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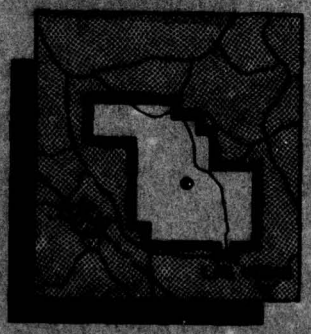
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AIR WEATHER SERVICE PARTICIPATION

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Report to the Test Director

AIR WEATHER SERVICE PARTICIPATION

By

Lt Col Dewitt N. Morgan
Lt Col William H. Wyatt

and

A/1C Robert L. Ligon

Air Force Special Weapons Center
Kirtland Air Force Base
Albuquerque, New Mexico
July 1953

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AIR WEATHER SERVICE PARTICIPATION

1 INTRODUCTION

The primary purpose of this report is to record pertinent meteorological data that were taken in support of the atomic tests at the Nevada Proving Grounds (NPG). These data, comprising the major portion of this report, are tabulated in the appendixes and discussed in Sec. 3, Meteorological Data.

Operational, administrative, and logistical details were analogous to those of previous tests. For background information on these matters reference is made to the following reports: Air Weather Service Participation in Operation Buster-Jangle, WT-342, December 1951, and Air Weather Service Participation in Operation Tumbler-Snapper, WT-508, January 1953.

2 OPERATIONS

The Mercury Weather Station, 4th Weather Group, began full-scale operations on 2 March 1953. This allowed approximately two weeks to get all personnel acquainted with the specific requirements of the task ahead and to develop adequate teamwork. In particular it permitted indoctrination of forecasters in the procedures and techniques which would be used. This was essential in view of the fact that, of the forecasters assigned, only three had previous experience with the NPG weather requirements. Personnel augmentation from other weather units is indicated in Appendix B.

The principal functions and responsibilities are indicated in the Air Weather Service Organizational Chart of Appendix A.

By 10 March 1953 all off-site observing sections (upper air) were in operation. Types and locations of these stations are given in Appendix C and Appendix D.

The forecast requirement and briefing schedule remained about the same as on previous tests. For the first time in the Nevada operations, and in accordance with the wishes of the Test Director, the forecaster-in-charge presented the weather briefings.

Detailed forecasts were required with primary emphasis on winds aloft and clouds. The decision to proceed with a scheduled nuclear detonation was influenced largely by the expected fall-out of radioactive particles and blast effects. These fall-outs were dependent upon the winds, the forecasts of which obviously were desired to the highest degree of accuracy. Since the atomic cloud from a large percentage of the detonations rose to the tropopause and above, it was necessary to forecast winds from the surface to approximately 40,000 ft MSL. These were given in increments of 5000 ft above the 10,000-ft MSL.

Cloud cover, including cirrus at altitudes up to 35,000 and 40,000 ft, was usually of critical importance for one or more of the following reasons: visual bomb drops and aircraft tracking and sampling of the atomic cloud. Generally more than $\frac{3}{8}$ cloud cover, uniformly distributed, was considered unsatisfactory.

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Additional requirements included a forecast lapse rate for computations of blast effects, forecasts regarding precipitation downstream through which the atomic cloud might pass, and 24-hr trajectories at selected levels of 10,000, 20,000, 30,000, and 40,000 ft MSL.

The map analyses needed for forecasting purposes were the 1000-mb (surface) and the 700-, 500-, 300-, and 200-mb levels for all synoptic reporting times. The map area extended from the Mississippi Valley westward to approximately 150° east longitude on Weather Bureau WBAN #1 plotting chart. Standard "differential-analysis" techniques were used over the Pacific areas to get the most accurate and detailed analyses possible. Map analyses upon which the forecasts were based (1500 Z for upper air) required approximately 7 hr of intensive effort of three forecasters.

With the additional time required for discussions and preparation of the forecasts, the 48-hr forecast was not available until approximately 36 hr and the 24-hr forecast not until some 10 hr before shot time. The briefing schedule was as follows: The 48-hr forecast was given informally to the Test Director on the day it was prepared. This forecast, with indicated modifications, was given to the Test Director and key operating personnel in a formal briefing at approximately 0800 hr on D−1 day, at which time a decision was made on the advisability of proceeding with test preparations. The 24-hr forecast was presented at the evening briefing (2100 PST) to the Test Manager and his staff. For planning purposes, particularly if any elements of the 24-hr forecast were unfavorable, a 48-hr outlook was also given at this time.

Briefing aids in the form of basic meteorological charts were held to a minimum. Generally the map discussion was restricted to significant features and expected developments on the 500-mb chart which was presented as a streamline analysis.

3 METEOROLOGICAL DATA

Prior to the tests at the NPG the program directors of all projects submitted their requirements for meteorological data to the Director of Weapons Effects Tests, Field Command AFSWP, Sandia Base, N. Mex. An analysis of these test requirements by the Project Weather Officer indicated that they could be satisfactorily met with the equipment on hand at the Mercury Weather Station and the proposed personnel complement.

The following tabulation of on-site observation facilities indicates the location, type of data, and observing schedules used to meet these needs:

Type of data	Location	Schedule
Standard surface observations	Control Point	Hourly (24 per day plus specials at H-hour)
Rawinsonde observations	Yucca Lake	Four per day plus three specials hourly, from H−6 to H+24 including one at H-hour
Surface winds, temperatures, and relative humidity	Yucca Flat (EG&G shelter) (#351)	Continuous automatic recording
Surface winds, temperatures, and relative humidity	Frenchman Flat (EG&G shelter) (#370)	Continuous automatic recording

The instrumentation for obtaining surface data in the Yucca and Frenchman shot areas consisted of Friez Aerovane wind equipment remoted to the Control Point and Friez hygrothermographs installed in standard Air Force instrument shelters.

The "fixed" observations were supplemented in several ways. On the airdrop and cannon shot in Frenchman Flat. a set of Beckman-Whitley surface-wind equipment was installed at approximately 1500 ft from Ground Zero and remoted to the Control Point. This was for smoke-screen control purposes rather than for meteorological effects on experiments.

For each of the tower shots at Yucca Flat the EG&G company supplied and installed in the tower cab remote-indicating temperature (wet and dry bulb) and pressure equipment which was calibrated by weather station personnel on D−2 day using a standard aneroid barometer and a sling psychrometer. These parameters were recorded in the control room of the Control Point.

Plans were made to take wiresonde data at Frenchman Flat for the two shots scheduled in that area. Because of strong surface winds on shot days, however, it was impossible to operate this equipment. The desirability of having this data from the surface to at least 1000 ft is obvious since the rawinsonde section was located north on Yucca Lake at an elevation of approximately 850 ft above that of Ground Zero for Frenchman Flat.

The meteorological data for shot days are found in the appendixes under such headings as Upper-air Data for H-hour, Surface Observations, Actual Weather Conditions at Burst Height and Ground Zero, and Rawinsonde and Pibal Observations. Perhaps the most useful and readily usable tabulation of data will be found in Appendix E, which gives the more commonly required meteorological elements for every 1000 ft from the surface to the maximum height of the rawinsonde observation. It also includes the special levels of Ground Zero and burst height.

The data in Appendix E are based largely upon the H-hour rawinsonde data of Appendix G but have been modified and extended in the low levels where indicated by the supplementary information from tower and surface observations. Based upon a very careful correlation of all available data and further checked by standard height-pressure computations in the lowest levels, these data are considered to be applicable to conditions over Ground Zero within the accuracy tolerances of upper-air observation equipment.

As on previous tests a network of six upper-air observing stations was established at selected points surrounding the NPG to furnish data supplementary to those normally available from Air Force and Weather Bureau stations. The locations of these sections and other pertinent information will be found in Appendixes C and D.

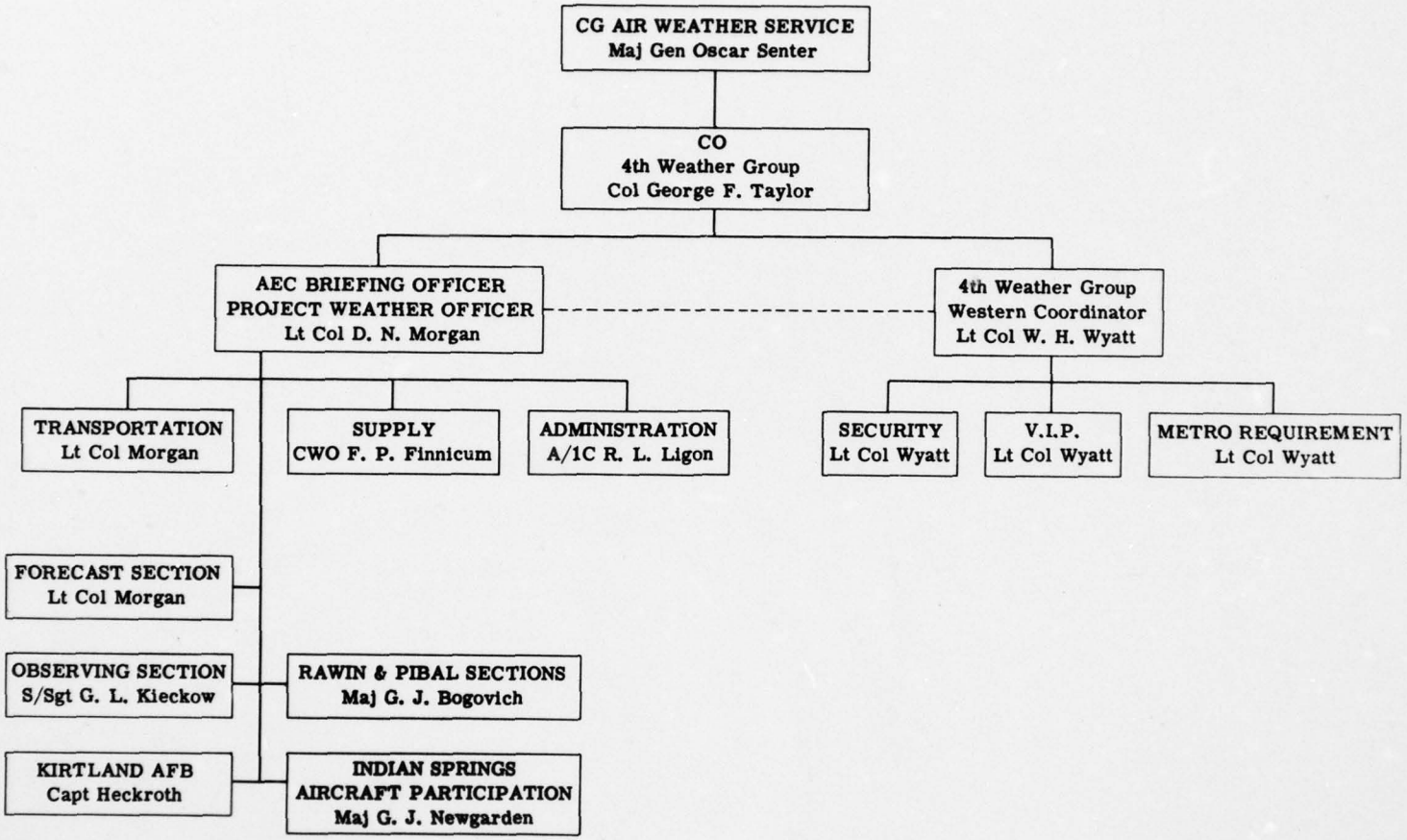
The data from these stations served a twofold purpose. They were used primarily by Radiological Safety (Rad-Safe) personnel to compute accurate postshot analysis trajectories by streamline methods. They were also valuable for monitoring the winds aloft that had been forecast during the few hours preceding shot time. The rawinsonde data, given in Appendix G, proved very useful in weather analysis and forecasting.

All the afore-mentioned collected data were recorded and are available for utilization by the using agencies. They are stored at Detachment 22, 4th Weather Group, Post Office Box 1663, Los Alamos, N. Mex., Attention: H-6 Weather Station.

Appendix A

AIR WEATHER SERVICE ORGANIZATIONAL CHART

AIR WEATHER SERVICE ORGANIZATIONAL CHART. ——, Command Channel; ----, Technical and Advisory Channel.



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Appendix B

PERSONNEL ASSIGNED TO WEATHER SECTIONS

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Table B.1 — PERSONNEL ASSIGNED TO WEATHER SECTIONS

Section	Location	Personnel*
Forecast		10
Observing		16
Rawinsonde	Yucca Flat	15
Rawinsonde	Tonopah	11
Pibal	Beatty	3
Pibal	Warm Springs	3
Pibal	Caliente	3
Pibal	Currant	3
Pibal	St. George	3

*Some personnel were assigned to more than one section and are included in the totals. One officer was in charge of all rawinsonde and pibal sections; he is not included in the totals given for these units.

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Appendix C

LOCATOR CHART—LOCATION AND TYPE OF WEATHER STATION

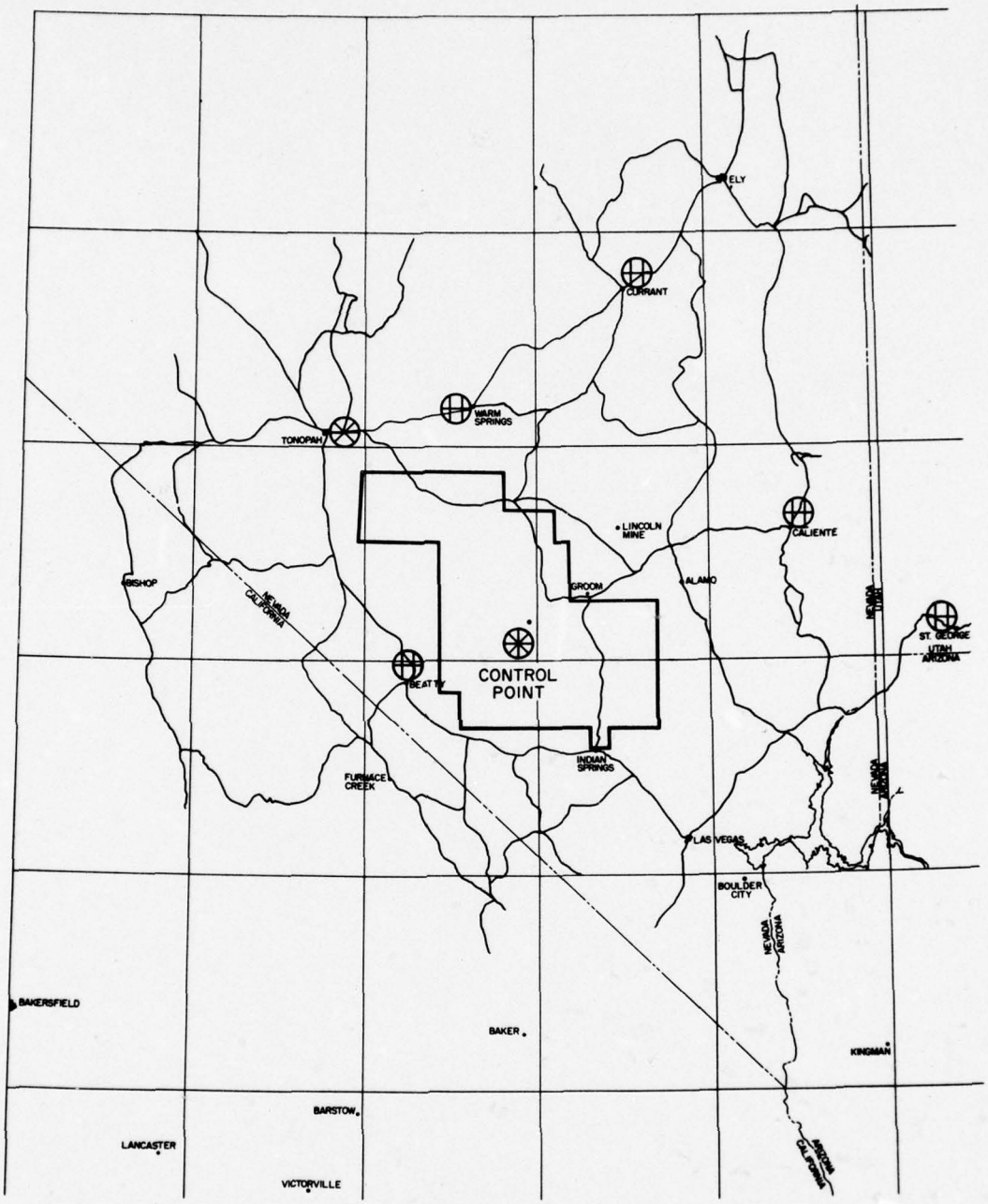


Fig. C-1— Location and type of weather station. ⊙, weather station. ⊗, rawinsonde station; equipment, rawin set (GMD-1) and radiosonde set (FMQ-1). ⊙, pibal station; equipment, theodolite. ⊖, radio.

Appendix D

LOCATIONS OF SATELLITE WEATHER STATIONS

Table D.1 — LOCATIONS OF SATELLITE WEATHER STATIONS

Location	Call letter	Type station	Latitude, north	Longitude, west	Elevation, ft
Beatty	BTY	Pibal	36°04′	117°06′	5413
Caliente	CAL	Pibal	37°43′	114°27′	4621
Currant	CUR	Pibal	38°42′	115°31′	4974
St. George	SGU	Pibal	37°05′	113°35′	2905
Tonopah	TPH	Rawinsonde	38°04′	117°06′	5413
Warm Springs	WSP	Pibal	38°13′	116°21′	5458
Nevada Proving Grounds (Yucca Lake)	AEC	Rawinsonde	36°57′	116°03′	3927

Appendix E

UPPER-AIR DATA, GROUND ZERO

Table E.1 — UPPER-AIR DATA, GROUND ZERO, 17 MARCH 1953
[0520 PST (1320 Z)]

Altitude, 10^3 ft MSL	Atmospheric pressure, mb	Temperature, °C	Relative humidity, %	Dew point, °C	Virtual temp., °C	Wind	
						Direction, deg	Speed, knots
Ground Zero	876	2.7	43	−8.5	3.0	Light and variable	
Burst height	866	7.9	38	−5.4	8.3	250	2
5	845	7.5	39	−6.5	7.9	250	4
6	816	6.8	32	−8.5	7.2	290	8
7	785	5.0	34	−9.5	5.4	270	9
8	757	3.0	33	−11.5	3.3	280	6
9	728	1.0	34	−12.9	1.3	270	24
10	700	−1.2	34	−14.9	−0.9	270	25
11	675	−3.5	28	−19.5	−3.3	270	25
12	648	−6.2	29	−21.2	−6.0	270	25
13	624	−9.0	30	−23.2	−8.8	270	23
14	599	−11.5	31	−25.0	−11.3	270	21
15	576	−14.0	32	−26.8	−13.9	280	32
16	554	−16.0	32	−28.7	−15.9	280	34
17	530	−17.8	31	−30.5	−17.7	280	38
18	509	−19.7	31	−32.3	−19.6	270	42
19	488	−21.8	29	−35.0	−21.7	270	48
20	470	−24.1	Dry	Dry		270	54
21	450	−26.9				270	50
22	432	−29.5				270	46
23	414	−32.0				270	43
24	398	−34.0				270	40
25	380	−37.0				270	47
26	365	−40.0				270	47
27	348	−42.9				270	50
28	332	−45.5				270	52
29	319	−48.1				270	60
30	304	−51.5				270	68
31	290	−53.8				270	66
32	278	−55.8				270	64
33	263	−57.8				270	60
34	250	−60.5				260	56
35	239	−62.5				260	53
36	228	−64.5				260	60
37	218	−60.0				260	65
38	205	−56.5				260	71
39	197	−55.5				260	80
40	188	−53.0				260	89
41	179	−52.0				260	79
42	171	−53.0				260	73
43	163	−54.0				260	70
44	155	−55.2				260	66
45	148	−56.0				260	63
46	142	−57.3				260	61
47	135	−59.0				250	60
48	129	−60.2				250	59
49	122	−61.5				240	58
50	118	−62.9				240	58

Table E.2 — UPPER-AIR DATA, GROUND ZERO, 24 MARCH 1953
[0510 PST (1310 Z)]

Altitude, 10^3 ft MSL	Atmospheric pressure, mb	Temperature, °C	Relative humidity, %	Dew point, °C	Virtual temp., °C	Wind	
						Direction, deg	Speed, knots
Ground Zero	870	9.9	39	−3.6	10.4	310	2
Burst height	860	13.3	31	−3.2	13.9	Calm	Calm
5	852	12.0	30	−4.6	12.5	Calm	Calm
6	821	11.4	13	−14.0	11.6	210	16
7	792	8.9	33	−6.0	9.3	150	12
8	764	6.4	32	−8.2	6.5	150	16
9	736	4.1	32	−10.3	4.2	150	12
10	703	2.7	Dry	Dry		150	12
11	683	0.4				160	13
12	657	−2.0				170	9
13	632	−4.1				200	18
14	608	−6.4				200	18
15	584	−8.7				220	12
16	561	−11.0				210	16
17	538	−13.3				210	12
18	517	−15.6				190	11
19	497	−17.8				180	15
20	477	−20.0				210	20
21	458	−22.0				220	25
22	440	−24.1				220	24
23	422	−26.2				230	25
24	404	−28.4				210	25
25	387	−30.6				210	25
26	371	−33.0				210	25
27	355	−35.2				220	25
28	340	−37.4				210	28
29	324	−39.8				230	25
30	311	−42.1				220	31
31	296	−44.3				230	34
32	283	−47.1				230	30
33	272	−49.4				220	29
34	258	−52.2				220	31
35	247	−54.7				210	27
36	236	−56.3				210	28
37	224	−57.7				220	27
38	214	−59.3				220	30
39	203	−60.8				220	32
40	194	−61.1				220	32
41	184	−58.2				220	32
42	176	−59.3				220	37
43	166	−60.3				220	39
44	159	−61.3				220	31
45	152	−62.3				220	37
46	144	−63.0				220	35
47	137	−63.6				220	41
48	131	−64.1				230	30
49	124	−64.8				230	27
50	118	−65.2				230	25

Table E.3 — UPPER-AIR DATA, GROUND ZERO, 31 MARCH 1953
[0500 PST (1300 Z)]

Altitude, 10^3 ft MSL	Atmospheric pressure, mb	Temperature, °C	Relative humidity, %	Dew point, °C	Virtual temp., °C	Wind	
						Direction, deg	Speed, knots
Ground Zero	873	4.4	48	−5.3	4.8	360	4
Burst height	863	8.2	32	−7.4	8.5	020	7
5	846	9.0	30	−7.4	9.4	020	9
6	816	8.0	34	−16.8	8.4	010	12
7	787	5.7	39	−8.0	6.1	360	12
8	757	3.1	42	−8.5	3.5	350	13
9	729	0.9	46	−9.0	1.2	330	12
10	701	−1.4	49	−10.6	−1.1	310	18
11	675	−4.4	65	−10.0	−4.0	300	16
12	649	−7.3	60	−14.0	−7.0	310	16
13	625	−8.7	32	−22.0	−8.5	320	16
14	600	−10.3	Dry	Dry		320	20
15	577	−12.2				300	22
16	553	−14.3				330	24
17	531	−16.2				330	26
18	512	−18.0				320	30
19	491	−20.7				320	28
20	471	−23.0				310	29
21	452	−25.6				310	31
22	432	−28.1				320	31
23	414	−30.7				320	36
24	397	−32.8				320	39
25	378	−35.0				310	30
26	363	−37.9				330	36
27	348	−40.7				330	34
28	332	−42.8				330	34
29	317	−45.4				330	36
30	308	−47.0				330	38
31	290	−50.3				330	38
32	277	−53.0				330	34
33	264	−55.2				320	42
34	251	−57.9				320	44
35	240	−60.0				320	48
36	229	−60.9				320	51
37	218	−60.5				310	46
38	207	−60.7				300	37
39	197	−60.9				300	41
40	188	−60.6				290	58
41	178	−58.8				290	48
42	170	−56.1				290	41
43	162	−55.7				290	41
44	154	−55.9				290	41
45	147	−56.8				290	40
46	139	−57.4				290	40
47	133	−56.8				290	35
48	127	−56.8				280	34
49	122	−57.0				280	34
50	116	−58.7				280	34

Table E.4 — UPPER-AIR DATA, GROUND ZERO, 6 APRIL 1953
[0730 PST (1530 Z)]

Altitude, 10^3 ft MSL	Atmospheric pressure, mb	Temperature, °C	Relative humidity, %	Dew point, °C	Virtual temp., °C	Wind	
						Direction, deg	Speed, knots
Ground Zero	861	15.5	25	−4.1	16.1	015	7
5	834	12.0	29	−5.0	12.6	030	2
6	806	9.1	31	−7.0	9.6	300	3
7	776	5.7	33	−9.2	6.2	310	10
8	744	3.6	38	−9.8	4.0	310	13
9	720	1.9	41	−10.0	2.3	280	21
10	694	0.0	38	−12.1	0.4	280	28
Burst height	686	−0.6	36	−13.7	−0.2	280	29
11	666	−2.3	31	−17.7	−2.1	280	31
12	642	−4.0	27	−20.0	−3.8	280	33
13	618	−6.4	Dry	Dry		280	45
14	594	−8.8				280	48
15	574	−10.8				280	31
16	550	−13.1				280	34
17	528	−14.5				280	37
18	506	−15.7				290	64
19	486	−17.9				290	73
20	468	−20.1				290	72
21	448	−22.3				290	78
22	428	−24.7				290	80
23	412	−27.0				290	73
24	396	−29.2				290	73
25	375	−32.5				290	68
26	363	−34.8				290	57
27	345	−38.0				290	60
28	331	−40.0				290	83
29	316	−42.9				290	94
30	302	−45.2				290	92
31	289	−47.9				290	96
32	276	−50.2				290	106
33	263	−52.9				290	80
34	251	−55.1				290	72
35	239	−57.9				290	68
36	229	−59.1				290	64
37	217	−59.9				290	73
38	207	−60.1				290	126
39	198	−60.8				290	120
40	188	−59.0				290	122
41	179	−56.2				290	122
42	171	−55.0				290	120
43	162	−54.7				290	114
44	154	−54.6				290	123
45	148	−54.9				290	119
46	141	−55.0				290	104
47	134	−55.1				290	89
48	127	−55.3				290	81
49	122	−55.6				290	78
50	116	−56.4				290	78

Table E.5 — UPPER-AIR DATA, GROUND ZERO, 11 APRIL 1953
[0445 PST (1245 Z)]

Altitude, 10^3 ft MSL	Atmospheric pressure, mb	Temperature, °C	Relative humidity, %	Dew point, °C	Virtual temp., °C	Wind	
						Direction, deg	Speed, knots
Ground Zero	869	−0.3	43	−11.3	0.0	045	5
Burst height	866	−0.1	40	−11.7	0.2	030	7
5	830	0.5	45	−10.0	0.9	010	15
6	813	−1.7	45	−11.7	−1.6	360	18
7	780	−4.0	48	−13.2	−4.0	360	23
8	739	−6.5	53	−14.2	−6.6	360	31
9	720	−8.5	42	−23.5	−8.4	360	36
10	695	−10.0	32	−32.8	−10.0	360	31
11	668	−12.5	28	−32.5	−12.7	360	23
12	640	−15.0	27	−32.2	−15.2	360	23
13	608	−18.7	24	−32.1	−17.7	350	26
14	590	−20.4	Dry	Dry		350	23
15	568	−22.8				310	28
16	545	−25.4				300	33
17	525	−25.9				300	49
18	500	−27.9				300	49
19	481	−29.7				300	46
20	459	−31.0				300	44
21	440	−32.0				300	63
22	420	−33.4				300	83
23	403	−34.5				300	95
24	383	−34.5				300	106
25	368	−36.0				300	112
26	352	−37.5				290	121
27	338	−39.2				290	135
28	325	−41.4				290	150
29	308	−44.0				290	180
30	297	−45.9				260	185
31	278	−47.1				280	137
32	270	−46.5				280	117
33	257	−49.6				290	115
34	247	−51.8				290	120
35	235	−52.0				280	134
36	223	−52.6				270	144
37	217	−53.0				270	152
38	205	−50.6				270	140
39	195	−50.0				260	133
40	187	−49.3				260	138
41	178	−48.7				260	135
42	171	−48.9				250	116
43	164	−49.2				270	105
44	157	−49.5				270	100
45	148	−51.3				260	115
46	143	−52.3				280	148
47	137	−53.4				280	170
48	128	−55.4				280	184
49	123	−57.2				280	195
50	118	−58.2				280	203

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Table E.6—UPPER-AIR DATA, GROUND ZERO, 18 APRIL 1953
[0435 PST (1235 Z)]

Altitude, 10^3 ft MSL	Atmospheric pressure, mb	Temperature, °C	Relative humidity, %	Dew point, °C	Virtual temp., °C	Wind	
						Direction, deg	Speed, knots
Ground Zero	862	7.7	40	−3.9	8.2	360	9
Burst height	852	7.2	39	−4.1	7.5	360	12
5	845	7.0	41	−4.8	7.5	010	20
6	815	4.9	44	−6.3	5.4	010	24
7	785	3.0	46	−7.2	3.5	360	19
8	754	3.2	42	−8.0	3.6	290	6
9	725	0.3	45	−9.7	0.8	270	9
10	699	−0.7	48	−10.2	−0.2	270	17
11	674	−1.4	46	−11.4	−1.0	270	23
12	648	−3.9	61	−10.0	−3.5	280	26
13	624	−6.5	70	−11.0	−6.1	300	29
14	600	−8.5	70	−12.7	−8.1	310	30
15	576	−8.7	49	−17.4	−8.5	320	30
16	555	−9.4	38	−20.8	−9.3	310	30
17	534	−11.4	49	−20.0	−11.2	310	31
18	512	−13.4	52	−23.0	−13.3	300	33
19	492	−15.4	50	−23.6	−15.3	290	35
20	472	−17.5	48	−25.9	−17.4	290	35
21	453	−18.7	37	−29.8	−18.6	290	36
22	435	−21.0	34	−32.5	−21.0	290	43
23	417	−23.4	Dry	Dry		290	50
24	401	−25.0				290	50
25	384	−27.5				290	43
26	368	−30.0				300	43
27	351	−32.9				300	40
28	338	−35.1				300	43
29	322	−38.2				310	40
30	308	−40.4				310	46
31	294	−42.2				300	58
32	283	−43.9				300	60
33	270	−46.5				300	57
34	258	−48.9				300	50
35	246	−51.7				300	54
36	236	−54.2				300	49
37	225	−56.8				290	43
38	214	−59.3				290	47
39	202	−61.6				300	60
40	194	−62.8				300	68
41	184	−64.2				300	78
42	175	−65.5				300	68
43	167	−66.3				290	43
44	158	−65.6				280	44
45	150	−62.8				280	52
46	142	−62.2				280	77
47	135	−61.9				280	61
48	131	−61.5				280	68
49	122	−61.9				290	21
50	117	−62.3				290	17

Table E.7 — UPPER-AIR DATA, GROUND ZERO, 25 APRIL 1953
[0430 PST (1230 Z)]

Altitude, 10^3 ft MSL	Atmospheric pressure, mb	Temperature, °C	Relative humidity, %	Dew point, °C	Virtual temp., °C	Wind	
						Direction, deg	Speed, knots
Ground Zero	870	11.7	26	−7.3	12.3	340	5
Burst height	860	15.3	26	−4.7	15.8	040	7
5	846	17.3	21	−4.8	17.9	010	8
6	817	15.7	21	−6.4	16.0	030	8
7	789	13.9	21	−8.0	14.2	040	4
8	760	11.8	22	−9.1	12.2	070	3
9	732	9.4	24	−10.0	9.7	180	4
10	706	7.2	26	−10.3	7.5	200	9
11	681	5.0	30	−10.8	5.4	270	11
12	656	2.1	32	−12.3	2.5	280	12
13	632	−0.7	39	−12.6	−0.3	270	15
14	607	−3.7	41	−14.7	−3.3	270	11
15	585	−6.2	46	−15.8	−5.8	290	9
16	562	−8.8	44	−18.5	−8.6	280	8
17	540	−11.0	38	−22.3	−10.8	270	9
18	519	−13.2	30	−27.2	−13.0	270	26
19	499	−15.7	33	−28.0	−15.6	280	12
20	478	−18.4	Dry	Dry		280	26
21	457	−19.8				280	30
22	441	−22.7				280	23
23	422	−25.0				280	25
24	405	−28.2	31		−28.1	280	22
25	387	−30.0	51		−29.9	280	20
26	371	−32.0	Dry			280	23
27	354	−34.4				280	29
28	340	−36.9				280	31
29	325	−39.0				270	28
30	312	−41.7				280	41
31	297	−44.1				280	40
32	284	−46.4				280	39
33	272	−49.1				280	42
34	260	−51.8				280	40
35	248	−54.0				280	36
36	236	−56.9				270	39
37	226	−58.9				270	41
38	215	−61.2				270	43
39	204	−63.4				270	42
40	194	−63.0				270	48
41	184	−62.0				270	50
42	176	−59.0				270	48
43	167	−58.4				270	42
44	159	−58.1				270	26
45	151	−58.3				270	30
46	144	−58.9				270	24
47	127	−59.8				270	22
48	131	−59.5				270	22
49	124	−59.6				270	22
50	119	−60.8				270	24

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Table E.8—UPPER-AIR DATA, GROUND ZERO, 8 MAY 1953
[0730 PST (1530 Z)]

Altitude, 10^3 ft MSL	Atmospheric pressure, mb	Temperature, °C	Relative humidity, %	Dew point, °C	Virtual temp., °C	Wind	
						Direction, deg	Speed, knots
Ground Zero	900	16.7	19	−07.0	17.0	190	5
Burst height	825	8.0	23	−12.5	8.3	250	5
5	837	9.4	21	−12.0	9.8	230	6
6	806	6.6	24	−12.3	6.9	270	5
7	781	4.3	26	−13.4	4.6	310	10
8	752	1.3	29	−15.0	1.6	320	10
9	720	−1.3	40	−13.0	−0.9	300	10
10	695	−3.4	50	−12.0	−3.0	260	12
11	669	−5.1	50	−14.0	−4.7	250	20
12	644	−6.2	30	−21.2	−6.0	250	26
13	620	−7.6	Dry	Dry		260	30
14	596	−9.3				260	35
15	574	−11.0				260	44
16	550	−12.9				250	48
17	529	−14.5				250	53
18	505	−17.2				250	58
19	486	−19.8				250	56
20	466	−22.4				250	57
21	447	−24.8				250	51
22	428	−27.4				250	52
23	412	−30.0				250	62
24	396	−32.6				250	68
25	377	−35.3				250	78
26	361	−37.7				250	78
27	348	−38.5				250	83
28	333	−40.1				250	101
29	316	−42.4				250	109
30	304	−44.0				240	103
31	291	−45.7				240	100
32	278	−47.3				240	102
33	266	−49.1				240	111
34	254	−50.6				240	127
35	243	−52.3				240	170
36	233	−52.8				240	168
37	223	−53.5				240	144
38	211	−55.3				240	140
39	202	−56.9				240	142
40	192	−54.3				240	146
41	182	−55.3				240	150
42	174	−55.2				Balloon out of range of wind equipment	
43	165	−56.7					
44	157	−56.3					
45	151	−55.4					
46	144	−55.7					
47	137	−56.2					
48	125	−55.5					
49	124	−56.4					
50	118	−57.2					

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Table E.9 — UPPER-AIR DATA, GROUND ZERO, 19 MAY 1953
[0405 PST (1205 Z)]

Altitude, 10^3 ft MSL	Atmospheric pressure, mb	Temperature, °C	Relative humidity, %	Dew point, °C	Virtual temp., °C	Wind	
						Direction, deg	Speed, knots
Ground Zero	874	14.3	35	−0.6	14.9	020	5
Burst height	864	18.3	35	4.5	18.9	200	5
5	843	17.2	30	−0.2	17.8	200	10
6	814	15.2	32	−1.1	15.8	200	20
7	786	13.3	34	−1.9	13.9	200	25
8	756	11.3	37	−2.8	11.8	200	26
9	728	8.7	40	−4.2	9.2	210	23
10	704	6.3	44	−4.8	7.0	210	18
11	678	4.0	50	−5.2	4.6	210	15
12	652	1.3	54	−6.6	1.8	200	15
13	629	−1.3	59	−9.2	−0.7	210	15
14	605	−4.0	64	−9.9	−3.4	220	17
15	584	−6.5	69	−11.2	−5.9	230	21
16	561	−6.6	75	−10.2	−6.1	260	30
17	540	−6.8	72	−10.7	−6.3	270	35
18	520	−7.7	62	−13.4	−7.3	270	37
19	497	−10.5	64	−16.0	−10.2	270	37
20	478	−11.0	69	−15.7	−10.7	280	38
21	460	−15.6	71	−19.2	−15.3	280	42
22	440	−18.4	71	−22.2	−18.2	280	48
23	423	−20.8	70	−24.8	−20.6	280	50
24	40[illegible]	−23.[illegible]	67	−27.4	−23.0	280	55
25	389	−25.1	Dry	Dry		280	54
26	374	−27.4				290	50
27	357	−30.0				290	46
28	342	−32.6				280	44
29	332	−34.0				280	50
30	314	−37.6				290	60
31	300	−40.0				290	70
32	287	−42.4				290	67
33	275	−45.5				290	64
34	262	−48.0				290	64
35	250	−51.0				290	63
36	239	−53.5				290	64
37	228	−56.2				290	67
38	217	−59.0				290	64
39	206	−61.7				300	60
40	196	−64.5				300	67
41	186	−67.6				300	74
42	177	−68.4				300	79
43	168	−68.4				280	78
44	161	−67.5				280	76
45	153	−65.5				280	77
46	145	−65.6				280	75
47	138	−66.1				280	76
48	131	−66.4				280	80
49	125	−66.7				280	73
50	119	−67.0				280	63

Table E.10 — UPPER-AIR DATA, GROUND ZERO, 25 MAY 1953
[0730 PST (1530 Z)]

Altitude, 10^3 ft MSL	Atmospheric pressure, mb	Temperature, °C	Relative humidity, %	Dew point, °C	Virtual temp., °C	Wind	
						Direction, deg	Speed, knots
Ground Zero	901	14.8	32	−3.8	15.4	360	4
Burst height	884	13.1	23	−7.2	13.6	220	7
4	872	11.8	23	−8.3	12.3	220	10
5	840	7.9	21	−12.7	8.3	220	14
6	809	4.0	20	−16.8	4.2	190	21
7	781	3.5	20	−17.2	3.7	180	30
8	752	1.9	25	−16.0	2.1	190	21
9	722	−0.6	31	−15.4	−0.3	200	21
10	697	−2.3	30	−17.3	−2.0	200	30
11	665	−4.2	24	−21.8	−4.0	200	30
12	644	−6.0	Dry	Dry		200	31
13	621	−8.1				200	32
14	596	−10.9				200	33
15	574	−13.0				200	35
16	551	−15.0				200	48
17	529	−15.1				210	55
18	508	−14.7				210	74
19	488	−15.7	29	−29.6	−15.6	210	74
20	468	−17.3	36	−28.3	−17.2	220	74
21	449	−19.1	41	−29.0	−19.0	220	75
22	431	−21.3	40	−31.0	−21.2	220	76
23	413	−23.7	38	−33.9	−23.6	220	82
24	396	−26.4	38	−36.1	−26.0	220	88
25	378	−29.2	40	−38.3	−28.7	220	65
26	355	−31.0	Dry	Dry		220	55
27	348	−31.8				220	89
28	334	−34.0				220	89
29	320	−37.0				220	80
30	305	−40.0				220	85
31	292	−42.1				220	108
32	278	−45.0				220	110
33	266	−47.2				220	109
34	254	−50.0				220	104
35	243	−53.1				220	120
36	232	−55.0				220	122
37	222	−55.0				220	87
38	212	−56.0				220	90
39	202	−56.2				220	83
40	192	−56.0				220	65
41	182	−55.2				220	74
42	174	−54.2				220	79
43	167	−55.0				220	62
44	158	−55.2				220	53
45	152	−56.0				220	57
46	144	−56.3				220	56
47	137	−57.0				220	55
48	130	−57.0				220	67
49	124	−57.0				220	52
50	118	−58.4				220	33

Table E.11—UPPER-AIR DATA, GROUND ZERO, 4 JUNE 1953
[0315 PST (1115 Z)]

Altitude, 10^3 ft MSL	Atmospheric pressure, mb	Temperature, °C	Relative humidity, %	Dew point, °C	Virtual temp., °C	Wind	
						Direction, deg	Speed, knots
Ground Zero	867	13.3	30	−3.9	14.0	045	3
Burst height	824	12.2	38	−1.5	12.9	010	8
5	842	14.1	37	0.1	14.8	010	10
6	812	12.1	37	−2.0	12.7	360	6
7	783	10.2	37	−3.8	10.8	010	8
8	755	8.3	37	−5.1	8.9	020	6
9	727	6.0	38	−7.0	6.5	020	10
10	701	3.6	40	−8.6	4.1	140	3
11	674	0.9	42	−10.4	1.4	220	4
12	650	−1.6	45	−11.8	−1.2	200	3
13	623	−4.6	48	−13.7	−4.2	190	6
14	600	−7.0	49	−15.8	−6.7	170	8
15	577	−9.7	51	−17.6	−9.4	170	6
16	555	−11.2	40	−22.0	−11.0	210	4
17	534	−12.7	Dry	Dry		250	10
18	513	−14.8				270	15
19	493	−17.0				270	16
20	474	−19.0				280	13
21	454	−21.2				280	16
22	435	−23.3				310	18
23	416	−25.6				320	17
24	399	−27.5				310	20
25	384	−30.3				310	19
26	367	−33.0				310	24
27	350	−36.0				310	24
28	335	−38.5				310	28
29	321	−41.1				310	24
30	307	−43.8				310	28
31	293	−46.6				310	28
32	280	−48.9				310	26
33	268	−51.3				300	24
34	254	−54.0				280	20
35	243	−56.3				270	17
36	232	−57.3				260	16
37	222	−56.7				250	19
38	211	−58.0				260	21
39	201	−59.3				280	22
40	192	−57.3				250	24
41	183	−57.3				250	23
42	173	−57.1				240	28
43	166	−56.7				260	24
44	158	−55.8				270	16
45	150	−56.2				280	12
46	143	−56.6				270	12
47	137	−57.0				270	20
48	130	−57.3				270	22
49	124	−57.8				270	18
50	117	−58.0				270	11

Appendix F

ACTUAL WEATHER CONDITIONS FOR GROUND ZERO AND BURST HEIGHT

Table F.1 — ACTUAL WEATHER CONDITIONS FOR NUCLEAR DETONATION ONE, 17 MARCH 1953
(0520 PST)

Cloud cover: 6/10 cirrus stratus above 30,000 ft MSL
Precipitation: no precipitation within 1000 miles downstream
Height Ground Zero: 4025 ft MSL
Burst height: 4325 ft MSL
Pressure: Ground Zero, 876 mb
Burst height, 866 mb
Virtual temperature: Ground Zero, 37.4°F
Burst height, 47.0°F
Actual temperature: Ground Zero, 36.9°F
Burst height, 46.2°F
Relative humidity: Ground Zero, 43 %
Burst height, 38 %
Altimeter setting: 29.98 in. at Ground Zero
Height of tropopause: 37,000 ft MSL

Winds			Winds		
Height above MSL, ft	Deg from true north	Speed, knots	Height above MSL, ft	Deg from true north	Speed, knots
Surface	Light and variable		16,000	280	34
6,000	290	8	18,000	270	42
8,000	280	6	20,000	270	54
10,000	270	25	25,000	270	47
12,000	270	25	30,000	270	68
14,000	270	21	35,000	260	53
15,000	280	32	40,000	260	89

Table F.2 — ACTUAL WEATHER CONDITIONS FOR NUCLEAR DETONATION TWO, 24 MARCH 1953
(0510 PST)

Cloud cover: clear
Precipitation: no precipitation within 1000 miles downstream
Height Ground Zero: 4308 ft MSL
Burst height: 4608 ft MSL
Pressure: Ground Zero, 870 mb
Burst height, 860 mb
Virtual temperature: Ground Zero, 10.4°C
Burst height, 13.9°C
Actual temperature: Ground Zero, 9.9°C
Burst height, 13.3°C
Relative humidity: Ground Zero, 39 %
Burst height, 31 %
Altimeter setting: 30.09 in. at Ground Zero
Height of tropopause: *39,300 ft MSL*

Winds			Winds		
Height above MSL, ft	Deg from true north	Speed, knots	Height above MSL, ft	Deg from true north	Speed, knots
Surface	310	2	20,000	210	20
6,000	140	4	25,000	210	25
8,000	150	16	30,000	220	31
10,000	150	12	35,000	210	27
15,000	220	12	40,000	220	32

Table F.3 — ACTUAL WEATHER CONDITIONS FOR NUCLEAR DETONATION THREE, 31 MARCH 1953 (0500 PST)

Cloud cover: clear
Precipitation: no precipitation within 500 miles downstream
Height Ground Zero: 4164 ft MSL
Burst height: 4464 ft MSL
Pressure: Ground Zero, 873 mb
Burst height, 863 mb
Virtual temperature: Ground Zero, 4.8°C
Burst height, 8.5°C
Actual temperature: Ground Zero, 4.4°C
Burst height, 8.2°C
Relative humidity: Ground Zero, 48 %
Burst height, 32 %
Altimeter setting: 30.00 in. at Ground Zero
Height of tropopause: 35,500 ft MSL.

Winds			Winds		
Height above MSL, ft	Deg from true north	Speed, knots	Height above MSL, ft	Deg from true north	Speed, knots
Surface	360	4	15,000	300	22
6,000	010	12	20,000	310	29
8,000	350	13	25,000	310	30
10,000	310	18			

Table F.4 — ACTUAL WEATHER CONDITIONS FOR NUCLEAR DETONATION FOUR, 6 APRIL 1953 (0730 PST)

Cloud cover: 3/10 at 30,000 ft
Precipitation: no precipitation within 500 miles downstream
Height Ground Zero: 4191 ft MSL
Burst height: 10,211 ft MSL
Pressure: Ground Zero, 861 mb
Burst height, 686 mb
Virtual temperature: Ground Zero, 16.1°C
Burst height, −0.2°C
Actual temperature: Ground Zero, 15.5°C
Burst height, −0.6°C
Relative humidity: Ground Zero, 25 %
Burst height, 36 %
Altimeter setting: 29.66 in. at Ground Zero
Height of tropopause: 38,500 ft MSL

Winds			Winds		
Height above MSL, ft	Deg from true north	Speed, knots	Height above MSL, ft	Deg from true north	Speed, knots
Surface	015	7	25,000	290	68
6,000	300	3	30,000	290	92
8,000	310	13	35,000	290	68
10,000	280	28	40,000	290	122
15,000	280	31	45,000	290	119
20,000	290	72	50,000	290	78

Table F.5 — ACTUAL WEATHER CONDITIONS FOR NUCLEAR DETONATION FIVE, 11 APRIL 1953 (0445 PST)

Cloud cover: clear
Precipitation: no precipitation within 300 miles downstream
Height Ground Zero: 4240 ft MSL
Burst height: 4340 ft MSL
Pressure: Ground Zero, 869 mb
Burst height, 866 mb
Virtual temperature: Ground Zero, 0.0°C
Burst height, 0.2°C
Actual temperature: Ground Zero, −0.3°C
Burst height, −0.1°C
Relative humidity: Ground Zero, 43 %
Burst height, 40 %
Altimeter setting: 29.99 in. at Ground Zero
Height of tropopause: 38,330 ft MSL

Winds			Winds		
Height above MSL, ft	Deg from true north	Speed, knots	Heights above MSL, ft	Deg from true north	Speed, knots
Surface	045	5	15,000	310	28
6,000	360	18	20,000	300	44
8,000	360	31	25,000	300	112
10,000	360	31			

Table F.6—ACTUAL WEATHER CONDITIONS FOR NUCLEAR DETONATION SIX, 18 APRIL 1953 (0435 PST)

Cloud cover: clear
Precipitation: no precipitation within 1000 miles downstream
Height Ground Zero: 4492 ft MSL
Burst height: 4792 ft MSL
Pressure: Ground Zero, 862 mb
Burst height, 852 mb
Virtual temperature: Ground Zero, 8.2°C
Burst height, 7.5°C
Actual temperature: Ground Zero, 7.7°C
Burst height, 7.2°C
Relative humidity: Ground Zero, 40 %
Burst height, 39 %
Altimeter setting: 30.03 in. at Ground Zero
Height of tropopause: 39,320 ft MSL

Winds			Winds		
Height above MSL, ft	Deg from true north	Speed, knots	Height above MSL, ft	Deg from true north	Speed, knots
Surface	360	9	25,000	290	43
6,000	010	24	30,000	310	46
8,000	290	6	35,000	300	54
10,000	270	17	40,000	300	68
15,000	320	30	45,000	280	52
20,000	290	35	50,000	290	17

Table F.7 — ACTUAL WEATHER CONDITIONS FOR NUCLEAR DETONATION SEVEN, 25 APRIL 1953
(0430 PST)

Cloud cover: 5/10 clouds at 33,000 ft; 2/10 clouds at 16,000
Precipitation: no precipitation within 1000 miles downstream
Height Ground Zero: 4238 ft MSL
Burst height: 4538 ft MSL
Pressure: Ground Zero, 870 mb
Burst height, 860 mb
Virtual temperature: Ground Zero, 12.3°C
Burst height, 15.8°C
Actual temperature: Ground Zero, 11.7°C
Burst height, 15.3°C
Relative humidity: Ground Zero, 26 %
Burst height, 26 %
Altimeter setting: 30.02 in. at Ground Zero
Height of tropopause: 39,350 ft MSL

Winds			Winds		
Height above MSL, ft	Deg from true north	Speed, knots	Height above MSL, ft	Deg from true north	Speed, knots
Surface	340	5	25,000	280	20
6,000	030	8	30,000	280	41
8,000	070	3	35,000	280	36
10,000	260	9	40,000	270	48
15,000	290	9	45,000	270	30
20,000	280	26	50,000	270	24

[redacted]

UNCLASSIFIED

Table F.8 — ACTUAL WEATHER CONDITIONS FOR NUCLEAR DETONATION EIGHT, 8 MAY 1953 (0730 PST)

Cloud cover: clear
Precipitation: no precipitation within 1000 miles downstream
Height Ground Zero: 3078 ft MSL
Burst height: 5501 ft MSL
Pressure: Ground Zero, 900 mb
Burst height, 825 mb
Virtual temperature: Ground Zero, 17.0°C
Burst height, 8.3°C
Actual temperature: Ground Zero, 16.7°C
Burst height, 8.0°C
Relative humidity: Ground Zero, 19 %
Burst height, 23 %
Altimeter setting: 29.81 in. at Ground Zero
Height of tropopause: 39,000 ft MSL

Winds			Winds		
Height above MSL, ft	Deg from true north	Speed, knots	Height above MSL, ft	Deg from true north	Speed, knots
Surface	190	5	22,000	250	52
5,000	230	6	25,000	250	78
6,000	270	5	30,000	240	103
8,000	320	10	35,000	240	170
10,000	260	12	40,000	240	146
15,000	260	44	45,000	*	*
20,000	250	57	50,000	*	*

*Balloon out of range of wind equipment.

UNCLASSIFIED

[redacted]

Table F.9 — ACTUAL WEATHER CONDITIONS FOR NUCLEAR DETONATION NINE, 19 MAY 1953
(0405 PST)

Cloud cover: scattered 18,000; overcast 35,000
Precipitation: no precipitation within 1000 miles downstream
Height Ground Zero: 4009 ft MSL
Burst height: 4309 ft MSL
Pressure: Ground Zero, 874 mb
Burst height, 864 mb
Virtual temperature: Ground Zero, 14.9°C
Burst height, 18.9°C
Actual temperature: Ground Zero, 14.3°C
Burst height, 18.3°C
Relative humidity: Ground Zero, 35 %
Burst height, 35 %
Altimeter setting: 29.89 in. at Ground Zero
Height of tropopause: 40,500 ft MSL

Winds			Winds		
Height above MSL, ft	Deg from true north	Speed, knots	Height above MSL, ft	Deg from true north	Speed, knots
Surface	20	5	20,000	280	38
6,000	200	20	25,000	280	54
8,000	200	26	30,000	290	60
10,000	210	18	35,000	290	63
15,000	230	21	40,000	300	67

Table F.10 — ACTUAL WEATHER CONDITIONS FOR NUCLEAR DETONATION TEN, 25 MAY 1953
(0730 PST)

Cloud cover: scattered 26,000
Precipitation: no precipitation within 1000 miles downstream
Height Ground Zero: 3078 ft MSL
Burst height: 3602 ft MSL
Pressure: Ground Zero, 901 mb
Burst height, 884 mb
Virtual temperature: Ground Zero, 15.4°C
Burst height, 13.6°C
Actual temperature: Ground Zero, 14.8°C
Burst height, 13.1°C
Relative humidity: Ground Zero, 32 %
Burst height, 23 %
Altimeter setting: 29.83 in. at Ground Zero
Height of tropopause: 35,400 ft MSL

Winds			Winds		
Height above MSL, ft	Deg from true north	Speed, knots	Height above MSL, ft	Deg from true north	Speed, knots
Surface	360	4	25,000	220	65
6,000	190	21	30,000	220	85
8,000	190	21	35,000	220	120
10,000	200	30	40,000	220	65
15,000	200	35	45,000	220	57
20,000	220	74	50,000	220	33

Table F.11 — ACTUAL WEATHER CONDITIONS FOR NUCLEAR DETONATION ELEVEN, 4 JUNE 1953 (0315 PST)

Cloud cover: clear, except for few cumulus clouds to east
Precipitation: no precipitation within 1000 miles downstream
Height Ground Zero: 4191 ft MSL
Burst height: 5525 ft MSL
Pressure: Ground Zero, 867 mb
Burst height, 824 mb
Virtual temperature: Ground Zero, 14.0°C
Burst height, 12.9°C
Actual temperature: Ground Zero, 13.3°C
Burst height, 12.2°C
Relative humidity: Ground Zero, 30 %
Burst height, 38 %
Altimeter setting: 29.79 in. at Ground Zero
Height of tropopause: 39,060 ft MSL

Winds			Winds		
Height above MSL, ft	Deg from true north	Speed, knots	Height above MSL, ft	Deg from true north	Speed, knots
Surface	045	3	25,000	310	19
6,000	360	6	30,000	310	28
8,000	020	6	35,000	270	17
10,000	140	3	40,000	250	24
15,000	170	6	45,000	280	12
20,000	280	13	50,000	270	11

Appendix G

RAWINSONDE OBSERVATIONS

Table G.1—RAWINSONDE OBSERVATION, YUCCA LAKE, 17 MARCH 1953

0400 PST

AEC12
00000 42502 2504 62908 2709 82806 2724 02725 22725 42721 52832 62834 82742
02754 22746 42740 52747 62747 82752 02768 52653 02689 52663 02689 52663 02689
52663 02458 52659 02640 52647 00738 50618 00816 52650 00809 52712 02712 52714
02710

AEC12
87909 57511 00000 00037 85484 08579 02504 70001 51642 02724 50847 70835 02742
40374 34990 02738 55555 11837 07582 20806 06585 33680 52697 44585 63761 55484
72853

AEC62
30010 01998 02764 20843 06990 02652 15449 06990 02657 10278 10997 02242 05679
13996 02630 66666 22615 21207 19205 18701 10715 09411 08809 07615 06216 05911
05808 10158

0700 PST

AEC15
00000 40000 00000 63607 3509 83310 2714 02712 22615 42820 52820 62820 82842
02742 22752 42704 52760 62759 82658 02660 52671 02693 52652 02557 52260 02654

AEC15
88301 59511 00000 00055 85195 08546 00000 70010 52681 02715 50857 69994 02743
40382 82995 02754 55555 11860 08544 22840 08564 33777 03657 44752 01595 55520
67816 66454 75897 10168 04540

AEC65
30022 50990 02660 20854 09992 02687 15463 04990 02556 10301 09992 02460 66666
35690 22015 18201 16800 14206 13505 10813 09205 07012 10168 04036 10190 05352
10158

Table G.2—RAWINSONDE OBSERVATION, YUCCA LAKE, 24 MARCH 1953

0300 PST

AEC11
00000 40000 0604 61205 1408 81414 1013 01816 21913 42014 52012 62110 82112
02218 22318 52327 52332 62329 82327 02327 52426 02536 52638 02635 52719 02727
52514

AEC11
88652 63011 00000 00065 85505 12999 00603 70032 02657 01717 50891 66786 02215
40431 78992 02330 55555 11872 11999 22834 13537 33698 02659 44560 59996 55525
64780 66464 10168 08983

Table G.2 — (Continued)

AEC61
30087 92990 02431 20947 11994 02634 15539 10998 02639 10350 10998 02715 66666
19612 17308 11217 08419 07416 06918 05510 10190 05057 10158

0500 PST

AEC13
00000 40000 0000 61404 1512 81516 1512 01512 21709 42018 52012 62116 81911
02120 22224 42125 52125 62125 82128 02231 52127 02237 52237 02326 52325 02407

AEC13
88652 59214 00000 00070 85505 11549 00000 70028 02990 01512 50886 67994 01815
40423 78999 02125 55555 11869 11522 22855 12541 33830 12531 44731 03605 55712
03661

AEC63
30076 93998 02235 20531 11991 02232 15518 12995 02229 10325 17990 02329 05700
09994 66666 24505 15211 18708 06016 10158

Table G.3 — RAWINSONDE OBSERVATION, YUCCA LAKE, 31 MARCH 1953

0400 PST

AEC12
00000 40000 3610 60111 0113 83615 3420 03320 23020 42922 52921 63124 83231
03128 23135 43127 53125 63229 83130 03144 53142 03059 52726 02826 52730 62926

AEC12
88100 55911 00000 00047 85489 08567 03510 70007 51605 03320 50853 70993 03230
40380 83996 03127 55555 11865 08541 22834 09581 33630 57639 44579 64672 55531
66807

AEC61
30052 99997 03244 20894 09994 02963 15491 07994 02738 10327 10990 02828 05741
11990 66666 22211 19209 18805 09012 08310 06913 06508 10158

0600 PST

AEC14
88151 64111 00000 00051 85488 09672 00000 70007 51609 03114 50853 69996 03230
40383 82996 03240 55555 11870 05996 22863 08992 33816 08663 44640 58645 55630
58713 66604 60750

AEC14
00000 40000 0209 60112 0112 83511 3312 03114 23116 43220 53322 63323 83229
03231 23231 43240 53332 63335 83332 03338 53248 02857 52940 02835 53010 03016
53008

AEC64
30026 98997 03338 20867 10999 03035 15462 06994 02941 10299 09994 02825 05723
08998 03008 66666 23411 18310 17706 07613 06807 06509 10158

Table G.4—RAWINSONDE OBSERVATION, YUCCA LAKE, 6 APRIL 1953

0600 PST

AEC14
03205 43205 3421 63423 3318 83017 2718 02622 22834 42838 52944 62944 82844
02855 22960 43070 53073 63083 83087 02986 22997 53088 02952 52955 02970 52727
02948 52965

AEC14
86910 55811 03405 00501 85453 10553 03317 70976 01591 02622 50835 66991 02844
40373 79994 02968 55555 11746 05585 22673 51604 33662 52615 44650 52623 55617
55716 66666 58659 57459

AEC64
30022 96991 02987 20869 10990 03088 15467 06990 02960 10309 11997 02938 05736
06998 02956 66666 21611 19259 18307 13404 10511 09113 08207 07009 10158

0800 PST

AEC16
00903 40803 0202 63004 3010 83113 2820 02828 22833 42848 52830 62836 82964
02972 22979 42974 52968 62960 82988 02992 52970 07923 57912 02978 52934

AEC16
86915 53614 00903 00500 85454 13547 00602 70976 00616 02624 50831 66992 02568
40368 78994 02573 55555 11710 01601 22637 54711 66666 55063

AEC66
30020 96990 02992 20869 90996 07928 15469 04998 07923 10313 10998 02994 05737
05991 66666 23409 17405 11906 08412 08210 07213 06807 10158

Table G.5—RAWINSONDE OBSERVATION, YUCCA LAKE, 11 APRIL 1953

0100 PST

AEC09
03505 43505 3420 63527 3627 83622 3517 03515 23410 43115 53016 62915 83224
03060 23078 43094 58012 68020 87955 07912 57720 07720

AEC09
87750 60414 03505 00044 85475 51616 03416 70975 60744 03516 50791 81998 03223
40306 86993 02979 55555 11755 56680 22638 65807 66666 47381

AEC59
30950 95998 07923 20826 98997 07810 15440 01997 10285 11999 05711 08991 66666
37487 23700 22498 16003 15701 14005 12405 08313 07407 06106 10158

Table G.5—(Continued)

0500 PST

AEC13
00305 40307 50115 63618 3623 83631 3636 03631 23623 43523 53128 63033 83049
03044 23083 48006 58012 67921 87950 07685 57834 07638 57615 02803 00200

AEC13
87950 65014 00306 00049 85481 01582 00211 70982 59829 03628 50801 78990 03043
40318 84996 03185 55555 11868 02583 22738 57657 33608 68824 66666 54475

AEC63
30964 95992 07764 20833 00992 07718 15484 00998 02889 10330 07991 05768 04997
66666 34089 20801 17899 12008 09205 08806 06707 06502 05507 10158

Table G.6—RAWINSONDE OBSERVATION, YUCCA LAKE, 18 APRIL 1953

0400 PST

AEC12
03205 43205 0120 60124 3619 82906 2709 02717 22826 43130 53230 63130 83033
02935 22943 42950 52943 63043 83043 03146 53054 03068 52852 02917

AEC12
88005 54111 03205 00043 85486 07993 00119 70003 50617 02717 50863 64728 03034
40407 75991 02948 55555 11868 08992 22845 07543 33787 02579 44760 03584 55711
51611 66668 51627 77609 58619 88563 58727 99521 61704 00426 72841 10168 08884

AEC62
00069 91998 03154 20932 12990 03063 15509 12998 02860 10330 14990 05741 07996
66666 15615 12811 09015 08009 07212 06212 10158

0700 PST

AEC15
03611 43611 0215 60215 0213 83410 2815 03023 23126 43127 52930 62931 83330
03534 22753 43048 53147 63145 83144 03143 53152 03143 53113 03117 53125 03115
53108

AEC15
88211 53811 03610 00048 85493 08552 00215 70008 00594 03023 50870 64731 03330
40414 74998 03048 55555 11760 00609 22720 51611 33666 52596 44588 55704 55521
62716 66472 66805

AEC65
30077 91998 03144 20937 12990 03137 15513 14993 03114 10335 12996 03130 05785
05997 03109 66666 31489 18016 16216 12611 08714 08212 10158

Table G.7—RAWINSONDE OBSERVATION, YUCCA LAKE, 25 APRIL 1953

0400 PST

AEC12
88109 57411 00000 00038 85492 17557 00107 70022 06609 02710 50890 65784 02812
55555 11853 17557 22574 57664 33507 64786 44482 68762 66666 46419 10150 10168
04846 10159

AEC12
00000 40000 0108 60308 0404 80703 1804 02609 22812 42711 52909 62908 82709
02826 22826 42823 52822 62823 82832 02841 52836 02748 52730 02724 42724

AEC62
10150 10159

0700 PST

AEC15
00000 40000 0506 60809 0909 81404 2606 02707 22712 42509 52510 62209 83113
02818 22822 42835 52828 62826 82820 02826 52826 02843 52837 02832

AEC15
88115 56111 00000 00038 85493 15567 00506 70023 05612 02707 50887 65996 03113
40423 79995 02828 55555 11874 17542 22738 09611 33580 57675 44522 63787 55478
68824 66440 74832 77423 76885

AEC65
30074 96990 02828 20914 15990 02842 15499 09997 02839 66666 33190 20317 19713
18914 18411 12614 10614 10168 04033 10190 10316 10155

Table G.8—RAWINSONDE OBSERVATION, YUCCA LAKE, 8 MAY 1953

0700 PST

AEC15
01404 41504 2306 62705 3110 83210 3010 02612 22526 42635 52644 62548 82558
02557 22552 42568 52578 62578 87501 07403 57470 07446

AEC15
87312 60414 01404 00015 85466 10616 02106 70982 52619 02710 50834 68990 02555
40366 81995 02568 55555 11752 01651 22680 54627 33635 56741

AEC65
30045 94995 07403 20909 07994 07443 15510 05992 10357 08999 05579 05992 66666
19104 16307 10307 09511 08106 06809 10158

Table G.8 — (Continued)

1000 PST

AEC18
87116 53314 02015 00004 85460 13501 02212 70977 53639 02810 50814 71995 02456
40341 82992 02468 55555 11780 04604 22650 59675 33597 64782 66666 55967 54417

AEC18
02015 42015 2212 62210 2408 82708 2810 02810 22618 42624 52530 62440 82454
02465 22462 42472 52472 62470 82481 02485 52310 07410 57400 07435

AEC68
30986 95994 02484 20858 02991 07417 15465 02995 07404 10314 08996 05087 03991
66666 27100 23701 22298 17405 16702 09203 08008 07605 06408 05604 10158

Table G.9 — RAWINSONDE OBSERVATION, YUCCA FLAT, 19 MAY 1953

0400 PST

AEC12
02003 42003 2010 62020 2025 82926 2123 02118 22015 42217 52321 62630 82737
02837 22848 42855 52854 62950 82844 02960 52963 03067 52877 02863 52860 02856
52824

AEC12
87615 51211 02003 00019 85477 17007 02007 70011 06543 02116 50883 60653 02737
40433 73787 02856 55555 11864 18005 22580 56618 33552 56596 44520 57636

AEC62
30100 90990 02969 20961 14990 03064 15531 15996 02876 10334 18991 02754 05727
09997 02814 66666 18418 16218 09518 07414 06510 05212 10158

0700 PST

AEC15
00000 40000 0000 62017 2020 82021 2117 02217 22220 42626 52732 62836 82837
02739 22841 42750 52753 62753 82754 02860 52878 02870 52862 02860 52816

AEC15
87617 00111 00000 00018 85477 15517 00000 70010 06588 02217 50884 61651 02736
40433 72768 02753 55555 11797 13531 22778 12558 33558 56605 44529 58621

AEC65
30102 89991 02870 20965 12994 02868 15539 17994 02862 10342 19990 02825 66666
18816 18013 15319 14315 09320 07815 10151

Table G.10—RAWINSONDE OBSERVATION, YUCCA FLAT, 25 MAY 1953

0400 PST

AEC12
87209 58011 01811 00016 85462 07607 01922 70978 51674 02036 50834 60997 02262
40380 75892 02393 55555 11782 04672 22768 04991 33735 01686 44656 55663 55626
56757 66574 61999 77504 60990 88460 67837 99432 71822

AEC12
01811 1811 61930 2033 82036 2035 02038 22139 42330 52333 62344 82264 02266
22289 42392 52396 62398 87304 07305 57322 07337 52387 02237 52232

AEC62
30040 91998 07310 20901 10990 07320 15498 03997 02387 10338 11990 02324 66666
21210 18710 17609 17205 16406 15202 14606 12906 08714 07607 06809 10190 05761
10147

0700 PST

AEC15
01816 41915 2214 61921 1830 81921 2021 02030 22031 42038 52035 62048 82174
02274 22276 42288 52265 62255 82289 02285 57220 02265 52257 02233 52211 02209

AEC15
87412 58114 01816 00017 85469 09611 02112 70984 52671 02030 50837 64998 02187
40381 75861 02290 55555 11804 03664 22772 03664 33657 54725 44535 66991 55522
64991 66498 64807 77452 68787

AEC65
30044 90998 02295 20906 06992 02162 15507 06990 02159 10345 10996 02113 05778
04992 55555 88366 81893 66666 35182 30590 23605 20607 12506 11808 11107 09114
08207 07709 07406 06509 06205 05807 10158

Table G.11—RAWINSONDE OBSERVATION, YUCCA FLAT, 4 JUNE 1953

0400 PST

AEC12
00000 40000 0110 63606 0108 80206 0210 01403 22003 41708 51706 62104 82715
02813 23118 43120 53119 63124 83128 03128 52717 02524 52812 02711 52604 02704

AEC12
87505 59311 00000 00027 85473 14001 00211 70001 03586 01603 50861 66991 02716
40399 77995 03120 55555 11873 10524 22866 14006 33560 61698 44542 61767

AEC62
30053 95990 03129 20906 09996 02822 15504 06992 02712 10343 09993 02609 05767
07990 66666 24606 18606 09210 10158

Table G.11 — (Continued)

0700 PST

AEC15
00000 0000 0206 60509 0607 80504 0303 02803 22208 42307 52303 60000 80000
02930 22928 42829 52828 62827 82928 03027 53047 03031

AEC15
87615 57014 00000 00023 85477 17002 00000 70010 05587 02704 50875 99999 00000
40421 76990 02829 55555 11864 17017 22732 09561 33600 55667 44569 59720 55551
60990 44444 77492 63787 88432 72852 10168 05749

AEC65
30080 93992 03032 20937 10990 15541 03990 66666 24705 20311 18803 10808 10190
10388 10155

Table G.12—RAWINSONDE OBSERVATION, TONOPAH, 17 MARCH 1953

0400 PST

TPH12
83102 67911 00211 00041 85482 90993 54992 02736 50832 72823 02639 40359 83995
02854 55555 11822 04644 22642 58756 33549 68787 44522 69806 55474 73859

TPH12
00211 63613 3411 83319 3123 02736 22634 42634 52734 62732 82629 02646 22644
42851 52744 62754 82652 02575 52444 02574 22577

TPH62
30997 00995 02755 20835 11990 02542 66666 23408 21413 19308 17084 10190 15434
10159

0700 PST

TPH15
83303 57014 03405 00048 85488 70996 55995 02836 50834 72820 02751 40359 85896
02754 55555 11828 02643 22710 55712 33677 56999 44620 62777 55587 65767

TPH15
03405 63405 3410 83320 3126 02934 22628 42728 52730 62738 82751 02743 22747
42752 52752 62952 82752 02527 52656 02577 52752 02765 22778

TPH65
30992 01998 02557 20827 06995 02572 15935 03999 02745 10279 09998 05703 08993
66666 37390 23812 17401 11906 08707 07211 07009 05210 10158

Table G.13—RAWINSONDE OBSERVATION, TONOPAH, 24 MARCH 1953

0400 PST

TPH12
83650 60511 03609 00062 85498 70019 01618 01718 50878 67990 02124 40415 77999
01925 55555 11831 09521 22779 09561 33651 51695 66666 47171 46221

TPH12
03609 62309 1512 81618 1720 01718 21820 44444 45689 02120 22022 41926 51923
62023 81933 02035 52234 02224 12150

TPH62
30069 94993 02039 20994 11994 02332 55555 19112 18211 10159

0700 PST

TPH15
83501 60411 03604 00061 85434 70015 02993 01733 50872 67783 01825 40410 79995
01944 55555 11827 08557 22784 08562 33723 03600 44704 02655 55599 58993 66517
65794 77472 69828

TPH15
03604 60910 1416 81522 1629 01631 21831 42026 52026 61926 81825 01825 22035
41944 52143 62339 82436 02435 52350 02243 52139 02140 52228 02307 32303

TPH65
30066 93992 02335 20923 10997 02239 15514 10990 02145 10331 13990 02234 66666
36482 20311 18909 11016 08516 06214 10190 05717 10158

Table G.14—RAWINSONDE OBSERVATION, TONOPAH, 31 MARCH 1953

0400 PST

TPH12
83400 63211 03409 00053 85491 70003 54604 03115 50846 71993 03233 40373 83996
03235 55555 11815 06556 22684 56611 33657 58665 44651 57724 55630 58736

TPH12
03409 63409 3412 83315 3115 03115 23122 43230 53224 63230 83230 03135 23134
43287 53244 63335 83344 03340 53154 02952

TPH62
30011 00991 03340 30850 10990 03152 66666 23711 21609 18211 17708 10159

Table G.14—(Continued)

0700 PST

TPH15
83603 55711 03606 00056 85496 70009 54627 03216 50857 70996 03330 40386 83992
03231 55555 11828 05654 22797 04665 33680 56637 44654 55719 55600 59995

TPH15
03606 63507 3509 83410 3212 03216 23521 43326 53327 63329 83330 03231 23231
43231 53236 63236 83235 03245 53242 02941 52934 02820 52617 03027 50908 02503

TPH65
30022 00990 03247 20862 10994 03135 15453 05997 02926 10298 08999 02719 05722
06998 02703 66666 22412 21810 17812 11305 06809 06406 05912 10158

Table G.15—RAWINSONDE OBSERVATION, TONOPAH, 6 APRIL 1953

0700 PST

TPH15
82507 58711 02911 00009 85458 70976 52662 02839 50820 70996 02871 40349 81910
02873 55555 11760 01604 22625 59765 66666 41032

TPH15
02911 63015 3120 83124 2928 02839 22944 42951 52943 62947 82868 02871 22979
42980 52923 62989 82991 07915 57916 07912 62962 02955 12950

TPH65
30655 96992 07916 20850 05999 02997 15453 65990 02968 66666 23407 12409 10706
10190 10294 10158

1000 PST

TPH18
82410 58411 03226 00005 85456 70972 52684 02743 50818 72990 02987 40347 80995
08011 55555 11817 07613 22755 50632 33738 50638 44727 50650 55668 55736 66666
60461

TPH18
03226 63226 3126 83030 2839 02745 22853 42848 52950 63054 82987 02961 22999
42992 53061 63197 88713 07917 57960 02965 12960

TPH68
30995 95998 07917 20852 03990 02981 66666 22808 17803 10159

Table G.16—RAWINSONDE OBSERVATION, TONOPAH, 11 APRIL 1953

0400 PST

TPH12
83256 59311 03309 00062 85487 70983 62663 00118 50796 81991 03325 40304 89996
03362 55555 11805 53578 22664 03362 33572 73859 66666 43388

TPH12
03309 63309 3310 83612 0116 00117 23510 43423 52323 63324 83328 03328 23059
43263 53266 63173 83097 07906 52971 02874

TPH62
30938 96991 07912 20808 98998 02864 66666 25501 24600 22201 17699 10159

0700 PST

TPH15
83350 58714 03306 00060 85490 70985 62716 03415 50798 81994 03129 40308 89990
03180 55555 11740 60674 22598 70854

TPH15
03306 63308 3412 83415 3416 03415 23415 43213 53118 63122 83135 03148 23156
48011 58023 68031 88074 02942 00200 52943 00200 57796

TPH65
30940 96998 02930 00200 20808 00991 07799 15426 00995 10274 08991 05721 04999
66666 34495 25002 17997 12902 07805 06308 05803 10158

Table G.17—RAWINSONDE OBSERVATION, TONOPAH, 18 APRIL 1953

0400 PST

TPH12
83550 52111 03612 00061 85494 70003 55617 03111 50859 65728 03135 40399 75998
02942 55555 11830 03560 22821 03549 33688 54605 44671 54685 55638 54707 66576
59683 77553 60717 88484 67731 99436 71847

TPH12
02612 63613 3612 83310 3310 03111 22934 43141 53145 63235 83138 02843 22933
42942 52950 62948 63057 03053 53067 02882

TPH62
30057 93991 03056 20919 11991 03038 66666 24301 18514 10159

Table G.17—(Continued)

0700 PST

TPH15
83604 53311 03610 00060 85497 70008 54614 03213 50867 64752 03133 40411 74997
02944 55555 11817 03578 22670 54710 33635 53706 44586 57668 55452 69834

TPH15
03610 63609 0207 80207 3609 03212 23024 43230 53130 63132 83133 03031 22934
42943 52945 62938 82942 03036 53042 02953 52848 02851 52910 01909 52317 02929

TPH65
30076 91990 03146 20940 09998 02944 15521 12556 02852 10347 11993 02910 05778
03993 03417 66666 22207 17715 11510 07608 07011 06005 05507 10158

Table G.18—RAWINSONDE OBSERVATION, TONOPAH, 25 APRIL 1953

0400 PST

TPH12
83708 57011 03207 00048 85498 70029 06603 02002 50897 64789 02713 40438 78833
02820 55555 11830 12540 22812 13546 33592 55641 44542 59744 55480 67814 66462
69996 77438 72857

TPH12
03207 60107 0804 81703 2402 02605 22513 42512 52711 62909 82711 02816 22916
42819 52819 62816 82822 02728 52737 02738

TPH62
30090 97998 02728 20940 12999 02738 55555 88354 86900 66666 19412 10159

0700 PST

TPH15
83712 55711 03213 00044 85497 70029 06602 02211 50897 65990 02911 40438 78836
02816 55555 11830 13560 22782 12569 33630 51628 44562 57736 55496 65807

TPH15
03213 63607 0916 81406 1906 02110 22416 42409 52308 62508 82910 02814 22819
42818 52818 62718 82727 02817 52731 02735 52741 02525 52617 02706 50906 00809

TPH65
30091 94991 02716 20943 12990 02736 15532 06994 02727 10366 10999 02622 05786
07998 00806 55555 66354 85896 66666 19813 10158

Table G.19—RAWINSONDE OBSERVATION, TONOPAH, 8 MAY 1953

0700 PST

TPH15
82906 65911 03215 00028 85474 70987 54701 02918 50825 70996 02552 40353 82995
02371 55555 11714 54700 22644 60733 33615 60756 44536 66666 53670

TPH15
03215 63116 3117 83218 3115 02917 22215 42426 52433 62537 82550 02563 22468
42465 52762 62473 82487 02592 52497 02432 52435 00000 50631 02407 52509 00000

TPH65
30995 95995 02592 20874 50990 02492 15489 02998 02455 10346 03993 07409 05806
03998 02409 66666 33693 23496 22299 13804 12899 10606 07206 06702 10158

1000 PST

TPH18
82909 99811 03017 00026 85473 70987 56674 02817 50814 76997 02532 40336 83991
02649 55555 11824 06614 22564 69832

TPH18
03017 63117 3119 83017 2916 02817 22623 42530 52530 62630 82631 02536 22643
42551 52557 62557 82360 02463 52463 02548

TPH68
30980 94999 02462 20862 08990 02444 66666 24298 22695 18299 10159

Table G.20—RAWINSONDE OBSERVATION, TONOPAH, 19 MAY 1953

0400 PST

TPH12
83114 03111 00000 00017 85478 70042 05524 02221 50881 61644 02646 40430
72766 02646 55555 11557 57595

TPH12
00000 60000 3009 82614 2416 02220 22327 42525 52527 62534 82645 02747
22842 42646 52649 62653 82660 02758 52766 02777

TPH62
30102 88994 02757 20970 11994 02777 55555 22320 84894 66666 19214 10159

0700 PST

TPH15
83114 02211 01604 00018 85477 70010 06530 02320 50882 62643 02740 40430
73773 02649 55555 11556 58600

TPH15
01604 61804 2006 82111 2215 02319 22519 42626 52734 62739 82744 02630 22746
42745 52653 62654 82663 02683 52687 02797 17709

TPH65
30099 88993 02693 20969 10992 02790 55555 22313 85899 66666 18813 18411 10158

Table G.21 — RAWINSONDE OBSERVATION, TONOPAH, 25 MAY 1953

0400 PST

TPH12
82601 55711 03209 00022 85467 70975 54641 02014 50816 69991 02274 40353
76868 07203 55555 11614 61711 22564 66811 33488 69995 44438 73869

TPH12
03209 63110 2909 82607 2109 02014 21921 42030 52237 62248 82273 02285
27200 42299 57210 67225 87227 07201 57234 07013

TPH62
30013 92995 07207 20880 04998 02295 55555 55380 79897 66666 21006 18102 10158

0700 PST

TPH15
82705 54711 03209 00015 85468 70979 55639 01910 50819 67998 02273 40357
77991 02107 55555 11660 59671 22604 61779 33546 67995 44482 69832

TPH15
03209 63109 2907 82503 2006 01910 21927 42032 52133 62242 82271 02282 22189
47108 57107 62297 82195 07128 57265 07208 52276 02185 52118 00324 52126 02119

TPH65
30016 91990 07129 20885 04994 07111 15495 02997 02276 10353 06998 03107
05809 02990 02110 55555 55366 81897 66666 21005 17201 11302 10158

Table G.22 — RAWINSONDE OBSERVATION, TONOPAH, 4 JUNE 1953

0400 PST

TPH12
83107 50211 03309 00029 85479 70007 03558 03303 50869 65752 02617 40409
77904 02827 55555 11824 11024 22813 12021 33762 09524 44527 64686

TPH12
03309 63410 3510 83509 3508 03303 22207 42210 52213 62314 82615 02723
22827 42828 52828 62828 82826 03032 52837 02732 32718

TPH62
30063 55990 03033 20911 10997 02733 66666 23009 20511 18007 16007 10190 15545
10158

0700 PST

TPH15
83212 50411 03309 00024 85481 70013 04547 01703 50877 65754 02723 40418
77828 02737 55555 11764 10514 22536 63691

TPH15
03309 63406 3604 80405 0604 01803 22313 42511 52612 62613 82619 02728
22831 42737 52636 62635 82638 02744 52843 02830 52729 02721 52812 02708
50910 03103

TPH65
30073 73939 02747 20930 09993 02830 15531 74993 02824 10374 07996 02812
05807 06997 00908 55555 33359 83898 66666 22208 21006 19710 17804 10158

Appendix H

PIBAL OBSERVATIONS

Table H.1—PIBAL OBSERVATION, 17 MARCH 1953

Beatty

0400 PST

BTY12
00604 41603 1804 61905 2007 82413 2513 02714 22521 42518

0700 PST

BTY15
00403 40308 0210 60107 3208 83109 2709 2410 22518 42623 52236 62444 82458 92467

Caliente

0400 PST

CAL12
00000 0000 62010 2024 82126 2475 02526 22626 42631 52628 62729 82732 02720 52725

0700 PST

CAL15
00000 0000 62509 2614 82718 2719 02718 22821 42824 52727 62730 82730 02739 22744
42748 52744 62735

Currant

0400 PST

CUR12
01903 62112 23138 82616 2616 02588 22525 40441 52444 62343 82345

0700 PST

CUR15
03322 63327 3223 82914 2612 02413 22532 42538 52539 62541 82450 02554 22578
42570 52577 62574 82477 02275 52464 82469

St. George

0500 PST

SGU13
00000 0000 41006 1804 62508 2513 82416 2317 02320 22425 42631 52632 62633
82643 02644 22643 42653 52658 82656 02657

0700 PST

SGU15
00000 0000 43505 3303 62804 2507 82311 2314 02617 22828 42827 52626 62532
83736 02645 22646 42650 52757 62757 82757 02765

Warm Springs

0400 PST

WSP12
02812 62817 2824 82729 2633 02637 22641 42641 52641 62653 82670 02677 22666
42655 52655 62659 82669

Table H.1 — (Continued)

0700 PST

WSP15
03203 63103 3008 82916 2824 02828 22743 42743 52744 62744 82749 02775

Table H.2 — PIBAL OBSERVATION, 24 MARCH 1953

Beatty

0400 PST

BTY12
00407 40605 1103 61606 1709 81712 1615 01618 21822 42022 52018 62014 81912
02019 22123 42027 51929 61924 81923 02129 12129

0700 PST

BTY15
00604 40704 1005 61511 1516 81717 1621 01620 21621 41925 51927 61930 81932
01830 21827 41929 51929 62030 82133 02231 52235 02135 22236

Caliente

0400 PST

CAL12
03503 3603 60304 0808 80910 1208 01706 21310 41608 51908 62109 82611 02617
22319 42118 52117 62217 82118 02127 22228

0700 PST

CAL15
00904 1004 61105 1209 81313 1513 01513 21912 42110 52113 62212 82513 02317
22323 42327 52224 62121 82124 02125 52337 62327

Currant

0400 PST

CUR12
00000 61103 1705 81706 1608 01609 21512 41816 51914 61913 82012 02219 21921
41923 51925 61827 71825

St. George

0400 PST

SGU12
00000 0000 40000 0807 60807 0909 81109 1210 01109 21110 41908 51910 62205
82405 02615 22516 42514 52214 62214 82314 02115 52125 02438 12439

0700 PST

SGU15
00703 0703 40707 0808 61111 1313 81415 1515 01413 21608 41910 52007 02307
82409 02418 22321 42222 52120 62118 82221 02425 52432 02233 52343 72334

Table H.2 — (Continued)

Warm Springs

0400 PST

WSP12
01803 61803 1805 81913 1916 01819 21820 41922 61923 82115 02215 22122 42324
52325 62129 82130 01930 52129 62130

0700 PST

WSP15
00000 60000 1808 81615 01523 1627 21825 42028 52027 62026 82023 02030 21930
42038 52036 62035 82132 02232 52143 02143 52243 72245

Table H.3 — PIBAL OBSERVATION, 31 MARCH 1953

Beatty

0400 PST

BTY12
03407 43510 3615 63618 3519 83317 3016 03116 23120 43423 53325 63324 83229
03129 23234 43333 53333 63234 83241 03242 33243

0700 PST

BTY15
03609 43610 3613 63615 3616 83614 3112 03013 23418 43322 53323 63326 83330
03131 23233 43336 53325 63333 83337 03346 23345

Caliente

0400 PST

CAL12
00000 0000 63103 3106 83209 3411 03314 23118 42922 52926 62925 83021 03022
23020 43024 53026 63020 83023 03022 13027

0700 PST

CAL15
03603 3604 60104 3609 83615 3518 03517 23418 43221 53325 63329 83326 03332
23331 43333 53237 63241 83239 03237

Currant

0400 PST

CUR12
03204 63109 83118 3022 03023 22715 42719 52826 62829 82928 02838 22841 42850
52854 62860 82074 02884

CUR15
03005 63009 3116 83118 3021 03022 23024 43022 53025 63030 82931 03042 22944
42941 52941 62940 82942 02938

Table H.3 — (Continued)

St. George

0400 PST

SGU12
00000 0000 40704 0203 63105 2816 82719 2719 02022 22220 42118 53022 63025
83022 03023 12028

0700 PST

SGU15
00000 0000 40000 2804 62809 2810 83110 3209 23015 42923 53024 63024 83030
03121 23126 43127 53129 63140 82134 03236 53262 63265

Warm Springs

0300 PST

WSP11
03603 63603 3605 83607 3507 03407 23208 43016 53017 63123 83129 03133 23232
43233 53235 63235 83243 03249 23342

0700 PST

WSP15
00203 63303 0303 83505 3205 03208 23416 43323 53321 63327 83229 03232 23237
43241 53242 63243 83247 03243 53258 03126

Table H.4 — PIBAL OBSERVATION, 6 APRIL 1953

Beatty

0700 PST

BTY15
00906 40408 0112 63614 3312 82910 2716 02725 22733 42942 52949 62955 82955
03060 23079 43086 52987 62988 82990 02997

1000 PST

BTY18
03003 43303 3102 62704 2706 82812 2720 02825 22934 42949 52853 62868 82978
03171 23288 33293

Caliente

0700 PST

CAL15
00000 0000 63008 3016 83020 3019 02920 22927 42844 52848 62847 82748 02762
22872 42774 52877 62880 87802 07807

1000 PST

CAL18
02608 2608 62610 2712 82715 2717 02721 22731 42741 52753 62753 82935 02841
22850 42854 52850 62861 82969 02956 12956

Table H.4—(Continued)

Currant

0700 PST

CUR15
03005 63009 2914 82615 2516 02415 22519 42536 52541 62544 82559 92563

1000 PST

CUR18
02609 62613 2616 82515 2415 02418 22325 42331 52333

St. George

0700 PST

SGU15
02509 2509 42516 2516 62517 2417 82715 2915 02923 22933 42736 52638 62742

1000 PST

SGU18
02514 2514 42416 2515 62515 2617 82619 2721 02722 22725 42938 52742 62749 82753
02756 22760

Warm Springs

0700 PST

WSP15
02909 62914 2921 82927 2932 02936 22939 42943 52849 62855

1100 PST

WSP19
02839 62839 2848 82869 2882 02875 22862 42851

Table H.5—PIBAL OBSERVATION, 11 APRIL 1953

Beatty

0400 PST

BTY12
00513 40214 6196 63626 3623 83622 3618 03615 23414 2321 53223 63133 83039
03056 23078 48005 58027 60932 87901

0700 PST

BTY15
00113 43612 3614 63619 3622 83620 3518 03417 23316 43321 53225 63330 83140
03055 23080 4800 52998 62997 87921 07928

Caliente

0400 PST

CAL12
00000 3603 63610 3619 83621 3620 03620 23518 43517 53518 63418 83317 03134
23045 43065 53074 62983 83097 08001 38005

Table H.5—(Continued)

0700 PST

CAL15
00000 3604 61609 3615 80116 0215 00115 23520 43518 53517 63518 83320 03324
23231 43051 53053 62979 82988 02991 52772 02866 22762

Currant

0400 PST

CUR12
00000 60000 3016 83117 3217 03318 23319 43118 53119 83124 03228 23037 43041
53043 63048

0700 PST

CUR15
02807 22807 62908 3613 83117 3218 03211 23016 43017 53019 63011

St. George

0400 PST

SGU12
00000 0000 43209 3406 60000 0000 83204 3608 03617 23323 43123 53122 63030
83037 02942 22959 42977 52978 62975 82974 02982

0700 PST

SGU15
00000 0000 41703 2104 62006 1204 80403 0104 03609 23417 43418 53419 63319
83126 03039 22960 42971 52876 62987 87901 02983 52880 72876

Warm Springs

0400 PST

WSP12
00000 60000 3306 83409 3514 00119 20119 43618 53519 63422 83424 03423 23334
43338 53450 63269 83184 03187

0700 PST

WSP15
00000 60000 0304 83506 3509 00108 20213 43417 53317 63316 83114 03223 23042
43065 53069 63075

Table H.6—PIBAL OBSERVATION, 18 APRIL 1953

Beatty

0400 PST

BTY12
03609 40114 0117 60218 0118 83516 3314 02712 22732 43027 53232 63236 83129 02927
22936 42947 52956 62857 82991 92980

Table H.6 — (Continued)

0700 PST

BTY15
03610 43012 0113 60215 3617 83013 2606 02912 23018 43224 53223 63223 83129
02929 22836 43034 53036 63045 83040 03046 43043

Caliente

0400 PST

CAL12
00000 0000 60208 0915 80112 3611 03418 22835 42938 53240 63044 82961 02955 22973
42981 53068 63172 82973 92977

0700 PST

CAL15
00000 0000 60305 0411 80612 0712 00511 23616 43034 52939 62934 83147 03144
23049 43151 53150 63150 82955 03054 53266 03287 23268

Currant

0400 PST

CUR12
03303 60104 3310 83314 3314 03211 23012 42823 52833 62842 82743 02743 22741
42870 52778 62785 82794 97705

0700 PST

CUR15
23406 43410 53410 63210 82935 02948 22849 42747 52649 62748 82860 02761 42654

St. George

0400 PST

SGU12
00000 0000 42307 2707 63008 3311 83412 3214 02918 22728 42738 52945 63056
83055 03053 22953 42853 52853 62955 82958 02979

0700 PST

SGU15
00000 0000 40000 0906 61007 01004 83209 3017 02919 22833 42840 52941 63040
82944 02942 22942 42945 53047 62953 82958 02953 12953

Warm Springs

0400 PST

WSP12
00803 60703 0407 80212 0117 03515 23122 42942 53043 63146 83151 03154 23151
43042 53056 63058 83063 03059 53075 63079

0700 PST

WSP15
00503 60504 0507 80511 0512 00410 23315 43029 53130 63136 83134 03141 23139
43143 53153 63051 83040 03156 53159 63161

Table H.7—PIBAL OBSERVATION, 25 APRIL 1953

Beatty

0400 PST

BTY12
00109 40210 0210 60407 1106 81506 1604 02604 22513 42612 52609 62709 82815
02917 22926 42929 52931 62929 82831

0700 PST

BTY15
00704 40407 0603 61502 1610 81510 1606 01905 22111 42215 52314 62511 83111
03022 22823 42825 52927 62927 82829 02829 12826

Caliente

0400 PST

CAL12
00000 0000 60507 0607 80705 0406 03609 23220 42828 52820 62818 83224 03322
23121 43128 53134 63139 83144 03144 23166

0700 PST

CAL15
00000 0000 60807 0910 80808 0604 00106 23016 43019 52924 62924 83020 03015
22914 42817 52818 62821 83023 03026 53035 02945 52947

Currant

0100 PST

CUR09
03003 63504 3404 83309 3211 03011 22608 42618 52619 62618 82716 02715 22735
42748 52758 62763 82780 02796

0500 PST

CUR13
00000 60000 1005 80904 0403 00103 22811 42617 52621 62722 82720 02620 22619
42619 52618 62619 82622 02627

St. George

0400 PST

SGU12
00000 0000 40812 0714 60614 0711 80704 0303 03308 23120 43026 53027 63126
83122 03221 23219 43119 52927 62931 83029 03133 13134

0700 PST

SGU15
00404 40509 0809 61009 1305 82303 2803 03107 23113 43121 53122 63123 83115
03115 22919 42821 52823 62926 83026 02925 53035 02948 52938 02925 42930

Table H.7— (Continued)

Warm Springs

0400 PST

WSP12
00404 60404 0406 80510 0610 00710 22912 42919 52922 62823 86823 02916 23019
42819 52817 62823 82929 02823 52833 82937

0700 PST

WSP15
00000 60502 0505 80608 1009 01410 22617 42622 52618 62614 82711 02713 22715 42820
52823

Table H.8— PIBAL OBSERVATION, 8 MAY 1953

Beatty

0600 PST

BTY14
00204 40106 3608 60108 0110 80113 0211 03602 22623 42738 52746 62660 82562
02560 22669 42562 52562 62562 82581 02599 27517

0900 PST

BTY17
00103 43508 3406 63405 3407 83408 3104 02407 22423 42534 52638 62644 82654
02667 22466 42575 52583 62488 87405 97414

Caliente

0700 PST

CAL15
00000 0000 62303 2507 82414 2316 02320 22225 42434 52435 62435 82548 02452
22355 42357 52370 62369 82481 07401 27415

1000 PST

CAL18
02309 2309 62410 2109 82007 22080 02215 22325 42330 52332 62335 82444 02354
22359 42378 52389 62485 82491 02396 17306

Currant

0700 PST

CUR15
02709 63012 3012 83007 2809 02411 22416 42226 52130 62035 82044 02059 22165
4220 52068 62170 82190 92193

1000 PST

CUR18
00104 61908 2905 83003 3204 02405 22209 42920 52121 62121

Table H.8 — (Continued)

St. George

0700 PST

SGU15
00000 0000 42206 1807 61811 1813 81813 2013 02115 22221 42436 52540 62340
82441 22350 22351 42363 52369 62372 82388 07402

1000 PST

SGU18
02314 2314 42315 2216 62113 2210 82209 02106 02106 22321 42331 52234 62238
82242 02352 22359 42465 52476 62480 82487 07415 17421

Warm Springs

0700 PST

WSP15
02203 62503 2903 83009 3014 03016 22916 42429 52434 62436 82443 02462 22464
42466 52471 62473 82496 07410 17418

1000 PST

WSP18
02709 62816 2929 83035 2827 02622 22803 42209 52513 62518 82525 02441 22356 42375

Table H.9 — PIBAL OBSERVATION, 19 MAY 1953

Beatty

0400 PST

BTY12
00000 40000 1102 61704 1810 81915 1922 02023 22222 42320 52419 62522 82740
02849 22849 42850 52853 62856

0700 PST

BTY15
02303 42103 1905 61807 2008 82010 1912 02117 22322 42706 52831 62935 82935
02846 22844 42849 52751 62756 82762 02762

Caliente

0400 PST

CAL12
00000 0000 61911 2117 82221 2324 02322 22220 42220 52221 62325 72424

0700 PST

CAL15
01803 1807 61916 1919 82024 2128 02129 22134 42137 52137 62136 82135 02230

Table H.9—(Continued)

Currant

0400 PST

CUR12
00000 60000 1811 81915 2117 02119 22026 32028

0700 PST

CUR15
00000 10145

St. George

0400 PST

SGU12
00603 0603 40807 1404 61905 2210 82316 2322 02323 22219 42018 52116 62216
82628 02736 22741 42845 52740 62738 82738 02839 22844

0700 PST

SGU15
00000 00000 40910 1507 61609 2114 82221 2223 02126 22029 42141 52130 62230 82529
92525

Warm Springs

0400 PST

WSP12
02603 62608 2616 82616 2417 02220 22337 42345 52443 62530 72530

0700 PST

WSP15
02511 62412 2316 82319 2222 02121 22239 42345 52540 62636 82736

Table H.10—PIBAL OBSERVATION, 25 MAY 1953

Beatty

0400 PST

BTY12
01503 41504 1806 62009 2013 82018 2026 02030 22729 42338 52356 62374 82269 02287
27201 37203

0700 PST

BTY15
01608 41708 1809 61811 1914 82018 2027 02036 21927 42145 52250 62348 82278 02297
27204 47226 57230 67227

Table H.10— (Continued)

Caliente

0400 PST

CAL12
00000 1703 61715 1722 81828 2034 02037 22038 42031 52235 62355 82291 07200 17308

0700 PST

CAL15
01604 1608 61715 1720 81825 1929 02935 22042 42043 52148 62259 82274 02279 22291
37200

Currant

0400 PST

CUR12
00000 60000 1914 81817 1717 01717 21818 41936 52039 62140 82261 02266 22288 42297

0700 PST

CUR15
01707 62012 1913 81914 1917 01819 21925 41942 51944 62045 82245 02178 22181
47117 57119 67117 87117

St. George

0400 PST

SGU12
00000 0000 41411 1612 61715 1818 81821 1925 02032 22146 42144 52144 62142
82163 02276 22185 42298 57202 67212 87205 92298

0700 PST

SGU15
01103 1103 41310 1415 61615 1718 81920 2021 02027 22048 42056 52058 62049 82064
02177 22186

Warm Springs

0400 PST

WSP12
02005 61907 1810 82012 2009 02112 22035 41937 52033 62135 82246 02191 22294
47222 57230 67226 77210

0700 PST

WSP15
02507 62409 2209 82006 1806 01808 21930 41938 52037 62143 82273 02192 12192

Table H.11 — PIBAL OBSERVATION, 4 JUNE 1953

Beatty

0400 PST

BTY12
00811 40414 3617 60117 0216 80115 3513 03411 22903 41803 51604 61706 82715
02919 23131 43023 53026 63026 83129 03343 13350

0600 PST

BTY14
00207 40112 0114 60116 0116 80216 0213 00110 22504 42005 51906 62010 82612
02918 23022 43029 52934 62934 82942 02840 53037 03056

Caliente

0500 PST

CAL13
03204 3406 60409 0412 80613 0715 0814 20504 43605 53004 62505 82211 02514 22714
42811 52711 62612 82515 02417 52817 02721

0700 PST

CAL15
00000 0000 60407 0610 80813 0815 00812 20704 40000 50000 62604 82311 02615
22714 42614 52615 62617 82819 02820 52824 02528 52419 02525 52623 72715

Currant

0400 PST

CUR12
00000 60000 3605 80103 0103 03303 22503 42510 52310 62211

0700 PST

CUR15
00000 60000 0000 80000 1704 01805 22006 42407 52509 62511 82518 02618 22520
42523 52522 62522 82432 02228

St. George

0400 PST

SGU12
00000 0000 40403 0000 60000 1804 82806 2808 03007 23504 40000 51904 61810 82018
02409 22510

0700 PST

SGU15
00000 0000 42204 2309 62307 2507 82706 0000 00000 21004 41603 51806 62009
82205 02908 22617 42418 52317 62314 82412 02613 52717 62717

Table H.11 — (Continued)

Warm Springs

0400 PST

WSP12
00000 60201 0205 80310 0412 00407 22902 42508 52310

0700 PST

WSP15
00000 60702 0704 80706 0606 01203 22304 42710 52517 62419 2416 02520 22720 42629
52736 62736 82644 02534 12532

Appendix I

CONTROL POINT SURFACE OBSERVATIONS

Time, PST	Ceiling, × 100 ft	Sky	Visibility, miles	Temp., °F	Dew point, °F	Wind direction	Wind speed, knots	Pressure, in. Hg	Relative humidity, %
0030	None	Clr	50	53	27	SW	7	25.760	36
0130	None	Clr	50	51	24	WSW	8	25.760	33
0230	None	Clr	50	51	22	SW	12	25.750	31
0330	None	Clr	50	50	19	SW	12	25.750	29
0430	None	Clr	50	48	25	W	3	25.765	41
0520	300	7/10	50	43	22	NE	3	25.775	42
0530	300	6/10	50	44	23	NE	3	25.775	43
0630	300	2/10	50	44	20	NW	6	25.810	38
0730	300	6/10	50	47	24	NE	3	25.820	38
0830	300	3/10	50	54	26	E	2	25.840	32
0930	300	3/10	50	57	22	Calm	Calm	25.850	25
1030	300	3/10	50	60	21	Calm	Calm	25.850	22
1130	300	9/10	50	63	31	S	10	25.840	29
1230	300	4/10	50	63	28	SW	9	25.830	26
1330	300	4/10	50	63	29	S	9	25.820	27
1430	160–300	2/10–3/10	50	64	25	S	6	25.810	22
1530	160	2/10	50	62	22	NW	8	25.800	20
1630	160–250	2/10–2/10	50	62	19	S	9	25.775	18
1730	160–250	1/10–3/10	50	59	16	SSW	7	25.775	19
1830	250	2/10	50	56	17	SW	7	25.775	21
1930	250	2/10	50	52	16	NW	4	25.785	23
2030	250	2/10	50	52	16	SW	2	25.800	24
2130	None	Clr	50	47	13	NE	3	25.800	24
2230	None	Clr	50	41	10	NW	4	25.815	28
2330	None	Clr	50	38	8	NNE	3	25.815	28

* Total precipitation for period, none.

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Table I.2—SURFACE OBSERVATIONS, CONTROL POINT, 24 MARCH 1953*

Time, PST	Ceiling, × 100 ft	Sky	Visibility, miles	Temp., °F	Dew point, °F	Wind direction	Wind speed, knots	Pressure, in. Hg	Relative humidity, %
0030	None	Clr	50	43	21	N	2	25.905	40
0130	None	Clr	50	43	21	N	3	25.905	40
0230	None	Clr	50	41	21	N	2	25.890	43
0330	None	Clr	50	40	20	N	3	25.885	44
0430	None	Clr	50	39	20	N	4	25.880	46
0510	None	Clr	50	46	23	N	4	25.875	40
0530	None	Clr	50	46	23	N	3	25.880	39
0630	None	Clr	50	45	24	NNE	4	25.880	43
0730	None	Clr	50	49	27	N	3	25.880	42
0830	250	1/10	50	59	30	NE	5	25.875	32
0910	250					Calm	Calm		
0930	250	7/10	50	64	29	Calm	Calm	25.870	26
1030	250	4/10	50	68	30	SE	7	25.850	24
1130	250	5/10	50	71	41	S	3	25.830	34
1200	250		50			SSW	6		
1230	250	7/10	50	72	30	SW	15	25.800	21
1330	200–250	4/10–8/10	50	72	26	SW	14	25.870	18
1430	200–250	4/10–10/10	50	72	26	SW	14	25.850	18
1530	140–250	4/10–6/10	50	70	22	S	17	25.750	16
1630	140–250	4/10–6/10	50	69	19	SW	19	25.730	15
1730	140–250	4/10–2/10	50	64	19	SW	14	25.730	17
1830	140	4/10	50	64	20	SSW	10	25.730	18
1930	140	3/10	50	61	20	SSW	15	25.730	20
2030	140	2/10	50	59	19	SW	14	25.730	20
2130	140–250	2/10–3/10	50	63	26	SW	13	25.730	24
2230	140–250	2/10–3/10		64	28	SW	14	25.740	25
2330	140–250	2/10–3/10		64	29	SSW	10	25.730	26

* Total precipitation for period, none.

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Table I.3—SURFACE OBSERVATIONS, CONTROL POINT, 31 MARCH 1953*

Time, PST	Ceiling, × 100 ft	Sky	Visibility, miles	Temp., °F	Dew point, °F	Wind direction	Wind speed, knots	Pressure, in. Hg	Relative humidity, %
0030	180	1/10	50	54	20	WSW	11	25.760	26
0130	180	1/10	50	48	22	W	2	25.775	35
0230	None	Clr	50	44	22	Calm	Calm	25.780	41
0330	None	Clr	50	39	23	N	3	25.790	51
0430	None	Clr	50	43	20	NW	7	25.795	39
0500	None	Clr	50	39	21	Calm	Calm	25.800	48
0530	None	Clr	50	40	23	Calm	Calm	25.810	50
0630	None	Clr	50	43	22	N	4	25.840	42
0730	None	Clr	50	47	26	NE	3	25.860	44
0830	None	Clr	50	55	23	NNE	4	25.865	28
0930	None	Clr	50	60	23	N	3	25.870	24
1030	None	Clr	50	62	24	NE	3	25.870	23
1130	None	Clr	50	64	26	SE	9	25.860	25
1230	300	4/10	50	65	25	NE	3	25.840	21
1330	300	4/10	50	68	23	E	8	25.820	18
1430	250	4/10	50	66	26	S	9	25.810	22
1530	250	4/10	50	68	20	SSE	9	25.800	16
1630	250	5/10	50	67	16	SSE	7	25.780	14
1730	250	4/10	50	66	15	S	7	25.780	17
1830	250	4/10	50	61	23	SW	7	25.780	22
1930	250	2/10	50	62	20	W	12	25.780	20
2030	None	Clr	50	60	18	W	4	25.800	19
2130	None	Clr	50	53	19	N	2	25.800	25
2230	None	Clr	50	49	23	W	2	25.810	34
2330	None	Clr	50	47	20	Calm	Calm	25.810	33

*Total precipitation for period, none.

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Table I.4—SURFACE OBSERVATIONS, CONTROL POINT, 6 APRIL 1953*

Time, PST	Ceiling, × 100 ft	Sky	Visibility, miles	Temp., °F	Dew point, °F	Wind direction	Wind speed, knots	Pressure, in. Hg	Relative humidity, %
0030	300	2/10	50	63	25	W	9	25.520	23
0130	None	Clr	50	63	21	WNW	9	25.495	20
0230	None	Clr	50	58	24	N	5	25.500	27
0330	320	3/10	50	55	22	NNW	9	25.495	27
0430	320	2/10	50	54	22	NNW	12	25.475	27
0530	320	3/10	50	55	21	N	7	25.465	26
0630	350	5/10	50	56	21	NW	9	25.485	25
0730	300	3/10	50	59	23	Calm	Calm	25.495	24
0830	300	2/10	50	63	22	ENE	6	25.495	20
0930	300	2/10	50	63	22	ENE	6	25.495	20
1030	300	2/10	50	66	27	S	11	25.470	22
1130	300	2/10	50	69	23	S	6	25.440	17
1230	50–300	1/10–2/10	50	68	24	S	13	25.410	19
1330	50	2/10	50	69	22	S	13	25.390	17
1430	50	2/10	50	68	24	SW	20	25.360	18
1530	50	6/10	50	66	27	NW	11	25.350	35
1630	50	5/10	20	62	13	NW	18	25.340	14
1730	50	2/10	15	59	8	NW	15	25.345	13
1830	60	2/10	10	53	6	N	17	25.365	08
1930	60	3/10	10	50	5	NNE	20	25.395	15
2030	60	2/10	05	47	2	N	22	25.435	15
2130	60	2/10	05	43	1	N	13	25.490	17
2230	150	2/10	08	40	8	N	24	25.525	16
2330	None	Clr	50	38	3	N	20	25.530	22

*Total precipitation for period, none.

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Table I.5—SURFACE OBSERVATIONS, CONTROL POINT, 11 APRIL 1953*

Time, PST	Ceiling, × 100 ft	Sky	Visibility, miles	Temp., °F	Dew point, °F	Wind direction	Wind speed, knots	Pressure, in. Hg	Relative humidity, %
0030	None	Clr	50	36	14	NW	12	25.710	39
0130	None	Clr	50	34	14	NW	9	25.740	42
0230	None	Clr	50	34	12	NE	8	25.780	39
0330	None	Clr	50	29	15	NNE	4	25.755	55
0445	None	Clr	50	30	11	NW	7	25.780	45
0530	None	Clr	50	30	11	N	4	25.790	46
0630	None	Clr	50	35	11	N	7	25.800	37
0730	None	Clr	50	39	20	Calm	Calm	25.810	46
0830	None	Clr	50	42	18	NNW	4	25.820	38
0930	80	1/10	50	44	19	NE	5	25.820	36
1030	80	1/10	50	46	21	NNW	9	25.805	36
1130	80	2/10	50	50	17	NE	9	25.790	26
1230	80	3/10	50	49	13	NE	10	25.775	23
1330	80	6/10	50	50	13	E	3	25.765	22
1430	80	6/10	50	51	12	E	8	25.745	20
1530	80	6/10	50	55	14	NE	4	25.730	19
1630	80	4/10	50	53	10	NW	9	25.730	17
1730	80	2/10	50	51	10	NW	9	25.730	19
1830	80	1/10	50	47	11	NW	10	25.740	23
1930	80	1/10	50	46	10	NW	10	25.760	22
2030	None	Clr	50	45	10	NW	10	25.780	23
2130	None	Clr	50	44	10	NW	10	25.790	24
2230	None	Clr	50	43	10	NW	10	25.800	25
2330	None	Clr	50	40	10	NW	9	25.810	28

* Total precipitation for period, none.

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Table I.6—SURFACE OBSERVATIONS, CONTROL POINT, 18 APRIL 1953*

Time, PST	Ceiling, × 100 ft	Sky	Visibility, miles	Temp., °F	Dew point, °F	Wind direction	Wind speed, knots	Pressure, in. Hg	Relative humidity, %
0030	180	1/10	50	48	24	NNW	11	25.780	38
0130	None	Clr	50	46	22	NNW	13	25.780	38
0230	None	Clr	50	46	23	NNW	15	25.800	39
0330	None	Clr	50	45	24	NNW	13	25.810	42
0430	None	Clr	50	44	24	NNW	16	25.825	44
0530	None	Clr	50	45	23	NNW	13	25.850	41
0630	None	Clr	50	48	19	NNW	13	25.860	31
0730	None	Clr	50	52	23	N	15	25.880	31
0830	None	Clr	50	56	23	NNE	12	25.890	27
0930	None	Clr	50	58	24	NNE	11	25.890	26
1030	None	Clr	50	62	26	NE	11	25.865	25
1130	None	Clr	50	64	23	ENE	6	25.850	20
1230	None	Clr	50	66	21	NNE	3	25.850	17
1330	None	Clr	50	68	27	E	6	25.830	21
1430	None	Clr	50	68	19	ENE	7	25.810	15
1530	None	Clr	50	69	28	E	9	25.800	21
1630	None	Clr	50	69	28	Calm	Calm	25.800	21
1730	None	Clr	50	69	27	Calm	Calm	25.790	20
1830	None	Clr	50	61	28	Calm	Calm	25.790	28
1930	None	Clr	50	61	29	SE	4	25.790	29
2030	None	Clr	50	58	26	Calm	Calm	25.810	28
2130	None	Clr	50	58	25	SW	5	25.810	28
2230	None	Clr	50	57	27	Calm	Calm	25.825	31
2330	None	Clr	50	56	26	NW	4	25.830	31

*Total precipitation for period, none.

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Table I.7—SURFACE OBSERVATIONS, CONTROL POINT, 25 APRIL 1953*

Time, PST	Ceiling, × 100 ft	Sky	Visibility, miles	Temp., °F	Dew point, °F	Wind direction	Wind speed, knots	Pressure, in. Hg	Relative humidity, %
0030	300	7/10	50	66	24	NW	9	25.795	20
0130	300	7/10	50	64	25	NNW	9	25.800	22
0230	300	3/10	50	63	25	NW	10	25.810	22
0330	300	1/10	50	64	26	NW	12	25.815	23
0430	160–330	2/10–5/10	50	63	26	NW	4	25.815	24
0530	160–300	2/10–9/10	50	63	26	NW	9	25.820	24
0630	160–300	1/10–9/10	50	64	28	NW	12	25.830	25
0730	160–300	1/10–9/10	50	68	33	NW	9	25.850	27
0830	300	10/10	50	70	30	N	4	25.850	23
0930	300	9/10	50	74	32	ENE	5	25.850	21
1030	300	8/10	50	79	33	S	3	25.850	19
1130	300	8/10	50	81	35	SE	10	25.830	19
1230	300	8/10	50	81	32	SSE	10	25.820	16
1330	300	8/10	50	82	32	S	12	25.800	16
1430	300	9/10	50	81	32	S	14	25.780	17
1530	300	9/10	50	82	22	SW	10	25.770	11
1630	300	9/10	50	81	17	SSW	16	25.740	09
1730	300	9/10	50	79	16	SSW	11	25.730	09
1830	300	7/10	50	76	20	SSW	10	25.730	12
1930	300	7/10	50	75	17	SSW	9	25.740	11
2030	300	5/10	50	73	16	SW	11	25.750	11
2130	300	4/10	50	73	17	SW	8	25.760	12
2230	300	3/10	50	73	18	SW	7	25.765	12
2330	300	6/10	50	72	19	Calm	Calm	25.770	13

*Total precipitation for period, none.

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Table I.8—SURFACE OBSERVATIONS, CONTROL POINT, 8 MAY 1953*

Time, PST	Ceiling, × 100 ft	Sky	Visibility, miles	Temp., °F	Dew point, °F	Wind direction	Wind speed, knots	Pressure, in. Hg	Relative humidity, %
0030	None	Clr	50	55	15	SW	14	25.580	20
0130	None	Clr	50	53	15	WSW	15	25.595	22
0230	None	Clr	50	53	15	WNW	13	25.610	22
0330	None	Clr	50	53	20	WNW	15	25.610	27
0430	None	Clr	50	50	18	WNW	3	25.620	27
0530	None	Clr	50	51	20	Calm	Calm	25.620	29
0630	None	Clr	50	51	20	ENE	3	25.630	29
0730	None	Clr	50	56	25	E	5	25.630	30
0830	None	Clr	50	58	22	W	4	25.635	24
0930	150	1/10	50	61	8	WSW	8	25.640	12
1030	80	1/10	50	62	23	W	9	25.625	23
1130	80	2/10	50	63	22	S	8	25.590	20
1200	80		50			S	9		
1230	80	6/10	50	65	21	SSW	9	25.590	18
1330	80	8/10	50	65	21	SW	10	25.580	19
1430	80	10/10	50	58	23	NW	23	25.570	25
1530	80	7/10	50	59	24	N	11	25.570	25
1630	80	4/10	50	59	24	NW	17	25.570	25
1730	80	1/10	50	56	25	NW	17	25.590	29
1830	None	Clr	50	54	21	NW	17	25.600	27
1930	None	Clr	50	50	24	N	17	25.630	35
2030	None	Clr	50	47	23	N	20	25.660	38
2130	None	Clr	50	45	24	N	15	25.680	42
2230	None	Clr	50	44	28	NNW	20	25.670	51
2330	None	Clr	50	43	15	NW	17	25.670	32

*Total precipitation for period, none.

Table I.9—SURFACE OBSERVATIONS, CONTROL POINT, 19 MAY 1953*

Time, PST	Ceiling, × 100 ft	Sky	Visibility, miles	Temp., °F	Dew point, °F	Wind direction	Wind speed, knots	Pressure, in. Hg	Relative humidity, %
0030	270	4/10	50	70	33	S	4	25.710	26
0130	270	2/10	50	68	35	SSW	9	25.705	29
0230	270	2/10	50	68	35	SSW	5	25.700	29
0330	180–250	2/10–6/10	50	67	34	WSW	6	25.695	29
0405	180–350†	2/10–10/10	50	58	34	Calm	Calm	25.695	40
0430	180–250	2/10–10/10	50	59	35	Calm	Calm	25.685	40
0530	180–250	2/10–10/10	50	63	35	Calm	Calm	25.695	35
0630	180–250	2/10–10/10	50	65	34	Calm	Calm	25.695	31
0730	180–250	3/10–10/10	50	69	33	S	9	25.690	26
0830	180–250	4/10–10/10	50	68	32	SSW	23	25.680	26
0930	180–250	3/10–10/10	50	71	27	S	20	25.660	19
1030	140–250	3/10–5/10	50	72	28	S	21	25.650	19
1130	140–250	3/10–5/10	50	74	25	S	20	25.640	16
1230	140–250	3/10–8/10	50	74	32	S	18	25.620	20
1330	140–250	3/10–10/10	50	75	38	SSW	16	25.610	26
1430	100–150–250	1/10–3/10–10/10	50	76	40	S	8	25.580	27
1530	100–150–250	1/10–2/10–10/10	50	77	40	S	15	25.560	26
1630	100–250	2/10–10/10	50	77	40	WSW	7	25.525	26
1730	100–250	1/10–10/10	50	76	36	SW	9	25.510	23
1830	100–250	2/10–10/10	50	74	38	SSW	14	25.500	27
1930	150–250	3/10–10/10	50	71	39	SW	12	25.500	30
2030	150–250	2/10–10/10	50	69	42	SW	9	25.510	36
2130	150–250	2/10–9/10	50	68	39	W	13	25.530	34
2230	150–250	3/10–6/10	50	67	37	W	9	25.570	32
2330	150–250	4/10–5/10	50	65	35	NW	9	25.590	32

*Total precipitation for period, none.
†Aircraft report.

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Table I.10—SURFACE OBSERVATIONS, CONTROL POINT, 25 MAY 1953*

Time, PST	Ceiling, × 100 ft	Sky	Visibility, miles	Temp., °F	Dew point, °F	Wind direction	Wind speed, knots	Pressure, in. Hg	Relative humidity, %
0030	None	Clr	50	50	20	S	9	25.565	30
0130	None	Clr	50	49	19	S	10	25.570	29
0230	None	Clr	50	47	24	SSW	10	25.580	39
0330	None	Clr	50	48	21	SSW	13	25.580	33
0430	300	8/10	50	47	20	S	10	25.595	33
0530	300	8/10	50	49	19	SW	14	25.610	30
0630	130–260	1/10–8/10	50	57	22	S	10	25.620	31
0730	260	4/10	50	53	26	WSW	9	25.650	34
0830	150–260	2/10–2/10	50	56	26	S	13	25.650	31
0930	150	3/10	50	58	29	S	13	25.660	32
1030	150	2/10	50	61	33	SW	22	25.650	34
1130	150	1/10	50	61	33	SW	22	25.650	34
1230	150	2/10	50	64	33	S	17	25.650	31
1330	150	2/10	50	64	33	SSW	22	25.650	31
1430	160	1/10	50	64	21	SSW	20	25.650	19
1530	170	1/10	50	64	22	S	18	25.640	20
1630	180	1/10	50	63	19	SSW	22	25.640	18
1730	None	Clr	50	62	23	SSW	20	25.650	22
1830	None	Clr	50	59	22	SSW	13	25.650	24
1930	None	Clr	50	57	22	SW	10	25.645	26
2030	None	Clr	50	55	24	SW	14	25.655	30
2130	None	Clr	50	53	25	SSW	18	25.670	33
2230	None	Clr	50	52	26	SSW	18	25.680	36
2330	None	Clr	50	50	30	SSW	13	25.685	46

*Total precipitation for period, none.

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Table I.11—SURFACE OBSERVATIONS, CONTROL POINT, 4 JUNE 1953*

Time, PST	Ceiling, × 100 ft	Sky	Visibility, miles	Temp., °F	Dew point, °F	Wind direction	Wind speed, knots	Pressure, in. Hg	Relative humidity, %
0030	None	Clr	50	58	19	NW	3	25.650	21
0130	None	Clr	50	54	21	NW	5	25.650	27
0230	None	Clr	50	54	22	N	1	25.645	28
0315	None	Clr	50	54	25	N	3	25.655	32
0330	None	Clr	50	54	25	N	3	25.655	32
0430	None	Clr	50	50	25	Calm	Calm	25.660	37
0530	None	Clr	50	54	28	Calm	Calm	25.670	35
0630	None	Clr	50	53	22	Calm	Calm	25.680	29
0730	None	Clr	50	68	37	N	4	25.680	31
0830	300	5/10	50	73	36	W	5	25.680	25
0930	300	10/10	50	75	39	Calm	Calm	25.670	32
1030	80–300	1/10–10/10	50	76	39	E	3	25.660	20
1130	80–300	1/10–10/10	50	81	37	SW	9	25.640	21
1230	85–300	1/10–10/10	50	81	31	S	13	25.640	21
1330	300	10/10	50	80	32	SW	12	25.620	17
1430	300	10/10	50	81	33	S	16	25.600	18
1530	300	10/10	50	80	31	SW	14	25.600	21
1630	300	10/10	50	80	32	SW	4	25.600	17
1730	300	10/10	50	79	32	SW	7	25.600	18
1830	70–300	1/10–10/10	50	76	30	SW	5	25.600	18
1930	300	6/10	50	74	30	SW	7	25.600	19
2030	300	4/10	50	72	29	SW	6	25.610	20
2130	300	4/10	50	72	29	W	10	25.620	20
2230	300	3/10	50	71	30	WNW	12	25.640	22
2330	None	Clr	50	69	31	NW	13	25.640	24

*Total precipitation for period, none.

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