AD-A119 169 ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2
193188 MLRS, MISSILE NUMBERS BN-201, BN-135, BN-163, BN-181, BN--ETC(U)
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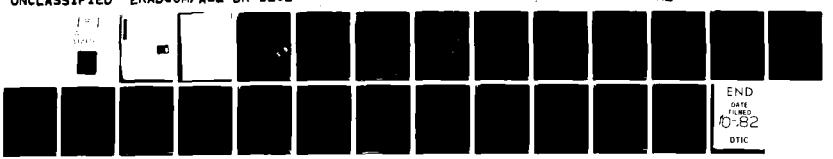

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19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

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

Meteorological data gathered for the launching of the 19318B MLRS, Missile Number BN-201,BN-135,BN-163,BN-181,BN-204,BN-189, Round Number V-295/PQT-35 thru V-300/PQT-40 are presented in tabular form.

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INTRODUCTION

19318B MLRS, Missile Numbers BN-201, BN-135, BN-163, BN-181, BN-204, and BN-189, Round Numbers V-295/PQT-35 thru V-300/PQT-40, were launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1503:30, 1503:35, 1503:41, 1503:48, 1503:54, and 1521:05 MDT, 05 Aug 1982. The scheduled launch times were 1500, 1500:04.5, 1500:09, 1500:13.5, 1500:18, and 1505 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 (^{o}C), relative humidity, dew point (^{o}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

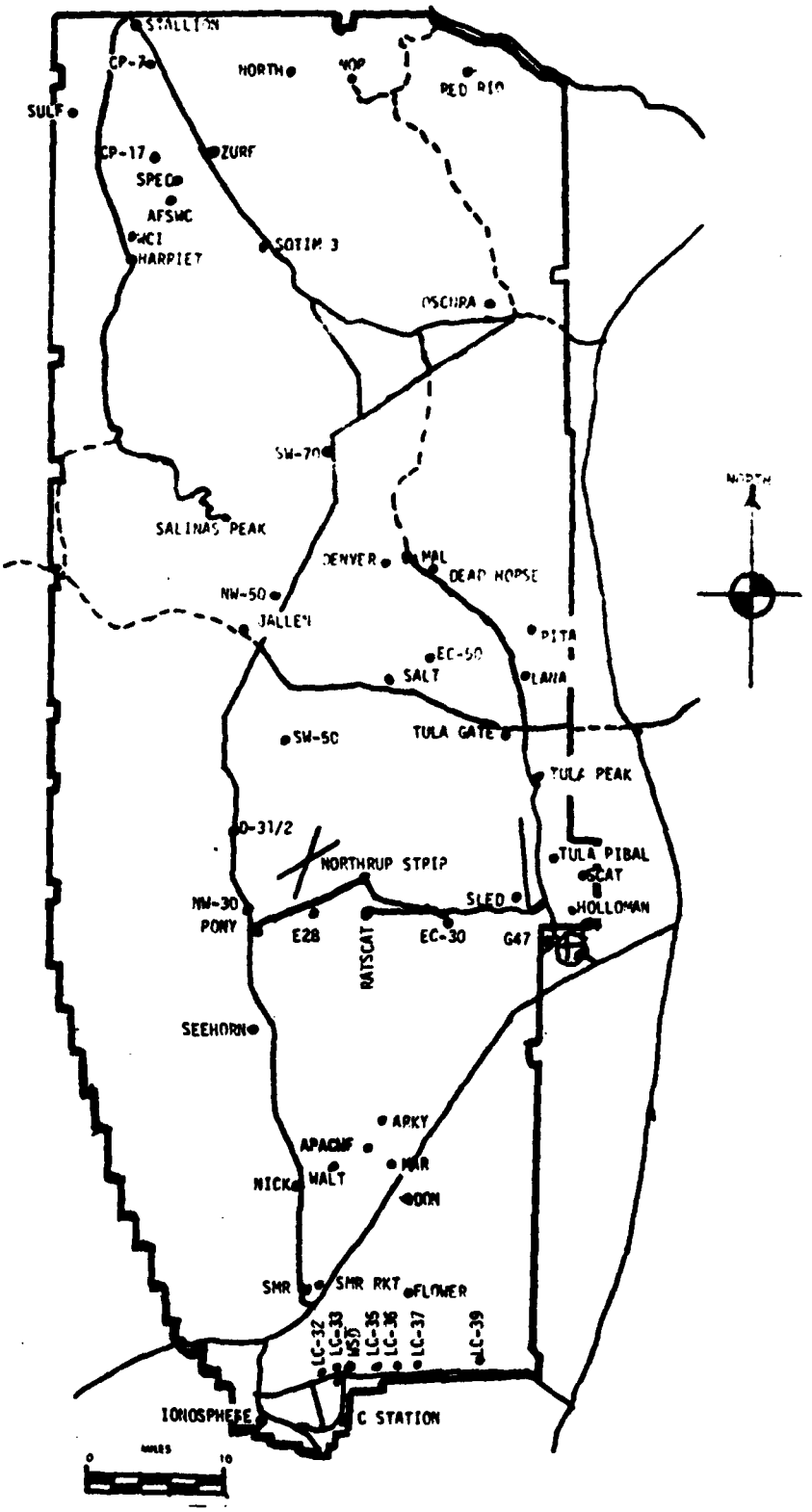
(1) Low level wind data were obtained from pilot-balloon observations at:

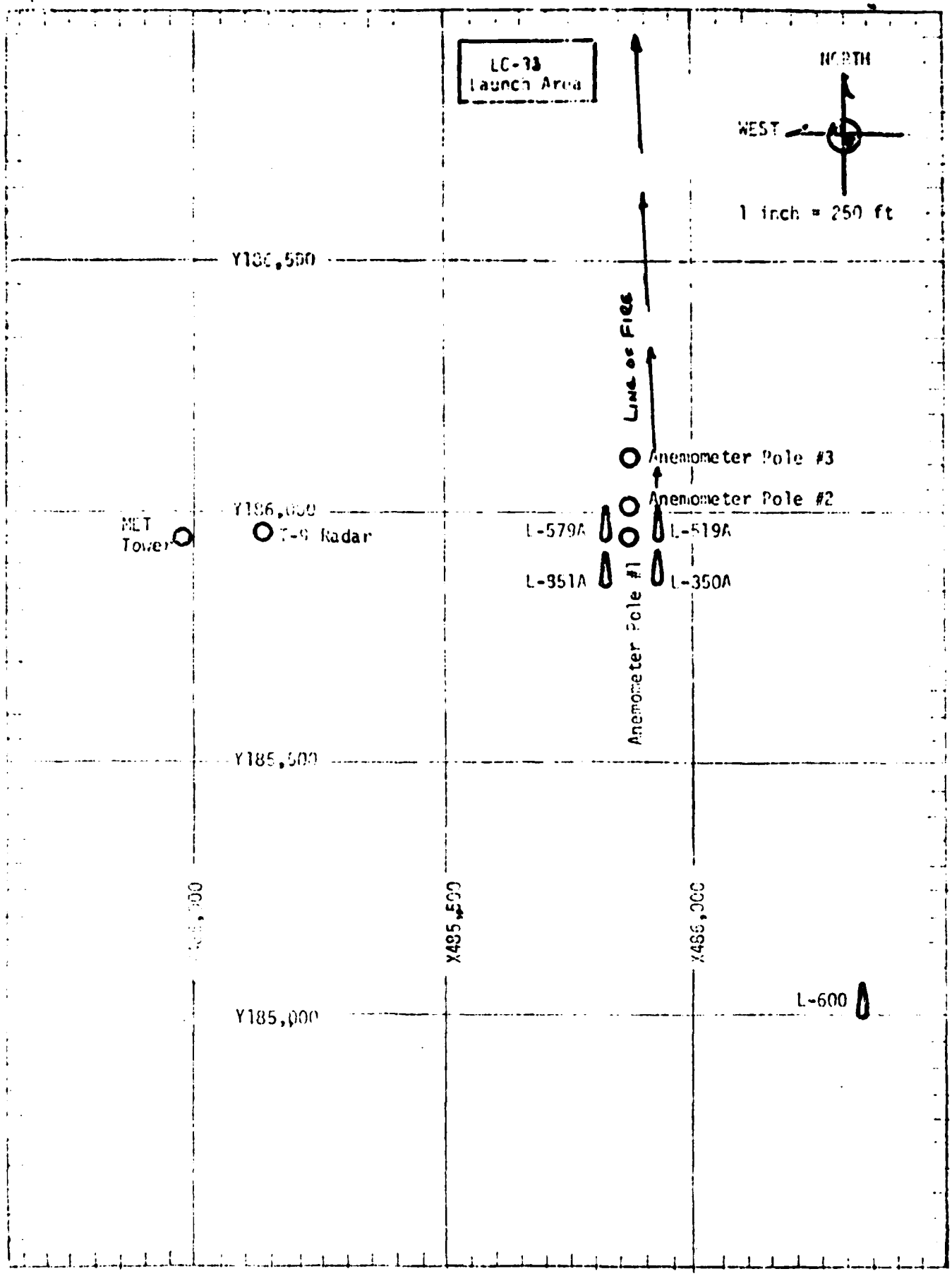
SITE AND ALTITUDE	
WSD	2 km
DON	2 km

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

SITE AND TIME	
WSD	1230 MDT
LC-37	1415 MDT
WSD	1515 MDT

WSMR METEOROLOGICAL SITES




LC-39
Launch Area
NORTH
WEST
1 inch = 250 ft
Y186,500
Line of Fire
Anemometer Pole #3
Anemometer Pole #2
Y186,000
MET
Tower
T-9 Radar
L-579A
L-519A
L-351A
L-350A
Anemometer Pole #1
Y185,500
X485,500
X486,000
L-600
Y185,000

PROJECT SURFACE OBSERVATION

TABLE 1

STATION LC-33

DATE 05 (DAY) Aug (MONTH) 82 (YEAR)

X= 484,982.64 Y= 185,957.73 H= 3995.00

TIME M D I	PRESSURE mbs	TEMPERATURE °F	TEMPERATURE °C	DEW POINT °F	DEW POINT °C	RELATIVE HUMIDITY %	DENSITY gm/m³	WIND DIRECTION degs Tn	WIND SPEED kts	WIND CHARACTER kts	VISIBILITY
1503	881.2		34.4		12.6	27	990	165	*07		40
1521	881.2		34.5		13.1	28	990	160	*09		

OBSTRUCTIONS TO VISIBILITY	CLOUDS 1st LAYER AMT	1st LAYER TYPE	1st LAYER HGT	2nd LAYER AMT	2nd LAYER TYPE	2nd LAYER HGT	3rd LAYER AMT	3rd LAYER TYPE	3rd LAYER HGT	REMARKS
	8	SC	6,500	1	AS	12,000	0	CI	25,000	
	8	SC	6,500	1	AS	12,000	0	CI	25,000	

PSYCHROMETRIC COMPUTATION

TIME:	1503	1521	
DRY BULB TEMP.	34.4	34.5	
WET BULB TEMP.	19.7	20.0	
WET BULB DEPR.	14.7	14.5	
DEW POINT	12.6	13.1	
RELATIVE HUMID.	27	28	

TABLE 2 LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

1503 MDT

POLE #1 X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL			POLE #2 X485,874.29 Y186.012.00 H4033.57 53.0 ft. AGL			POLE #3 X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
-30	148	10	-30	178	08	-30	187	08
-20	140	09	-20	175	09	-20	180	09
-10	125	11	-10	163	10	-10	163	06
0.0	122	09	0.0	153	08	0.0	149	09
+10	127	09	+10	158	07	+10	158	08

TABLE 3 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #2, 62 FEET X484,982.64, Y185.057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
-30	MISG	MISG	-30	MISG	09
-20	MISG	MISG	-20	MISG	09
-10	MISG	MISG	-10	MISG	08
0.0	MISG	MISG	0.0	MISG	06
+10	MISG	MISG	+10	MISG	06

LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #4, 202 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
-30	175	09	-30	159	07
-20	179	09	-20	174	10
-10	180	08	-10	149	10
0.0	177	09	0.0	180	10
+10	175	09	+10	168	09

TABLE 4. LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

1521 MDT

POLE #1 X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL			POLE #2 X485,874.29 Y186,012.06 H4033.57 53.0 ft. AGL			POLE #3 X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
-30	157	16	-30	175	12	-30	201	17
-20	162	15	-20	165	12	-20	202	16
-10	154	10	-10	168	07	-10	194	15
0.0	160	10	0.0	159	08	0.0	206	12
+10	165	11	+10	160	08	+10	199	10

TABLE 5 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (200 FT TOWER)

LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #2, 62 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
-30	MISG	MISG	-30	MISG	11
-20	MISG	MISG	-20	MISG	09
-10	MISG	MISG	-10	MISG	09
0.0	MISG	MISG	0.0	MISG	08
+10	MISG	MISG	+10	MISG	09

LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #4, 202 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
-30	184	10	-30	183	10
-20	184	09	-20	193	10
-10	191	06	-10	203	07
0.0	186	06	0.0	201	06
+10	198	09	+10	186	10

TABLE 9

T-TIME PILOT-BALLOON [illegible]

DATE 05 Aug 1982

SITE: WSD
TIME: 1505 MDT
WSTN COORDINATES:
X= 488,717.25
Y= 184,862.84
H= 3,993.75

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	180	08
150	175	17
210	173	15
270	162	18
330	150	17
390	148	18
500	137	17
650	129	16
800	129	17
950	131	15
1150	120	15
1350	128	14
1550	126	13
1750	127	10
2000	124	11

Data obtained from Nike-Herc Radar Tracked pilot-balloon observation.

SITE: DON
TIME: 1503 MDT
WSTN COORDINATES:
X= 511,988.37
Y= 247,396.36
H= 3,996.83

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	150	03
150	134	23
210	134	25
270	134	23
330	135	20
390	135	17
500	136	12
650	123	15
800	126	19
950	127	18
1150	118	11
1350	120	17
1550	125	24
1750	123	24
2000	123	22

Data obtained from single Theodolite Tracked pilot-balloon observation.

TABLE-7

AIMING AND T-TIME COMPUTER MET MESSAGES

WSD 1230 MDT		LC-37 1415 MDT		WSD 1515 MDT	
METCM1324064		METCM1324063		METCM1324064	
051850122884		052030124881		052130122883	
00427005	30780884	00178006	30700881	00258008	30870883
01353008	30530875	01266017	30680871	01321009	30600873
02327006	30180850	02278015	30440847	02335014	30460899
03085001	29760812	03252005	30070809	03279008	30100812
04168006	29250767	04182009	29580764	04239011	29620767
05183010	28820723	05183010	29090721	05172009	29170723
06176020	28490681	06182016	28630679	06166017	28710682
07172020	28160642	07204016	28240640	07156018	28320644
08220014	27870604	08228017	27900603	08189018	27950605
09236015	27480563	09229017	27550567	09212016	27490559
10230013	27030533	10241021	27110533	10227018	27130534
11250021	26710501	11222021	26760500	11234023	26790502
12222021	26210454	12202022	26310454	12210023	26410456

STATION ALTITUDE 3959.00 FEET MSL
5 AUG. 82 1230 MDT
ASCENSION NO. 381

SIGNIFICANT LEVEL DATA
82080501
WHITE SANDS

GEODETIC COORDINATES
32.460043 LAT DEG
106.370553 LON DEG

TABLE-8

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
856.4	5989.0	32.1	13.6	37.0
850.0	6491.0	28.9	12.8	37.0
850.0	6549.2	28.7	12.4	41.0
750.5	7800.7	19.0	9.0	55.0
732.9	7957.9	14.1	5.7	70.0
700.0	8262.3	11.7	0.2	59.0
668.9	11870.9	9.5	2.9	82.0
664.5	12057.1	8.7	2.1	83.0
617.4	14349.3	0.2	-0.4	80.0
585.8	15949.4	3.0	-0.4	90.0
550.4	17796.2	-2.7	-13.7	36.0
520.3	18277.4	-4.7	-9.0	72.0
521.1	18533.3	-5.0	-8.7	75.0
500.1	19488.2	-5.7	-20.1	31.0
500.0	19611.3	-8.4	-16.3	38.0
469.9	21189.4	-9.2	-17.4	31.0
447.0	22452.0	-13.2	-17.8	68.0
433.5	23221.0	-13.2	-21.4	36.0
430.0	23424.8	-16.4	-29.2	32.0

STATION ALTITUDE 3989.00 FEET MSL
5 AUG. 82 1230 MDT
ASCENSION NO. 381

UPPER AIR DATA
417002U381
WHITE SANDS

GEODETIC COORDINATES
32.400N43 LAT DEG
106.37033 LON DEG

TABLE-9

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3989.0	884.4	32.1	13.6	37.0	1001.7	683.2	240.0	5.1	1.000295
4000.0	884.1	32.0	13.5	37.0	1001.6	683.1	240.0	5.0	1.000295
4500.0	869.2	28.7	12.7	37.5	990.5	679.1	237.7	4.8	1.000285
5000.0	854.4	27.2	12.5	40.1	984.7	677.3	235.5	4.9	1.000280
5500.0	839.7	25.8	12.1	43.0	972.9	673.3	225.7	1.9	1.000277
6000.0	825.1	24.0	11.7	45.9	961.2	673.7	201.7	1.0	1.000273
6500.0	810.9	22.5	11.1	48.7	949.7	671.9	118.5	1.0	1.000269
7000.0	796.8	20.9	10.5	51.6	938.5	670.1	88.1	2.5	1.000265
7500.0	783.0	19.3	9.9	54.4	927.2	668.2	90.5	3.6	1.000261
8000.0	769.5	17.9	9.6	58.4	915.4	666.6	94.7	5.0	1.000258
8500.0	755.7	16.5	9.4	62.7	903.5	665.0	95.4	6.1	1.000255
9000.0	742.3	15.1	9.0	66.9	891.9	663.4	95.6	7.2	1.000251
9500.0	729.1	13.8	8.4	69.9	880.0	661.9	97.7	9.0	1.000247
10000.0	716.1	12.9	7.5	69.5	869.4	660.7	100.0	11.5	1.000241
10500.0	703.3	11.9	6.5	69.1	858.9	659.5	101.0	14.6	1.000236
11000.0	690.6	11.1	5.2	66.9	848.2	658.3	100.9	15.1	1.000229
11500.0	678.1	10.4	3.9	64.1	837.3	657.3	97.4	20.1	1.000223
12000.0	665.9	9.0	2.3	62.7	826.8	655.8	96.0	20.9	1.000217
12500.0	653.7	8.1	.4	57.9	816.0	654.6	95.3	21.4	1.000210
13000.0	641.8	7.3	-1.7	52.1	806.7	653.7	98.4	19.3	1.000203
13500.0	630.0	6.9	-3.8	46.3	794.0	652.8	104.9	17.4	1.000196
14000.0	618.5	6.3	-6.1	40.6	781.6	652.0	112.4	15.8	1.000190
14500.0	607.1	5.2	-8.3	43.0	769.5	650.8	119.0	14.8	1.000186
15000.0	595.9	4.2	-8.3	46.3	757.9	649.6	123.2	14.0	1.000183
15500.0	584.9	3.1	-8.4	49.7	746.7	648.5	129.4	14.3	1.000179
16000.0	573.9	1.8	-8.2	47.2	735.4	646.7	132.5	14.6	1.000 178
16500.0	563.1	.8	-10.2	44.0	725.3	645.1	132.1	14.4	1.000174
17000.0	552.6	-.7	-12.3	41.9	715.4	643.6	131.8	14.1	1.000169
17500.0	542.2	-2.0	-14.4	37.8	705.5	642.0	130.5	13.5	1.000165
18000.0	531.9	-3.0	-12.0	51.9	695.2	640.2	129.8	13.0	1.000160
18500.0	521.8	-5.0	-5.6	74.0	686.2	638.7	131.0	14.4	1.000157
19000.0	511.8	-5.4	-14.7	47.8	675.0	637.9	134.8	15.7	1.000156
19500.0	502.0	-6.2	-18.6	35.7	664.5	636.9	140.1	20.1	1.000153
20000.0	492.5	-7.1	-18.0	41.5	654.8	635.8	142.1	22.4	1.000151
20500.0	482.7	-9.0	-17.7	45.4	645.4	634.6	142.8	23.5	1.000149
21000.0	473.4	-8.9	-17.5	49.3	636.2	633.7	142.2	22.9	1.000147
21500.0	464.2	-10.2	-17.4	53.2	626.1	632.1	142.1	21.8	1.000145
22000.0	455.1	-11.8	-17.6	61.9	616.7	630.2	142.0	21.0	1.000143
22500.0	446.1	-13.2	-18.0	66.9	597.1	628.5	141.7	20.9	1.000141
23000.0	437.3	-13.2	-20.3	55.2	589.5	627.4	141.7	21.1	1.000139

STATION ALTITUDE 3939.00 FEET MSL
3 AUG. 82 1230 MDT
ASCENSION NO. 381

UPPER AIR DATA
2170U2U381
WHITE SANDS

GEODETIC COORDINATES
32.4UU43 LAT DEG
1U6.37U33 LON DEG

TABLE-9 cont'd

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
23500.0	426.7	-13.6	-24.4	47.0	574.9	627.9	106.8	22.1	1.0001134
24000.0	420.2	-14.4	-24.2	43.0	565.3	626.9			1.0001131
24500.0	411.8	-15.2	-26.2	38.3	555.9	625.8			1.0001126
25000.0	403.6	-16.0	-28.2	34.0	546.6	624.8			1.0001123

STATION ALTITUDE 3980.00 FEET MSL
5 AUG. 82 1230 MDT
ASCENSION NO. 381

MANDATORY LEVELS
21700Z0361
WHITE SANDS
TABLE-10

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

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	5145.	20.7	12.4	61.	232.1	2.6
800.0	6867.	21.2	10.7	51.	91.5	2.0
750.0	8707.	15.9	9.2	64.	95.5	6.6
700.0	10619.	11.7	6.2	69.	101.2	15.5
650.0	12645.	7.9	-.5	58.	96.4	20.2
600.0	14800.	4.6	-6.3	45.	125.5	14.3
550.0	17104.	-1.0	-12.8	40.	131.5	13.9
500.0	19572.	-6.4	-18.5	38.	140.9	20.7
450.0	22249.	-12.7	-17.7	66.	121.0	20.9
400.0	25182.	-16.4	-29.2	32.		

STATION ALTITUDE 4051.37 FEET MSL
5 AUG. 82 1415 MDT
ASCENSION NO. 74

SIGNIFICANT LEVEL DATA
217018UU74
LC-37

TABLE-11

GEODETIC COORDINATES
32.4U175 LAT DEG
106.51232 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
880.5	4051.4	32.U	14.0	35.U
872.7	4314.4	32.1	13.3	32.U
850.U	5U9U.2	29.7	12.2	34.U
779.8	7587.8	22.0	1U.4	46.U
752.0	8598.0	19.3	9.8	54.U
724.9	9655.4	16.3	9.4	63.U
7UU.U	10650.8	13.3	9.U	74.U
679.8	1144U.7	11.0	7.1	74.U
662.0	12144.0	9.9	5.U	62.U
637.4	132U2.U	8.1	.6	59.U
621.2	13698.8	5.9	-1.3	59.U
595.2	15U49.U	4.9	-3.9	55.U
57U.7	16172.U	2.3	-9.U	43.U
55U.4	18U99.0	-2.9	-14.3	41.U
516.6	18885.8	-4.0	-9.4	69.U
5UU.U	19629.8	-6.2	-8.3	84.U
467.3	21363.4	-9.U	-15.7	58.U
459.7	21786.9	-9.6	-16.3	58.U
436.3	23101.7	-12.6	-19.3	57.U
422.2	23927.3	-12.6	-24.8	35.U
4UU.U	25276.U	-15.8	-35.U	21.U

UPPER AIR DATA

STATION ALTITUDE 4051.37 FEET MSL
5 AUG. 82 1415 MDT
ASCENSION NO. 74

2170180074
TABLE-12 (LC-37)

GEODETIC COORDINATES
32.40175 LAT DEG
106.51232 LON DEG

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
4051.4	880.5	32.0	14.6	55.0	998.0	683.0	100.0	6.0	1.000290
4500.0	867.2	31.5	13.1	52.5	985.1	682.2	101.9	6.0	1.000281
5000.0	854.6	30.0	12.5	53.8	973.6	680.4	104.1	6.0	1.000276
5500.0	838.1	28.5	12.0	56.0	961.6	678.8	106.4	5.9	1.000273
6000.0	823.7	27.1	11.7	58.4	949.6	677.2	108.6	5.9	1.000270
6500.0	809.6	25.7	11.4	60.8	937.9	675.6	110.8	5.9	1.000268
7000.0	795.8	24.3	11.0	63.2	926.5	674.0	113.1	5.9	1.000265
7500.0	782.2	22.8	10.5	65.6	914.9	672.3	109.0	6.5	1.000259
8000.0	768.8	21.3	10.2	69.3	903.9	670.5	102.6	7.6	1.000256
8500.0	755.2	19.8	9.8	73.2	893.1	668.8	100.2	8.5	1.000253
9000.0	742.0	18.2	9.7	77.4	881.6	667.1	105.5	8.8	1.000250
9500.0	728.9	16.9	9.5	81.7	870.0	665.8	108.7	9.4	1.000247
10000.0	716.0	15.4	9.3	86.9	858.9	663.9	106.0	11.1	1.000245
10500.0	703.5	13.9	9.1	92.5	848.2	662.1	104.0	12.7	1.000242
11000.0	690.7	12.6	8.1	94.0	837.0	660.5	105.5	14.6	1.000237
11500.0	678.5	11.5	6.8	93.0	825.7	659.0	107.4	16.5	1.000230
12000.0	666.1	10.2	5.9	94.5	815.0	657.5	109.5	17.9	1.000220
12500.0	654.0	9.5	2.2	81.0	803.5	656.1	112.1	17.8	1.000213
13000.0	642.1	8.4	1.0	79.0	791.5	655.0	114.9	17.7	1.000208
13500.0	630.4	7.2	-0.5	79.0	780.7	653.4	117.8	16.9	1.000203
14000.0	618.9	5.8	-1.7	78.5	770.5	651.8	121.0	16.0	1.000196
14500.0	607.5	5.4	-2.7	75.9	757.4	651.2	123.8	15.7	1.000195
15000.0	596.3	4.9	-3.8	75.5	744.8	650.6	125.9	16.0	1.000189
15500.0	585.2	3.9	-5.9	69.0	734.1	649.2	128.0	16.4	1.000183
16000.0	574.4	2.7	-8.2	64.5	723.5	647.7	130.2	17.1	1.000178
16500.0	563.8	1.4	-9.9	62.7	713.7	646.2	132.2	17.9	1.000174
17000.0	553.0	.1	-11.2	62.1	703.9	644.5	134.1	18.7	1.000170
17500.0	542.6	-1.3	-12.6	61.6	694.2	642.9	135.8	19.4	1.000167
18000.0	532.4	-2.6	-14.0	61.1	684.6	641.2	133.4	20.1	1.000165
18500.0	522.5	-3.8	-11.4	55.5	674.2	640.0	132.5	20.7	1.000164
19000.0	512.5	-4.8	-9.2	71.5	665.7	638.8	128.7	20.8	1.000164
19500.0	502.5	-5.9	-8.0	81.4	655.5	637.8	124.8	20.8	1.000163
20000.0	492.8	-6.8	-7.9	78.4	645.2	636.5	121.5	20.5	1.000159
20500.0	483.5	-7.8	-11.9	70.9	636.8	635.4	118.0	19.6	1.000154
21000.0	474.0	-8.4	-14.1	62.5	627.7	634.4	114.6	19.1	1.000150
21500.0	464.8	-9.2	-15.9	56.0	618.6	633.4	113.9	19.7	1.000146
22000.0	455.7	-10.1	-16.8	57.8	610.7	632.5	113.2	20.2	1.000143
22500.0	446.8	-11.2	-17.9	57.5	593.5	630.9	112.0	21.5	1.000140
23000.0	438.1	-12.4	-19.1	57.1	584.5	629.5	110.9	22.4	1.000138
23500.0	429.4	-12.6	-21.7	46.4	575.6	629.1			1.000134

STATION ALTITUDE 4U51.5F FEET MSL
5 AUG. 82 1415 MDT
ASCENSION NO. 74

UPPER AIR DATA
217U16UU74
LC-37

TABLE-12 cont'd

GEODETIC COORDINATES
32.4U175 LAT DEG
1U6.31232 LON DEG

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
									1.UUU13U
24UUU.U	421.U	-12.8	-25.2	34.2	562.8	628.9			1.UUU127
245UU.U	412.8	-14.U	-26.1	29.1	554.3	627.4			1.UUU124
25UUU.U	4U4.4	-15.1	-31.2	23.9	545.9	625.9			

STATION ALTITUDE 4051.57 FEET MSL
5 AUG. 82 1415 MDT
ASCENSION NO. 74

MANDATORY LEVELS
2170180074
LC-37
TABLE-13

GEODETIC COORDINATES
32.40175 LAT DEG
106.51232 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
850.0	5086.	29.7	12.2	34.	104.5	5.9
800.0	6847.	24.7	11.1	42.	112.4	5.9
750.0	8689.	19.0	9.8	55.	102.3	6.6
700.0	10620.	15.5	9.0	74.	105.6	13.2
650.0	12655.	9.0	1.8	61.	115.0	17.7
600.0	14815.	5.1	-3.4	54.	125.2	15.9
550.0	17127.	-.5	-11.6	42.	134.2	19.0
500.0	19602.	-6.2	-8.5	84.	123.9	20.6
450.0	22287.	-10.8	-17.5	58.	112.4	20.9
400.0	25253.	-15.8	-33.0	21.		

STATION ALTITUDE 39X0.00 FEET MSL
3 AUG. 82 1515 MDT
ASCENSION NO. 382

SIGNIFICANT LEVEL DATA
217002U382
WHITE SANDS

TABLE-14

GEODETIC COORDINATES
32.4UU43 LAT DEG
1U6.37U33 LUN DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
883.0	3X8Y.U	33.4	14.3	32.U
872.1	4330.3	31.3	13.1	33.U
850.U	5110.Y	2Y.3	12.Y	3U.U
7UY.U	10ZYY.3	13.2	7.2	5Y.U
7UU.U	10053.4	14.4	8.4	67.U
67U.3	11840.8	1U.Y	7.4	7Y.U
6U2.6	14751.2	5.3	-4.3	4Y.U
578.6	15838.4	2.1	-2.4	72.U
56U.7	16870.3	-.2	-0.4	83.U
553.2	17U24.Y	-.7	-3.3	7U.U
538.9	17716.1	-1.Y	-1U.7	51.U
524.7	18409.U	-3.4	-13.6	43.U
5UY.4	19176.8	-4.Y	-18.3	34.U
5UU.U	19657.6	-6.1	-15.3	47.U
4UY.8	21256.6	-7.4	-17.3	43.U
448.3	22353.U	-1U.3	-1Y.Y	3U.U
439.3	22900.3	-11.3	-19.4	31.U
425.2	23788.3	-12.3	-3U.1	21.U
4UU.U	25315.3	-15.3	-34.3	18.U

UPPER AIR DATA

STATION ALTITUDE 3989.00 FEET MSL
5 AUG. 82 1515 MDT
ASCENSION NO. 3826

2770026382
WHITE SANDS
TABLE-15

GEODETIC COORDINATES
32.400043 LAT DEG
106.370333 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3989.0	883.0	33.4	14.3	52.0	996.4	684.3	145.0	8.0	1.000289
4000.0	882.7	33.3	14.4	52.0	996.2	684.4	145.1	8.0	1.000288
4500.0	867.9	31.0	13.1	53.6	987.6	681.6	150.1	7.9	1.000282
5000.0	853.2	29.6	12.9	55.6	974.8	680.3	155.1	7.8	1.000279
5500.0	838.5	28.4	12.6	57.7	962.2	678.8	160.1	7.9	1.000275
6000.0	824.0	27.0	12.3	59.9	949.9	677.2	165.1	7.9	1.000272
6500.0	809.7	25.7	11.9	62.2	937.8	675.6	159.5	8.4	1.000268
7000.0	795.7	24.3	11.4	64.4	925.9	674.1	148.8	9.4	1.000264
7500.0	781.9	22.9	10.9	66.6	914.2	672.5	140.1	10.0	1.000260
8000.0	768.3	21.5	10.3	68.8	902.7	670.8	131.1	9.4	1.000256
8500.0	755.0	20.2	9.7	71.0	891.5	669.2	121.1	9.1	1.000252
9000.0	741.9	18.8	9.1	73.2	880.2	667.6	110.9	9.5	1.000248
9500.0	729.1	17.4	8.4	75.5	869.2	666.0	101.5	10.3	1.000243
10000.0	716.5	16.0	7.7	77.7	858.3	664.3	97.2	11.7	1.000239
10500.0	703.9	14.7	7.9	83.5	848.9	662.9	96.7	13.6	1.000238
11000.0	691.5	13.4	8.1	90.5	839.5	661.4	96.4	15.6	1.000236
11500.0	679.0	11.9	7.7	95.5	829.8	659.7	94.1	16.3	1.000233
12000.0	666.7	10.6	6.6	97.4	819.9	658.1	91.7	16.9	1.000228
12500.0	654.6	9.7	4.9	92.3	810.2	656.8	90.0	17.4	1.000220
13000.0	642.7	8.8	3.0	87.1	799.6	655.6	91.6	17.4	1.000214
13500.0	631.0	7.8	1.0	81.9	789.2	654.3	93.2	17.4	1.000205
14000.0	619.5	6.9	-1.1	76.8	767.9	653.1	97.4	17.2	1.000198
14500.0	608.2	6.0	-3.2	71.6	756.8	651.8	103.8	17.0	1.000192
15000.0	597.0	4.7	-3.7	74.3	746.3	650.4	110.2	17.0	1.000189
15500.0	586.0	3.2	-4.8	84.8	736.4	648.8	114.0	16.9	1.000189
16000.0	575.1	1.7	-5.2	78.5	726.7	648.8	117.8	16.8	1.000186
16500.0	564.3	.3	-5.5	84.8	717.1	645.1	121.0	17.0	1.000180
17000.0	553.7	-.7	-5.5	89.5	706.0	644.0	123.5	17.6	1.000178
17500.0	543.3	-1.5	-6.9	86.9	695.3	642.8	125.9	18.3	1.000171
18000.0	533.0	-2.5	-11.9	68.5	684.9	641.4	127.9	19.4	1.000165
18500.0	522.9	-3.8	-14.1	63.7	674.7	640.1	129.4	20.8	1.000161
19000.0	512.9	-4.8	-17.1	58.5	664.4	638.8	130.7	22.2	1.000156
19500.0	503.1	-5.7	-18.5	62.7	654.4	637.5	129.5	23.0	1.000155
20000.0	493.4	-6.4	-15.9	66.6	643.4	636.7	126.0	23.4	1.000153
20500.0	483.9	-6.8	-16.4	65.9	632.0	636.2	122.9	23.9	1.000150
21000.0	474.6	-7.2	-17.0	65.3	620.8	635.7	120.4	22.9	1.000147
21500.0	465.4	-8.0	-17.5	65.9	610.6	634.8	117.8	21.9	1.000144
22000.0	456.3	-9.2	-18.2	67.9	601.5	633.3	115.2	21.5	1.000142
22500.0	447.3	-10.4	-18.8	69.8	592.5	631.9	120.1	21.5	1.000140
23000.0	438.7	-11.3	-19.7	69.8	583.1	630.7			1.000137

STATION ALTITUDE 3969.00 FEET MSL
5 AUG. 82 1515 MDT
ASCENSION NO. 382

UPPER AIR DATA
27/0020382
WHITE SANDS

GEODETIC COORDINATES
32.400463 LAT DEG
106.37033 LON DEG

TABLE-15 cont'd

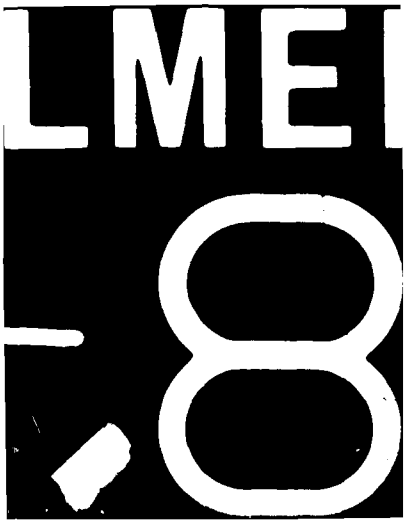
GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
23500.0	430.1	-11.9	-25.4	31.0	575.2	629.8			1.000132
24000.0	421.6	-12.7	-30.0	20.0	563.8	628.8			1.000128
24500.0	413.3	-13.8	-32.0	19.0	554.9	627.5			1.000126
25000.0	405.1	-14.8	-33.4	18.0	546.1	626.2			1.000124

STATION ALTITUDE 5989.00 FEET MSL
3 AUG. 82 1515 MDT
ASCENSION NO. 382

MANDATORY LEVELS
c17U02U382
WHITE SANDS
TABLE-1C

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

PRESSURE	GEOPOTENTIAL	TEMPERATURE		REL.HUM.	WIND DATA	
		AIR	DEWPOINT	PERCENT	DIRECTION	SPEED
MILLIBARS	FEET	DEGREES CENTIGRADE			DEGREES(TN)	KNOTS
850.0	5107.	24.3	12.9	50.	156.2	7.8
800.0	6868.	24.7	11.3	44.	151.3	9.1
750.0	8711.	19.6	9.3	52.	116.6	9.2
700.0	10645.	14.4	8.4	67.	98.8	14.2
650.0	12684.	9.3	4.2	70.	90.6	17.4
600.0	14850.	3.1	-4.0	51.	108.4	17.0
550.0	17155.	-1.0	-8.3	60.	124.4	17.9
500.0	19629.	-6.1	-15.3	47.	128.3	23.1
450.0	22322.	-10.0	-18.8	49.	119.5	21.3
400.0	25272.	-15.3	-34.3	18.		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