6			110.2	567.9		115.0	9.9	1.000025

STATION ALTITUDE 3412.75 F LT MSL
28 JULY 83 0800 MDT
ASCENSION ID. 39

UPPER AIR DATA
2000290039
EAST-26/CHERRY

GEODETTIC COORDINATES
32-89927 LAT DEG
136-40591 LON DEG

TABLE 11 Con'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (TN)	SPEED KNOTS	
63500.0	63.6	-60.5		107.5	568.1	108.9	9.8	1.000024
64000.0	64.0	-60.4		104.8	568.2	98.8	10.0	1.000023
64500.0	62.5	-60.3		102.3	568.3	87.2	10.6	1.000023
65000.0	61.0	-60.2		99.8	568.5	78.8	12.1	1.000022
65500.0	59.5	-60.0		97.3	568.8	75.9	14.9	1.000022
66000.0	58.1	-59.7		94.8	569.2	73.9	17.7	1.000021
66500.0	56.7	-59.3		92.4	569.7	70.4	19.2	1.000021
67000.0	55.4	-59.0		90.1	570.1	79.5	20.5	1.000020
67500.0	54.0	-58.7		87.8	570.5	82.9	21.5	1.000020
68000.0	52.8	-58.4		85.6	570.9	87.4	21.9	1.000019
68500.0	51.5	-58.1		83.4	571.3	91.8	22.6	1.000019
69000.0	50.3	-57.8		81.3	571.7	92.8	23.4	1.000018
69500.0	49.1	-57.4		79.3	572.3	93.4	24.2	1.000018
70000.0	47.9	-56.9		77.3	572.8	94.4	24.4	1.000017
70500.0	46.8	-56.5		75.3	573.4	95.9	23.7	1.000017
71000.0	45.7	-56.1		73.4	574.0	97.6	23.1	1.000016
71500.0	44.7	-55.6		71.5	574.6	97.1	22.9	1.000016
72000.0	43.6	-55.2		69.7	575.1	96.3	22.9	1.000016
72500.0	42.6	-54.8		68.0	575.7	96.2	23.1	1.000015
73000.0	41.6	-54.4		66.3	576.3	97.0	23.6	1.000015
73500.0	40.6	-53.9		64.6	576.8	97.8	24.2	1.000014
74000.0	39.7	-53.5		63.0	577.4	97.0	23.8	1.000014
74500.0	38.8	-53.1		61.4	578.0	96.1	23.3	1.000014
75000.0	37.9	-52.6		59.8	578.5	94.6	23.0	1.000013
75500.0	37.0	-52.2		58.3	579.1	92.2	22.8	1.000013
76000.0	36.1	-51.8		56.8	579.7	89.8	22.6	1.000013
76500.0	35.3	-51.3		55.4	580.2	89.4	22.1	1.000012
77000.0	34.5	-51.1		54.1	580.5	89.0	21.5	1.000012
77500.0	33.7	-50.9		52.8	580.7	88.9	21.4	1.000012
78000.0	32.9	-50.8		51.5	581.0	89.1	22.1	1.000011
78500.0	32.1	-50.6		50.3	581.2	89.3	22.8	1.000011
79000.0	31.4	-50.4		49.1	581.5	88.8	23.7	1.000011
79500.0	30.7	-50.2		47.9	581.7	87.5	24.8	1.000011
80000.0	30.0	-50.0		46.8	582.0	86.6	25.9	1.000010
80500.0	29.3	-49.8		45.7	582.2	87.9	25.6	1.000010
81000.0	28.6	-49.6		44.6	582.5	89.3	25.2	1.000010
81500.0	28.0	-49.4		43.6	582.7	90.9	25.0	1.000010
82000.0	27.4	-49.2		42.6	583.0	92.9	26.0	1.000009
82500.0	26.7	-49.0		41.6	583.2	94.8	27.0	1.000009
83000.0	26.1	-48.8		40.6	583.5	95.1	27.9	1.000009

STATION ALTITUDE 3,12.75 FEET MSL
28 JULY 83
ASCENSION NO. 39 0800 MDT

UPPER AIR DATA
2090290039
EAST-28/CILHRY
TABLE 11 Con'd

GEODETIC COORDINATES
32.8927 LAT DEG
136.40591 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DULGRES(TN)	SPEED KNOTS	INDEX OF REFRACTION
83500.0	25.5	-48.6		39.6	583.7	93.3	28.6	1.000009
84000.0	25.0	-48.5		38.7	584.0	91.6	29.3	1.000009
84500.0	24.4	-48.3		37.8	584.2	91.9	30.6	1.000008
85000.0	23.8	-48.1		36.9	584.5	93.3	32.3	1.000008
85500.0	23.3	-47.9		36.0	584.7	94.4	33.9	1.000008
86000.0	22.8	-47.7		35.2	585.0	95.8	35.2	1.000008
86500.0	22.3	-47.5		34.4	585.2	97.0	36.4	1.000008
87000.0	21.7	-47.3		33.5	585.5	98.1	37.5	1.000007
87500.0	21.3	-47.1		32.8	585.7	97.4	36.9	1.000007
88000.0	20.8	-46.9		32.0	586.0	96.6	36.4	1.000007
88500.0	20.3	-46.7		31.2	586.2	95.5	35.9	1.000007
89000.0	19.8	-46.6		30.5	586.4	93.8	35.9	1.000007
89500.0	19.4	-46.4		29.8	586.6	92.2	35.9	1.000007
90000.0	19.0	-46.3		29.1	586.8	92.0	36.1	1.000006
90500.0	18.5	-46.2		28.4	587.0	93.4	36.7	1.000006
91000.0	18.1	-46.0		27.8	587.1	94.9	37.4	1.000006
91500.0	17.7	-45.9		27.2	587.3	95.6	37.4	1.000006
92000.0	17.3	-45.8		26.5	587.5	95.9	37.0	1.000006
92500.0	16.9	-45.6		25.9	587.6	96.1	36.6	1.000006
93000.0	16.5	-45.5		25.3	587.8	94.9	36.3	1.000006
93500.0	16.2	-45.4		24.7	588.0	93.0	36.1	1.000005
94000.0	15.8	-45.0		24.1	588.5	91.1	35.9	1.000005
94500.0	15.5	-44.3		23.5	589.3	91.6	37.4	1.000005
95000.0	15.1	-43.7		23.0	590.2	92.4	39.3	1.000005
95500.0	14.8	-43.0		22.4	591.0	93.3	41.1	1.000005
96000.0	14.5	-42.4		21.8	591.8	95.8	42.6	1.000005
96500.0	14.1	-41.7		21.3	592.6	98.3	44.2	1.000005
97000.0	13.8	-41.1		20.8	593.5	100.7	45.9	1.000005
97500.0	13.5	-40.4		20.3	594.3			1.000005
98000.0	13.2	-39.8		19.8	595.1			1.000004
98500.0	12.9	-39.1		19.3	595.9			1.000004

STATION ALTITUDE 3912.75 FEET MSL
28 JULY 83
ASCENSION NO. 39 0800 MDT

MANDATORY LEVELS
2090290039
EAST-28/CILKRY

GEODETTIC COORDINATES
32.89927 LAT DEG
136.40591 LONG DEG

TABLE 12

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	5075.0	22.0	11.7	52.0	260.0	3.1	
800.0	6798.0	20.1	8.2	46.0	358.2	5.5	
750.0	8614.0	16.1	5.8	50.0	08	10.8	
700.0	10525.0	11.5	3.0	56.0	345.9	15.4	
650.0	12542.0	6.7	0.8	66.0	340.0	13.7	
600.0	14686.0	2.5	-4.1	62.0	351.0	8.2	
550.0	16980.0	-1.6	-8.3	60.0	58.9	5.1	
500.0	19450.0	-6.1	-10.5	71.0	134.4	4.4	
450.0	22133.0	-11.1	-14.0	80.0	223.5	0.7	
400.0	25072.0	-16.5	-20.5	71.0	238.4	9.3	
350.0	28330.0	-22.8	-29.9	52.0	233.0	10.1	
300.0	31976.0	-31.5	-39.9	43.0	229.2	17.5	
250.0	36124.0	-41.6			207.8	18.1	
200.0	40951.0	-53.8			245.9	22.7	
175.0	43743.0	-57.6			225.5	18.3	
150.0	46878.0	-65.8			212.5	20.9	
125.0	50496.0	-68.5			223.1	20.9	
100.0	54874.0	-69.3			186.8	10.4	
80.0	59250.0	-64.8			106.6	9.7	
70.0	61949.0	-60.8			113.7	10.7	
60.0	65099.0	-60.1			76.9	13.8	
50.0	68854.0	-57.7			92.9	23.5	
40.0	73517.0	-53.6			97.4	24.0	
30.0	79646.0	-50.0			80.7	25.8	
25.0	83569.0	-48.5			91.9	29.2	
20.0	88407.0	-46.6			94.6	35.9	
15.0	94698.0	-43.4			92.7	39.7	

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

STATION ALTITUDE 3912.75 FEET MSL
28 JULY 83
ASCENSION NO. 40 1045 MDT

SIGNIFICANT LEVEL DATA
2090290040
FAST-28/CHERRY
TABLE 13

GEODLTIC COORDINATES
32.89927 LAT DEG
136.40591 LON DEG

PRESSURE GEONETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
886.0	27.2	12.8	41.0
875.2	25.7	11.8	42.0
850.0	24.2	10.1	41.0
784.9	18.4	5.9	44.0
771.6	18.2	5.8	44.0
700.0	11.6	2.4	53.0
668.0	7.8	1.6	65.0
640.5	6.1	-1.3	59.0
625.9	6.0	-3.4	51.0
557.0	-3.3	-8.9	52.0
545.1	-1.3	-9.9	52.0
523.5	-3.8	-9.0	67.0
500.0	-5.2	-10.2	68.0
459.9	-10.3	-12.9	81.0
433.2	-12.4	-13.8	89.0
426.2	-14.1	-15.9	86.0
400.0	-15.8	-20.0	70.0
337.3	-23.8	-29.9	57.0
317.9	-28.3	-34.1	57.0
300.0	-30.8	-39.7	41.0
259.0	-39.0	-48.6	35.0
250.0	-41.2		
200.0	-53.0		
188.5	-56.1		
174.5	-59.0		
152.3	-65.2		
150.0	-65.4		
139.8	-65.8		
127.7	-68.1		
125.5	-68.9		
113.0	-67.9		
100.0	-70.2		
92.5	-71.5		
86.4	-69.6		
83.4	-65.6		
70.0	-61.0		
50.0	-56.3		
42.0	-54.9		
34.8	-50.2		
30.0	-50.3		

STATION ALTITUDE 3912.75 FEET MSL
28 JULY 83
ASCENSION NO. 40 1045 MDT

UPPER AIR DATA
2090290040
EAST-208/CHERRY

GEODETIC COORDINATES
32.89927 LAT DEG
136.40591 LON DEG

TABLE 14

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGR.(TN)	SPEED KNOTS	
3912.7	880.0	27.2	12.8	41.0	1021.1	677.3	.0	.0	1.000290
4000.0	883.3	26.8	12.6	41.2	1019.4	676.9	326.0	.1	1.000289
4500.0	868.2	25.3	11.4	41.7	1007.5	675.0	326.0	.8	1.000282
5000.0	853.3	24.4	10.3	41.1	993.4	673.9	326.0	1.5	1.000275
5500.0	838.5	23.2	9.4	41.5	980.4	672.5	326.0	2.2	1.000270
6000.0	823.9	21.9	8.5	42.2	967.7	670.9	321.6	2.6	1.000264
6500.0	809.5	20.6	7.6	42.8	955.2	669.4	316.8	3.0	1.000259
7000.0	795.4	19.4	6.7	43.5	942.9	667.9	334.3	6.6	1.000253
7500.0	781.5	18.3	5.9	44.0	929.8	666.6	335.5	10.1	1.000249
8000.0	767.7	17.9	5.6	44.5	914.9	666.1	333.7	13.1	1.000245
8500.0	754.1	16.6	5.0	46.1	902.5	664.7	336.1	12.5	1.000241
9000.0	740.7	15.4	4.4	47.8	890.3	663.2	342.3	12.9	1.000237
9500.0	727.5	14.2	3.8	49.4	878.2	661.8	350.4	14.3	1.000233
10000.0	714.5	13.0	3.1	51.1	866.4	660.3	353.1	15.1	1.000228
10500.0	701.8	11.8	2.5	52.8	854.7	658.9	354.5	15.6	1.000225
11000.0	689.1	10.3	2.2	57.0	843.5	657.2	353.9	15.9	1.000222
11500.0	676.6	8.8	1.9	61.7	832.6	655.5	355.8	15.3	1.000219
12000.0	664.3	7.6	1.3	64.2	821.2	654.0	359.9	14.1	1.000215
12500.0	652.2	6.8	-0.0	61.6	808.6	653.0	8.0	11.6	1.000210
13000.0	640.2	6.1	-1.3	58.8	796.1	652.1	17.8	9.1	1.000204
13500.0	628.4	6.0	-1.0	52.4	781.9	651.9	27.9	6.5	1.000198
14000.0	616.8	5.2	-4.1	51.1	769.8	650.9	36.9	5.4	1.000194
14500.0	605.3	4.2	-4.9	51.3	758.3	649.6	46.8	4.5	1.000190
15000.0	594.1	3.2	-5.8	51.4	747.0	648.4	57.7	3.7	1.000186
15500.0	583.0	2.2	-6.7	51.6	736.0	647.2	86.8	3.1	1.000182
16000.0	572.2	1.2	-7.6	51.8	725.0	646.0	123.7	3.9	1.000179
16500.0	561.5	.1	-8.5	51.9	714.3	644.7	138.6	5.6	1.000175
17000.0	551.0	-0.8	-9.4	52.0	703.4	643.6	145.4	7.4	1.000172
17500.0	540.6	-1.8	-9.6	55.1	692.6	642.4	149.0	7.1	1.000169
18000.0	530.4	-3.0	-9.2	62.2	682.4	641.0	154.8	6.0	1.000168
18500.0	520.3	-4.0	-9.2	67.1	671.9	639.9	173.5	3.6	1.000166
19000.0	510.3	-4.6	-9.6	67.6	660.5	639.1	211.7	2.8	1.000163
19500.0	500.6	-5.2	-10.1	68.0	649.4	638.4	245.6	3.5	1.000160
20000.0	490.9	-6.3	-10.7	70.8	639.6	637.0	249.4	3.8	1.000157
20500.0	481.4	-7.5	-11.3	73.9	630.1	635.6	251.6	3.9	1.000154
21000.0	472.1	-8.7	-12.0	76.9	620.7	634.1	251.0	3.2	1.000151
21500.0	463.0	-9.9	-12.7	80.0	611.5	632.7	251.6	2.5	1.000149
22000.0	454.0	-10.8	-13.1	82.7	601.6	631.6	257.5	1.7	1.000146
22500.0	445.1	-11.4	-13.4	85.4	591.4	630.8	260.4	1.8	1.000144
23000.0	436.4	-12.1	-13.7	88.0	581.4	630.0	257.0	2.9	1.000141

STATION ALTITUDE 5412.75 FEET MSL
28 JULY 83
ASCENSION NO. 40

UPPER AIR DATA
2090290040
EAST-20/CHERRY

GEODETIC COORDINATES
32.89927 LAT DEG
136.40591 LON DEG

TABLE 14 Con'd

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	
23500.0	427.3	-13.7	-15.4	86.7	573.5	628.0		244.2	4.6	1.000138
24000.0	419.3	-14.5	-16.9	81.9	564.0	627.0		234.7	6.8	1.000135
24500.0	411.0	-15.1	-18.2	76.8	554.0	626.3		231.1	8.2	1.000132
25000.0	402.8	-15.6	-19.5	71.8	544.2	625.6		228.6	9.4	1.000129
25500.0	394.7	-16.4	-20.8	69.0	535.0	624.6		223.7	9.5	1.000126
26000.0	386.7	-17.4	-21.9	67.4	526.2	623.4		217.3	9.7	1.000123
26500.0	378.9	-18.3	-23.1	65.9	517.5	622.2		209.0	10.2	1.000121
27000.0	371.2	-19.3	-24.3	64.3	509.0	621.0		207.4	11.5	1.000118
27500.0	363.7	-20.3	-25.5	62.7	500.6	619.8		207.9	12.9	1.000116
28000.0	356.3	-21.2	-26.7	61.2	492.4	618.6		209.3	12.4	1.000114
28500.0	349.1	-22.2	-27.9	59.6	484.3	617.4		211.0	11.9	1.000112
29000.0	342.0	-23.1	-29.1	58.1	476.3	616.2		213.0	11.3	1.000109
29500.0	335.1	-24.3	-30.4	57.0	468.8	614.7		213.6	11.6	1.000107
30000.0	328.1	-25.9	-31.9	57.0	462.1	612.7		213.4	12.4	1.000106
30500.0	321.3	-27.5	-33.4	57.0	455.4	610.7		211.4	13.0	1.000104
31000.0	314.6	-28.8	-35.1	54.1	448.2	609.1		209.2	13.6	1.000102
31500.0	308.0	-29.7	-37.1	49.2	440.5	608.0		208.0	14.0	1.000100
32000.0	301.5	-30.6	-39.2	42.3	432.9	606.8		208.3	14.5	1.000098
32500.0	295.0	-31.7	-41.7	40.3	425.6	605.4		212.3	15.0	1.000096
33000.0	288.7	-32.9	-42.0	39.4	418.6	603.8		215.2	15.4	1.000094
33500.0	282.5	-34.2	-43.3	38.5	411.7	602.3		217.1	15.9	1.000093
34000.0	276.4	-35.4	-44.6	37.7	404.9	600.8		215.8	16.6	1.000091
34500.0	270.4	-36.6	-46.0	36.8	398.2	599.2		213.7	17.4	1.000089
35000.0	264.6	-37.8	-47.3	35.9	391.6	597.7		213.9	18.1	1.000088
35500.0	258.9	-39.0	-49.7	34.7**	385.2	596.1		214.0	18.6	1.000086
36000.0	253.2	-40.4	-50.2	12.7**	379.0	594.4		213.2	18.2	1.000085
36500.0	247.6	-41.7			372.7	592.7		212.1	17.8	1.000083
37000.0	242.0	-42.9			366.1	591.1		210.6	17.2	1.000082
37500.0	236.5	-44.1			359.7	589.6		211.2	17.0	1.000080
38000.0	231.1	-45.4			353.5	588.0		213.9	17.1	1.000079
38500.0	225.9	-46.6			347.3	586.4		218.5	18.1	1.000077
39000.0	220.8	-47.8			341.2	584.9		223.2	19.7	1.000076
39500.0	215.8	-49.0			335.3	583.3		227.2	21.3	1.000075
40000.0	210.9	-50.2			329.5	581.7		230.5	22.8	1.000073
40500.0	206.1	-51.4			323.8	580.1		232.9	23.6	1.000072
41000.0	201.4	-52.6			318.2	578.5		233.9	22.5	1.000071
41500.0	196.8	-53.9			312.6	576.9		234.6	21.2	1.000070
42000.0	192.2	-55.1			307.0	575.3		233.8	19.4	1.000068
42500.0	187.6	-56.3			301.4	573.7		232.7	17.9	1.000067
43000.0	183.2	-57.2			295.5	572.5		230.3	18.1	1.000066

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

STATION ALTITUDE 3912.75 F ET MSL
28 JULY 83
AUGUSTION NO. 40

UPPER AIR DATA
2090290040
FAST-20/CHILRY

GEODETIC COORDINATES
32.89927 LAT DEG
136.40591 LON DEG

TABLE 14 Con'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND KNOTS	WIND DATA DIRECTION ULGRES(TN)	SPEED KNOTS	INDEX OF REFRACTION
43500.0	170.8	-58.1		289.7	571.3	227.4	18.2	1.000065
44000.0	174.6	-59.0		284.0	570.1	219.1	18.3	1.000063
44500.0	170.4	-60.1		278.6	568.6	211.0	18.8	1.000062
45000.0	160.2	-61.2		273.2	567.2	202.8	19.4	1.000061
45500.0	162.2	-62.3		268.0	565.7	195.1	20.4	1.000060
46000.0	158.3	-63.4		262.9	564.2	194.0	21.2	1.000059
46500.0	154.4	-64.6		257.9	562.6	197.9	21.6	1.000057
47000.0	150.7	-65.3		252.6	561.6	201.9	22.0	1.000056
47500.0	147.0	-65.5		246.6	561.4	207.0	22.3	1.000055
48000.0	143.3	-65.7		240.7	561.2	211.9	22.8	1.000054
48500.0	139.8	-65.8		234.9	561.0	210.1	23.5	1.000052
49000.0	135.3	-66.4		229.8	560.1	208.2	24.2	1.000051
49500.0	132.0	-67.1		224.8	559.3	206.3	24.2	1.000050
50000.0	129.7	-67.7		219.9	558.4	204.4	24.0	1.000049
50500.0	126.4	-68.6		215.3	557.2	204.4	23.2	1.000048
51000.0	123.3	-68.7		210.1	557.0	206.9	21.7	1.000047
51500.0	120.2	-68.5		204.6	557.3	209.7	20.2	1.000046
52000.0	117.2	-68.2		199.3	557.7	213.5	18.5	1.000044
52500.0	114.3	-68.0		194.1	558.0	218.0	16.9	1.000043
53000.0	111.4	-68.2		189.4	557.8	215.8	14.9	1.000042
53500.0	108.6	-68.6		185.1	557.1	212.4	13.0	1.000041
54000.0	105.9	-69.1		180.8	556.5	207.5	11.0	1.000040
54500.0	103.3	-69.6		176.7	555.8	200.2	9.2	1.000039
55000.0	100.7	-70.1		172.7	555.2	189.6	7.6	1.000038
55500.0	98.1	-70.5		168.7	554.6	171.5	6.4	1.000038
56000.0	95.7	-70.9		164.8	554.0	147.6	6.0	1.000037
56500.0	93.3	-71.4		161.0	553.4	130.0	6.9	1.000036
57000.0	90.9	-71.0		156.7	553.9	121.8	8.2	1.000035
57500.0	88.6	-70.3		152.2	554.9	113.6	9.3	1.000034
58000.0	86.4	-69.6		147.8	555.9	99.7	9.6	1.000033
58500.0	84.2	-68.7		142.1	559.7	87.6	10.4	1.000032
59000.0	82.2	-65.2		137.7	561.8	87.3	10.6	1.000031
59500.0	80.2	-64.6		133.9	562.7	86.9	10.8	1.000030
60000.0	78.2	-63.9		130.2	563.5	93.7	10.9	1.000029
60500.0	76.3	-63.3		126.7	564.4	103.4	11.4	1.000028
61000.0	74.5	-62.6		123.2	565.3	110.1	11.9	1.000027
61500.0	72.6	-62.0		119.8	566.1	111.0	11.9	1.000027
62000.0	70.9	-61.3		116.6	567.0	112.0	12.0	1.000026
62500.0	69.2	-60.8		113.5	567.7	108.8	10.4	1.000025
63000.0	67.5	-60.5		110.6	568.1	103.5	8.7	1.000025

STATION ALTITUDE 312.75 FEET MSL
28 JULY 83
ASCENSION NO. 40 1045 PDT

UPPER AIR DATA
2000290040
FAST-2B/CHEERY

GEODETTIC COORDINATES
32-89927 LAT NEG
136-40591 LON DEG

TABLE 14 Con'd

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 (T)	SPEED KNOTS	INDEX OF REFRACTION
63500.0	63.9	-60.2		107.8	568.0	94.5	8.0	1.000024
64000.0	64.3	-59.8		105.1	569.0	84.2	8.8	1.000023
64500.0	62.8	-59.5		102.4	569.5	75.9	9.9	1.000023
65000.0	61.3	-59.2		99.8	569.9	78.6	14.1	1.000022
65500.0	59.0	-58.8		97.3	570.4	80.1	18.3	1.000022
66000.0	56.4	-58.5		94.8	570.8	83.6	20.6	1.000021
66500.0	57.0	-58.1		92.4	571.2	88.3	21.9	1.000021
67000.0	55.7	-57.8		90.1	571.7	92.9	23.1	1.000020
67500.0	54.4	-57.5		87.8	572.1	99.4	23.4	1.000020
68000.0	53.1	-57.1		85.0	572.6	105.7	24.0	1.000019
68500.0	51.8	-56.8		83.4	573.0	106.6	24.8	1.000019
69000.0	50.6	-56.5		81.3	573.5	105.9	25.7	1.000018
69500.0	49.4	-56.2		79.3	573.8	104.9	25.9	1.000018
70000.0	48.2	-56.0		77.4	574.1	103.4	24.7	1.000017
70500.0	47.1	-55.8		75.5	574.3	101.8	23.6	1.000017
71000.0	46.0	-55.6		73.6	574.6	102.2	22.8	1.000016
71500.0	44.9	-55.4		71.8	574.8	103.2	22.2	1.000016
72000.0	43.8	-55.2		70.1	575.1	104.2	21.9	1.000016
72500.0	42.8	-55.1		68.4	575.3	105.1	22.3	1.000015
73000.0	41.8	-54.8		66.7	575.7	105.9	22.7	1.000015
73500.0	40.8	-54.2		65.0	576.5	104.2	23.1	1.000014
74000.0	39.9	-53.6		63.3	577.2	102.1	23.4	1.000014
74500.0	39.0	-53.0		61.7	578.0	100.5	23.8	1.000014
75000.0	38.1	-52.5		60.1	578.8	99.7	24.3	1.000013
75500.0	37.2	-51.9		58.0	579.5	98.9	24.8	1.000013
76000.0	36.3	-51.3		57.1	580.3	98.4	24.8	1.000013
76500.0	35.5	-50.7		55.6	581.1	98.0	24.6	1.000012
77000.0	34.7	-50.2		54.2	581.7	97.5	24.3	1.000012
77500.0	33.9	-50.2		52.9	581.7	96.8	24.5	1.000012
78000.0	33.1	-50.2		51.7	581.7	96.0	24.7	1.000012
78500.0	32.3	-50.2		50.6	581.6			1.000011
79000.0	31.6	-50.3		49.4	581.6			1.000011
79500.0	30.9	-50.3		48.3	581.6			1.000011
80000.0	30.2	-50.3		47.2	581.6			1.000011

STATION ALTITUDE 3912.75 F ET MSL
28 JULY 83
ASCENSION NO. 40 1045 MDT

MANDATORY LEVELS
2090290040
EAST-28/CHEKRY
TABLE 15

GEODETIC COORDINATES
32.89927 LAT DEG
136.40591 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	5107.	24.2	10.1	41.	326.0	1.6
800.0	6836.	19.8	7.0	43.	331.3	5.4
750.0	8650.	16.3	4.8	47.	336.9	12.3
700.0	10561.	11.6	2.4	53.	354.4	15.7
650.0	12577.	6.7	-3	61.	9.8	11.2
600.0	14727.	3.7	-5.4	51.	51.4	4.1
550.0	17027.	-9	-9.5	52.	145.7	7.3
500.0	19504.	-5.2	-10.2	68.	240.5	5.5
450.0	22100.	-11.1	-13.2	84.	262.4	1.3
400.0	25132.	-15.8	-20.0	70.	227.0	9.4
350.0	28397.	-22.1	-27.7	60.	210.7	12.0
300.0	32051.	-30.0	-39.7	41.	209.1	14.6
250.0	36208.	-41.2			212.7	10.0
200.0	41055.	-53.0			234.1	22.2
175.0	43839.	-58.9			220.2	18.3
150.0	46962.	-65.4			202.6	22.1
125.0	50501.	-69.9			205.4	22.6
100.0	54964.	-70.2			166.7	7.3
80.0	59338.	-64.5			66.9	10.8
70.0	62038.	-61.0			111.0	11.4
60.0	65197.	-58.8			79.8	17.4
50.0	68974.	-56.3			105.6	20.0
40.0	73645.	-53.7			102.5	23.4
30.0	79785.	-50.3				

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

END

FILMED

9-83

DTIC