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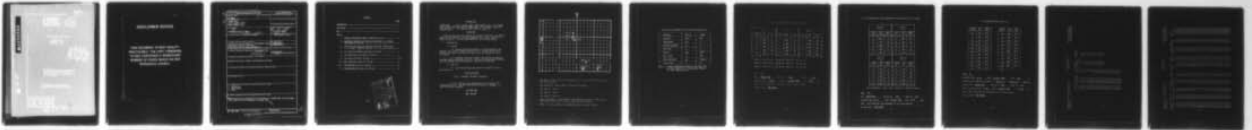
ARMY ELECTRONICS COMMAND WHITE SANDS MISSILE RANGE N--ETC F/G 4/2
19304D GSRs, MISSILE NUMBER 1023, ROUND NUMBER V-23.(U)
APR 79

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| 1. REPORT NUMBER DR-1004 | 2. GOVT ACCESSION NO. | 3. RECIPIENT'S CATALOG NUMBER |
| 4. TITLE (and Subtitle) 19304D GSRS, Missile Number 1023, Round Number V-23. | | 5. TYPE OF REPORT & PERIOD COVERED |
| 7. AUTHOR(S) WSMR Meteorological Team <i>data rept.</i> | | 6. PERFORMING ORG. REPORT NUMBER |
| 9. PERFORMING ORGANIZATION NAME AND ADDRESS | | 8. CONTRACT OR GRANT NUMBER(s) 16 17 1T6657-2D126-02 |
| 11. CONTROLLING OFFICE NAME AND ADDRESS US Army Electronics Research & Development Comd Atmospheric Sciences Laboratory White Sands Missile Range, New Mexico | | 10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS |
| 14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) US Army Electronics Research & Development Comd 12 16p. | | 12. REPORT DATE 11 Apr 1979 13. NUMBER OF PAGES |
| 16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited. | | 15. SECURITY CLASS. (of this report) UNCLASSIFIED 15a. DECLASSIFICATION/DOWNGRADING SCHEDULE |
| 17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) | | |
| 18. SUPPLEMENTARY NOTES | | |
| 19. KEY WORDS (Continue on reverse side if necessary and identify by block number) 1. Ballistics 2. Meteorology 3. Wind | | |
| 20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of 19304D GSRS, Missile Number 1023, Round V-23, are presented in tabular form. ↑ | | |

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INTRODUCTION

19304D GSRS, Missile Number 1023, Round Number V-23, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1517 MST, 24 April 1979. The scheduled launch time was 1515 MST.

DISCUSSION

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

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

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

b. Upper Air

(1) Low level wind data were obtained from RAPTS T-9 pibal observation at:

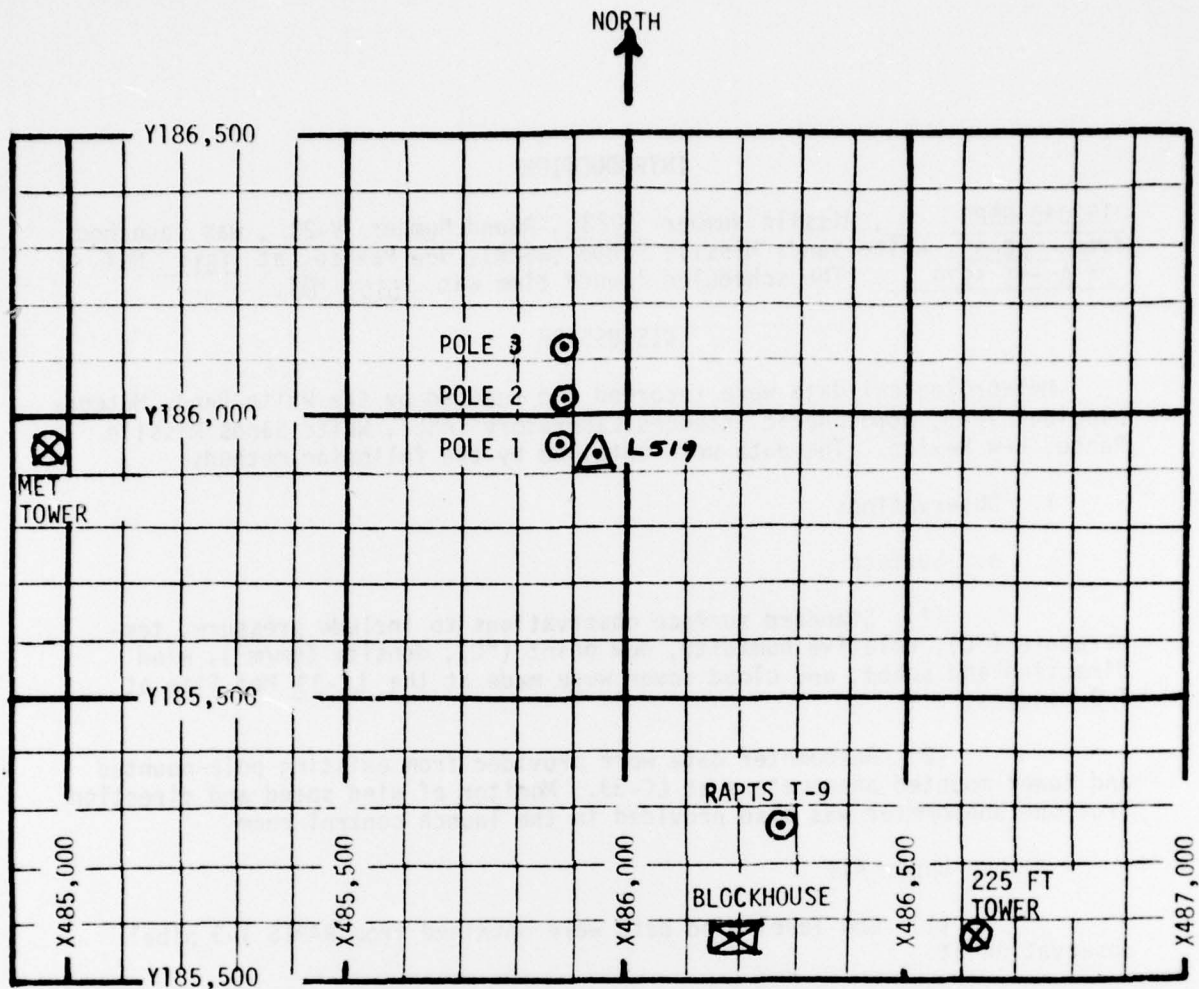
SITE AND ALTITUDE

LC-33 1 kilometer (50-meter increments)

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to 53,500 feet in 500-foot increments.

SITE AND TIME

SMR 1530 MST



1. MET TOWER - 4 Bendix Model T-120 Anemometers at 12 ft, 62 ft, 102 ft and 202 ft with E/A recorders.
2. POLE ANEMOMETER - Bendix Model T-120 with E/A recorders.
 - (a) Pole #1 - 38.7 ft
 - (b) Pole #2 - 53.0 ft
 - (c) Pole #3 - 83.6 ft
3. 225 FT WIND TOWER - 5 Bendix Model T-120 Anemometers at 35 ft, 88 ft, 128 ft, 168 ft and 200 ft with 5 X-Y visual indicators in Blockhouse.
4. RPTS T-9 - Radar Automatic Pilot-Balloon Tracking System T-9 Radar

The data are presented in the following tabulations:

| | | |
|-------------------|---------|-------------------|
| ELEVATION | 3977.30 | FT/MSL |
| PRESSURE | 893.9 | MBS |
| TEMPERATURE | 28.6 | °C |
| RELATIVE HUMIDITY | 26 | % |
| DEW POINT | 7.1 | °C |
| DENSITY | 1003 | GM/M ³ |
| WIND SPEED | 10 | MPH |
| WIND DIRECTION | 270 | DEGREES |
| CLOUD COVER | 3 | Cs |

TABLE I. SURFACE OBSERVATIONS TAKEN AT 1520 LOCAL TIME,
24 APRIL 1979 AT LC-33, 19304D GSRS, MISSILE
NO. 1023, ROUND NO. V-23.

LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

| POLE #1 | | | POLE #2 | | | POLE #3 | | |
|---------------|------------|--------------|---------------|------------|--------------|---------------|------------|--------------|
| T-TIME SEC | DIR DEG | SPEED MPH | T-TIME SEC | DIR DEG | SPEED MPH | T-TIME SEC | DIR DEG | SPEED MPH |
| -30 | 265 | 17 | -30 | 282 | 16 | -30 | 257 | 18 |
| -20 | 267 | 19 | -20 | 282 | 17 | -20 | 261 | 25 |
| -10 | 267 | 19 | -10 | 284 | 15 | -10 | 258 | 25 |
| 0.0 | 272 | 20 | 0.0 | 289 | 14 | 0.0 | 270 | 27 |
| +10 | 273 | 18 | +10 | 291 | 13 | +10 | 273 | 28 |

POLE #1 = X485,974.29 Y185,958.90 H4018.74 38.7 ft. AGL

POLE #2 = X485,874.93 Y186,012.00 H4033.57 53.0 ft. AGL

POLE #3 = X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL

TABLE II

TYPE 19304D GSRS MISSILE NO. 1023 ROUND NO. V-23

LAUNCHED FROM LC-33 DATE 24 April 1979 TIME 1517 LST

NOTE: WIND DIRECTIONS ARE REFERENCED TO THE FIPING AZIMUTH _____

OR TRUE NORTH TRUE NORTH

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

| LEVEL #1 12 ft | | | LEVEL #2 62 ft | | |
|--------------------|------------|--------------|--------------------|------------|--------------|
| T-TIME SEC | DIR DEG | SPEED MPH | T-TIME SEC | DIR DEG | SPEED MPH |
| -30 | 268 | 17 | -30 | 259 | 18 |
| -20 | 273 | 18 | -20 | 270 | 16 |
| -10 | 280 | 15 | -10 | 273 | 17 |
| 0.0 | 280 | 16 | 0.0 | 259 | 14 |
| +10 | 288 | 13 | +10 | 264 | 10 |
| LEVEL #3 102 ft | | | LEVEL #4 202 ft | | |
| T-TIME SEC | DIR DEG | SPEED MPH | T-TIME SEC | DIR DEG | SPEED MPH |
| -30 | 274 | 22 | -30 | 257 | 21 |
| -20 | 285 | 23 | -20 | 270 | 22 |
| -10 | 280 | 18 | -10 | 273 | 20 |
| 0.0 | 283 | 17 | 0.0 | 261 | 17 |
| +10 | 267 | 17 | +10 | 270 | 17 |

WTSM COORDINATES: X484,982.64 Y185,957.73 H3983.00 (base)

TABLE III

TYPE 19304D GSRS MISSILE NO. 1023 ROUND NO. V-23

LAUNCHED FROM LC-33 DATE 24 April 1979 TIME 1517 MST

NOTE: WIND DIRECTIONS ARE REFERENCED TO THE FIRING AZIMUTH _____

OR TRUE NORTH TRUE NORTH

PILOT BALLOON MEASURED WIND DATA

| HEIGHT METERS | DIR DEG | SPEED MPH |
|---------------|---------|-----------|
| SUR | 270 | 10.0 |
| 50 | 270 | 12.0 |
| 100 | 269 | 14.8 |
| 150 | 267 | 22.1 |
| 200 | 272 | 27.5 |
| 250 | 270 | 29.3 |
| 300 | 265 | 30.6 |
| 350 | 266 | 30.9 |
| 400 | 266 | 23.6 |
| 450 | 262 | 21.3 |
| 500 | 263 | 23.7 |

| HEIGHT METERS | DIR DEG | SPEED MPH |
|---------------|---------|-----------|
| 550 | 270 | 25.8 |
| 600 | 271 | 26.9 |
| 650 | 270 | 30.5 |
| 700 | 271 | 30.0 |
| 750 | 270 | 27.5 |
| 800 | 269 | 30.5 |
| 850 | 277 | 25.7 |
| 900 | 270 | 24.6 |
| 950 | 269 | 24.2 |
| 1000 | 281 | 26.5 |
| 1050 | | |

TABLE IV

RELEASED FROM LC-33 DATE 24 April 1979 TIME 1516 LST
 RELEASE POINT COORDINATES (WSTM) X = 486,037.24 Y = 182,350.16 H = 3977.30
 MISSILE TYPE 19304D GSRS MISSILE NO. 1023 ROUND NO. V-23
 MISSILE LAUNCHED FROM LC-33 DATE 24 April 1979 TIME 1517 LST
 NOTE: WIND DIRECTIONS ARE REFERENCED TO THE FIRING AZIMUTH _____
 OR TRUE NORTH TRUE NORTH.

STATION ALTITUDE 3997.30 FEET MSL
 24 APR. 79
 ASCENSION NO. 73

SIGNIFICANT LEVEL DATA
 1140060073
 S M R

STATION ALTITUDE 3997.30 FEET MSL
 24 APR. 79
 ASCENSION NO. 73

GEODETTIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

| PRESSURE GEOMETRIC ALTITUDE | TEMPERATURE AIR | REL. HUM. |
|-----------------------------|--------------------|-----------|
| MILLIBARS MSL FEET | DEGREES CENTIGRADE | PERCENT |
| 872.9 | 29.0 | 10.0 |
| 863.5 | 27.6 | 17.0 |
| 850.0 | 25.4 | 18.0 |
| 830.0 | 23.4 | 19.0 |
| 770.5 | 17.0 | 19.0 |
| 700.0 | 9.3 | 21.0 |
| 658.8 | 4.0 | 27.0 |
| 606.2 | -1.9 | 31.0 |
| 581.0 | -2.5 | 26.0 |
| 524.6 | -6.8 | 19.0 |
| 500.0 | -10.0 | 25.0 |
| 456.0 | -16.0 | 27.0 |
| 420.6 | -19.7 | 33.0 |
| 400.0 | -22.8 | 49.0 |
| 367.2 | -28.6 | 68.0 |
| 342.0 | -32.6 | 37.0 |
| 300.0 | -40.9 | 36.0 |
| 250.0 | -51.3 | |
| 200.0 | -59.8 | |
| 185.2 | -53.6 | |
| 164.2 | -64.7 | |
| 155.4 | -63.8 | |
| 150.0 | -64.7 | |
| 141.4 | -66.7 | |
| 130.6 | -65.6 | |
| 123.6 | -62.8 | |
| 116.8 | -63.6 | |
| 106.6 | -61.0 | |
| 103.2 | -62.1 | |
| 100.0 | -61.7 | |

STATION ALTITUDE 3997.30 FEET MSL
 24 APR. 79 1330 HRS MST
 ASCENSION NO. 73

UPPER AIR DATA
 1140000073
 S M R

GEOGETIC COORDINATES
 32.48034 LAT DEG
 100.42307 LON DEG

| 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 | |
| 3997.3 | 872.9 | 29.0 | -5.7 | 10.0 | 1004.7 | 677.8 | 280.0 | 15.0 | 1.000240 |
| 4000.0 | 872.8 | 29.0 | -5.6 | 10.1 | 1004.6 | 677.8 | 280.0 | 15.0 | 1.000241 |
| 4500.0 | 857.9 | 26.7 | -0.0 | 17.4 | 994.1 | 675.5 | 275.8 | 18.2 | 1.000247 |
| 5000.0 | 843.1 | 24.7 | -1.9 | 18.3 | 983.5 | 673.2 | 274.6 | 21.4 | 1.000244 |
| 5500.0 | 828.6 | 23.2 | -1.6 | 19.0 | 971.4 | 671.5 | 273.0 | 24.6 | 1.000240 |
| 6000.0 | 814.0 | 21.7 | -2.9 | 19.0 | 959.5 | 669.7 | 271.7 | 27.9 | 1.000235 |
| 6500.0 | 799.8 | 20.2 | -4.1 | 19.0 | 947.8 | 667.9 | 270.6 | 26.3 | 1.000231 |
| 7000.0 | 785.8 | 18.7 | -5.4 | 19.0 | 935.2 | 666.2 | 269.3 | 23.6 | 1.000227 |
| 7500.0 | 772.0 | 17.1 | -6.6 | 19.0 | 924.8 | 664.4 | 267.7 | 20.9 | 1.000223 |
| 8000.0 | 758.2 | 15.7 | -7.6 | 19.3 | 912.9 | 662.7 | 265.7 | 18.9 | 1.000219 |
| 8500.0 | 744.5 | 14.2 | -8.6 | 19.7 | 901.1 | 661.0 | 263.4 | 17.6 | 1.000215 |
| 9000.0 | 731.2 | 12.8 | -9.5 | 20.1 | 889.5 | 659.3 | 260.8 | 16.4 | 1.000212 |
| 9500.0 | 716.0 | 11.3 | -10.5 | 20.5 | 878.0 | 657.7 | 257.7 | 15.1 | 1.000208 |
| 10000.0 | 705.1 | 9.9 | -11.5 | 20.8 | 866.7 | 655.9 | 255.4 | 14.9 | 1.000205 |
| 10500.0 | 692.3 | 8.3 | -12.1 | 22.1 | 855.7 | 654.0 | 253.3 | 15.1 | 1.000202 |
| 11000.0 | 679.6 | 6.7 | -12.4 | 23.9 | 844.8 | 652.2 | 251.3 | 15.3 | 1.000200 |
| 11500.0 | 667.1 | 5.1 | -12.9 | 25.8 | 834.2 | 650.5 | 249.6 | 15.6 | 1.000197 |
| 12000.0 | 654.8 | 3.6 | -13.5 | 27.3 | 823.3 | 648.5 | 249.3 | 16.2 | 1.000194 |
| 12500.0 | 642.5 | 2.2 | -14.3 | 28.2 | 811.8 | 646.9 | 248.8 | 16.8 | 1.000191 |
| 13000.0 | 630.5 | 0.9 | -15.1 | 28.1 | 800.5 | 645.3 | 248.3 | 16.3 | 1.000188 |
| 13500.0 | 618.6 | -0.5 | -15.9 | 30.0 | 789.5 | 643.7 | 247.8 | 19.9 | 1.000185 |
| 14000.0 | 607.0 | -1.6 | -16.7 | 30.9 | 778.5 | 642.1 | 248.5 | 21.9 | 1.000182 |
| 14500.0 | 595.5 | -2.2 | -17.8 | 29.9 | 764.8 | 641.6 | 249.6 | 24.2 | 1.000178 |
| 15000.0 | 584.2 | -2.4 | -19.0 | 26.7 | 751.1 | 641.5 | 250.4 | 26.1 | 1.000174 |
| 15500.0 | 573.1 | -3.1 | -20.2 | 25.1 | 738.0 | 640.5 | 250.5 | 26.1 | 1.000171 |
| 16000.0 | 562.1 | -3.9 | -21.6 | 23.7 | 726.7 | 639.5 | 250.5 | 26.2 | 1.000168 |
| 16500.0 | 551.4 | -4.7 | -22.9 | 22.4 | 715.0 | 638.5 | 252.5 | 26.9 | 1.000164 |
| 17000.0 | 540.8 | -5.5 | -24.3 | 21.1 | 703.5 | 637.5 | 254.7 | 27.5 | 1.000161 |
| 17500.0 | 530.5 | -6.3 | -25.7 | 19.8 | 692.2 | 636.5 | 259.1 | 28.6 | 1.000158 |
| 18000.0 | 520.2 | -7.4 | -26.4 | 20.0 | 681.5 | 635.3 | 261.3 | 29.7 | 1.000156 |
| 18500.0 | 510.1 | -8.7 | -26.2 | 22.5 | 671.5 | 633.7 | 264.0 | 30.5 | 1.000153 |
| 19000.0 | 500.2 | -10.0 | -25.2 | 24.9 | 661.8 | 632.2 | 267.7 | 31.4 | 1.000151 |
| 19500.0 | 490.4 | -11.3 | -27.1 | 25.4 | 652.0 | 630.6 | 270.8 | 33.6 | 1.000149 |
| 20000.0 | 480.7 | -12.6 | -28.1 | 25.9 | 642.3 | 629.0 | 273.5 | 36.0 | 1.000146 |
| 20500.0 | 471.2 | -13.9 | -29.0 | 26.3 | 632.8 | 627.5 | 275.2 | 37.9 | 1.000144 |
| 21000.0 | 461.9 | -15.2 | -30.0 | 26.7 | 623.5 | 625.9 | 276.7 | 39.8 | 1.000142 |
| 21500.0 | 452.7 | -16.3 | -30.7 | 27.5 | 613.9 | 624.4 | 277.9 | 43.7 | 1.000139 |
| 22000.0 | 443.6 | -17.3 | -31.0 | 28.0 | 605.7 | 623.3 | 278.6 | 48.1 | 1.000137 |
| 22500.0 | 434.7 | -18.2 | -31.3 | 30.6 | 595.7 | 622.2 | 279.2 | 47.1 | 1.000135 |
| 23000.0 | 425.9 | -19.1 | -31.6 | 32.1 | 583.9 | 621.0 | 274.1 | 45.6 | 1.000133 |

STATION ALTITUDE 3997.30 FEET MSL
 24 APR. 79
 ASCENSION NO. 73

UPPER AIR DATA
 1140060073
 S M R

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES CENTIGRADE | | REL. HUM. PERCENT | DENSITY G/CUBIC METER | SPEED OF SOUND KNOTS | WIND DIRECTION DEGREES (TN) | WIND SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|------------------------------------|----------|-------------------|-----------------------|----------------------|-----------------------------|------------------|---------------------|
| | | AIR | DEWPOINT | | | | | | |
| 43500.0 | 417.3 | -20.2 | -31.5 | 35.5 | 574.5 | 619.7 | 272.6 | 42.8 | 1.000131 |
| 43000.0 | 408.8 | -21.5 | -30.9 | 42.0 | 565.9 | 618.2 | 272.8 | 43.5 | 1.000129 |
| 42500.0 | 400.5 | -22.7 | -30.5 | 46.6 | 558.9 | 618.9 | 274.1 | 46.4 | 1.000127 |
| 42000.0 | 392.2 | -24.1 | -30.9 | 52.4 | 548.4 | 614.9 | 273.9 | 48.7 | 1.000125 |
| 41500.0 | 384.1 | -25.5 | -31.3 | 56.0 | 540.2 | 613.1 | 273.1 | 50.7 | 1.000123 |
| 41000.0 | 376.1 | -27.0 | -31.9 | 62.7 | 532.0 | 611.4 | 274.2 | 50.7 | 1.000119 |
| 40500.0 | 368.3 | -28.4 | -32.5 | 67.3 | 524.0 | 609.6 | 275.2 | 49.7 | 1.000117 |
| 40000.0 | 360.5 | -29.6 | -34.9 | 60.0 | 515.5 | 609.0 | 273.7 | 48.8 | 1.000115 |
| 39500.0 | 352.9 | -30.8 | -37.7 | 50.7 | 507.2 | 609.5 | 285.6 | 48.2 | 1.000112 |
| 39000.0 | 345.4 | -32.0 | -40.7 | 41.4 | 499.0 | 605.0 | 289.6 | 48.2 | 1.000110 |
| 38500.0 | 338.0 | -33.3 | -43.0 | 36.9 | 491.0 | 603.3 | 289.4 | 48.7 | 1.000108 |
| 38000.0 | 330.7 | -34.7 | -44.3 | 36.7 | 483.1 | 601.8 | 289.3 | 49.8 | 1.000107 |
| 37500.0 | 323.5 | -36.1 | -45.6 | 36.6 | 475.4 | 599.8 | 289.2 | 51.4 | 1.000105 |
| 37000.0 | 316.5 | -37.5 | -46.9 | 36.4 | 467.9 | 598.1 | 290.2 | 54.1 | 1.000103 |
| 36500.0 | 309.6 | -38.9 | -48.2 | 36.2 | 460.4 | 596.3 | 291.3 | 56.9 | 1.000101 |
| 36000.0 | 302.9 | -40.3 | -49.5 | 36.1 | 453.1 | 594.5 | 290.2 | 57.9 | 1.000100 |
| 35500.0 | 296.2 | -41.6 | -51.3 | 33.5** | 445.7 | 592.6 | 289.8 | 58.6 | 1.000098 |
| 35000.0 | 289.5 | -42.9 | -53.7 | 28.0** | 438.1 | 591.1 | 289.7 | 60.0 | 1.000096 |
| 34500.0 | 283.0 | -44.2 | -56.2 | 24.5** | 430.6 | 589.4 | 289.8 | 61.5 | 1.000094 |
| 34000.0 | 276.6 | -45.5 | -58.0 | 20.0** | 423.3 | 587.6 | 290.3 | 63.2 | 1.000093 |
| 33500.0 | 270.4 | -46.8 | -62.0 | 15.5** | 415.1 | 586.1 | 291.8 | 64.8 | 1.000091 |
| 33000.0 | 264.3 | -48.1 | -65.7 | 10.9** | 409.1 | 584.4 | 292.6 | 66.0 | 1.000090 |
| 32500.0 | 258.3 | -49.4 | -70.4 | 6.4** | 402.2 | 582.7 | 294.9 | 67.3 | 1.000088 |
| 32000.0 | 252.5 | -50.7 | -79.2 | 1.9** | 395.4 | 581.0 | 295.9 | 68.6 | 1.000086 |
| 31500.0 | 246.6 | -51.6 | | | 388.2 | 579.5 | 297.2 | 72.2 | 1.000085 |
| 31000.0 | 240.9 | -52.7 | | | 380.6 | 578.4 | 298.5 | 76.6 | 1.000083 |
| 30500.0 | 235.2 | -53.6 | | | 373.2 | 577.2 | 299.9 | 81.4 | 1.000081 |
| 30000.0 | 229.6 | -54.5 | | | 365.9 | 576.0 | 301.1 | 86.3 | 1.000080 |
| 29500.0 | 224.2 | -55.4 | | | 358.6 | 574.8 | 301.8 | 91.0 | 1.000077 |
| 29000.0 | 218.9 | -56.4 | | | 351.6 | 573.6 | 302.4 | 95.7 | 1.000075 |
| 28500.0 | 213.8 | -57.3 | | | 343.0 | 572.4 | 302.5 | 99.6 | 1.000074 |
| 28000.0 | 208.6 | -58.2 | | | 334.3 | 571.2 | 302.6 | 103.4 | 1.000072 |
| 27500.0 | 203.6 | -59.1 | | | 331.7 | 570.0 | 303.1 | 104.5 | 1.000071 |
| 27000.0 | 199.0 | -60.0 | | | 325.3 | 568.7 | 303.8 | 104.7 | 1.000070 |
| 26500.0 | 194.2 | -61.3 | | | 319.3 | 567.1 | 304.3 | 103.1 | 1.000068 |
| 26000.0 | 189.5 | -62.5 | | | 307.4 | 565.5 | 304.7 | 103.7 | 1.000067 |
| 25500.0 | 184.9 | -63.6 | | | 293.2 | 563.5 | 304.1 | 110.0 | 1.000065 |
| 25000.0 | 180.4 | -63.8 | | | 286.3 | 563.0 | 304.5 | 112.1 | 1.000064 |
| 24500.0 | 176.0 | -64.1 | | | | | | | |
| 24000.0 | 171.7 | -64.3 | | | | | | | |

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

GEODETIC COORDINATES
 32°46'03" LAT DEG
 106°42'30" LON DEG

UPPER AIR DATA
 1140050073
 S M R

STATION ALTITUDE 3997.30 FEET MSL
 24 APR. 79 1530 HRS MST
 ASCENSION NO. 73

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | AIR TEMPERATURE DEGREES CENTIGRADE | REL. HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DIRECTION DEGREES(T) | WIND SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|------------------------------------|-------------------|------------------------|----------------------|---------------------------|------------------|---------------------|
| 43500.0 | 167.5 | -64.5 | | 279.6 | 562.7 | 299.4 | 109.5 | 1.000062 |
| 44000.0 | 163.4 | -64.5 | | 272.9 | 562.6 | 299.6 | 105.0 | 1.000061 |
| 44500.0 | 159.4 | -64.1 | | 265.5 | 563.2 | 300.4 | 94.6 | 1.000059 |
| 45000.0 | 155.5 | -63.9 | | 258.9 | 563.5 | 301.4 | 84.4 | 1.000058 |
| 45500.0 | 151.7 | -64.5 | | 253.2 | 562.8 | 301.6 | 76.1 | 1.000056 |
| 46000.0 | 147.9 | -65.2 | | 247.5 | 561.8 | 301.6 | 67.8 | 1.000055 |
| 46500.0 | 144.3 | -66.0 | | 242.7 | 560.7 | 300.5 | 65.3 | 1.000054 |
| 47000.0 | 140.7 | -66.6 | | 237.4 | 559.9 | 298.6 | 62.9 | 1.000053 |
| 47500.0 | 137.3 | -66.3 | | 231.1 | 560.3 | 297.0 | 60.5 | 1.000051 |
| 48000.0 | 133.9 | -65.9 | | 225.0 | 560.6 | 295.4 | 58.2 | 1.000050 |
| 48500.0 | 130.6 | -65.6 | | 219.1 | 561.3 | 292.9 | 54.6 | 1.000049 |
| 49000.0 | 127.4 | -64.3 | | 212.5 | 563.0 | 290.0 | 50.9 | 1.000047 |
| 49500.0 | 124.2 | -63.1 | | 206.0 | 564.7 | 285.2 | 49.8 | 1.000046 |
| 50000.0 | 121.2 | -63.1 | | 201.1 | 564.8 | 280.3 | 49.4 | 1.000045 |
| 50500.0 | 118.3 | -63.6 | | 196.6 | 564.0 | 273.7 | 52.4 | 1.000044 |
| 51000.0 | 115.4 | -63.4 | | 191.7 | 564.2 | 277.4 | 55.3 | 1.000043 |
| 51500.0 | 112.6 | -62.7 | | 186.3 | 565.2 | 278.9 | 58.3 | 1.000041 |
| 52000.0 | 109.9 | -61.9 | | 181.2 | 566.2 | 280.3 | 61.3 | 1.000040 |
| 52500.0 | 107.2 | -61.2 | | 176.2 | 567.2 | | | 1.000039 |
| 53000.0 | 104.6 | -61.6 | | 172.3 | 566.6 | | | 1.000038 |
| 53500.0 | 102.1 | -62.0 | | 160.4 | 566.2 | | | 1.000037 |

STATION ALTITUDE 3997.30 FEET MSL
24 APR. 79 1530 HRS MST
ASCENSION NO. 73

MRN SIGNIFICANT LEVEL DATA
1140000073
S M R

GEOPOTENTIAL ALTITUDE DECAMETERS 1630.
WIND DATA
DIRECTION DEG (TR) 9999.**
SPEED MPS 9999.**
N-S MPS -9999.**
E-W MPS -9999.**
DEW PT DEP DEG C 99
TEMPERATURE AIR DEG C -61.7
PRESSURE MILLIBARS 1.000+2

** WIND DATA NOT COMPUTED DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 3927.30 FEET MSL
 24 APR. 79
 ASCENSION NO. 73

MANDATORY LEVELS
 1140060073
 S M R

GEODETTIC COORDINATES
 22.46034 LAT DEG
 106.42307 LON DEG

| PRESSURE GEOPOTENTIAL | | TEMPERATURE | | REL. HUM. | WIND DATA | |
|-----------------------|--------|-------------|---------------------|-----------|-----------------------|-------------|
| MILLIBARS | FEET | AIR DEGREES | DEWPOINT CENTIGRADE | PERCENT | DIRECTION DEGREES(TN) | SPEED KNOTS |
| 850.0 | 4764. | 25.4 | -6 | 18. | 275.5 | 19.9 |
| 800.0 | 6492. | 20.2 | -4.1 | 19. | 270.0 | 26.4 |
| 750.0 | 8298. | 14.8 | -8.2 | 20. | 264.5 | 18.2 |
| 700.0 | 10192. | 9.3 | -11.9 | 21. | 254.0 | 15.0 |
| 650.0 | 12183. | 3.0 | -15.9 | 28. | 249.1 | 15.5 |
| 600.0 | 14286. | -2.0 | -17.3 | 30. | 249.2 | 23.3 |
| 550.0 | 16546. | -4.8 | -23.1 | 32. | 252.8 | 26.9 |
| 500.0 | 18986. | -10.0 | -26.2 | 25. | 267.8 | 31.4 |
| 450.0 | 21617. | -16.6 | -30.8 | 26. | 276.2 | 45.0 |
| 400.0 | 24490. | -22.8 | -30.5 | 49. | 274.1 | 46.5 |
| 350.0 | 27646. | -31.3 | -38.8 | 47. | 267.9 | 48.1 |
| 300.0 | 31160. | -40.9 | -50.1 | 36. | 289.0 | 58.2 |
| 250.0 | 35136. | -51.3 | | | 296.3 | 69.5 |
| 200.0 | 39604. | -59.6 | | | 303.6 | 104.7 |
| 175.0 | 42506. | -64.1 | | | 300.2 | 110.8 |
| 150.0 | 45597. | -64.7 | | | 301.7 | 72.8 |
| 125.0 | 49236. | -63.4 | | | | |
| 100.0 | 53753. | -61.7 | | | 266.6 | 50.1 |

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

STATION ALTITUDE 3997.30 FEET MSL
 24 APR. 79 1530 HRS MST
 ASCENSION NO. 73

MRI. MANDATORY LEVELS
 1140060075
 S M R

GEODEIC COORDINATES
 32.48034 LAT DEG
 106.42307 LONG DEG

| GEOPOTENTIAL ALTITUDE DECAMETERS | DIRECTION UEG (TH) | SPEED MPS | WIND DATA | | E-W MPS | DEW PT DEP DEG C | TEMPERATURE | | PRESSURE MILLIBARS |
|--|-----------------------|--------------|------------|----------|------------|---------------------|--------------|---------|-----------------------|
| | | | N-S MPS | | | | AIR DEG C | | |
| 1636. | 9999.** | 9999.** | -9999.** | -9999.** | 99 | -61.7 | | 1.000+2 | |
| 1501. | 267. | 28. | -7. | -7. | 99 | -63.4 | | 1.250+2 | |
| 1390. | 302. | 37. | -20. | -20. | 99 | -64.7 | | 1.500+2 | |
| 1296. | 300. | 57. | -29. | -29. | 99 | -64.1 | | 1.750+2 | |
| 1213. | 304. | 54. | -30. | -30. | 99 | -59.8 | | 2.000+2 | |
| 1071. | 296. | 36. | -16. | -16. | 99 | -51.3 | | 2.500+2 | |
| 950. | 290. | 30. | -10. | -10. | 09 | -40.9 | | 3.000+2 | |
| 843. | 268. | 23. | -8. | -8. | 08 | -31.3 | | 3.500+2 | |
| 746. | 274. | 24. | -2. | -2. | 08 | -22.8 | | 4.000+2 | |
| 659. | 278. | 23. | -3. | -3. | 14 | -19.6 | | 4.500+2 | |
| 579. | 268. | 16. | 1. | 1. | 16 | -10.0 | | 5.000+2 | |
| 504. | 253. | 14. | 4. | 4. | 16 | -4.8 | | 5.500+2 | |
| 436. | 249. | 12. | 4. | 4. | 15 | -2.0 | | 6.000+2 | |
| 371. | 249. | 6. | 3. | 3. | 17 | 3.0 | | 6.500+2 | |
| 311. | 255. | 9. | 2. | 2. | 21 | 9.3 | | 7.000+2 | |
| 253. | 264. | 9. | 1. | 1. | 23 | 14.8 | | 7.500+2 | |
| 198. | 271. | 14. | -0. | -0. | 24 | 20.2 | | 8.000+2 | |
| 143. | 276. | 10. | -1. | -1. | 26 | 25.4 | | 8.500+2 | |

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** WIND DATA NOT COMPUTED DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.