U. S. DEPARTMENT OF COMMERCE
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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

JANUARY 1963
Volume 14 No. 1

ASHEVILLE: 1963

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NOTE: Delayed data and corrections will be carried in the June and December issues of this publication.

SUBSCRIPTION PRICE: Monthly 20 cents and annual 40 cents per copy; yearly subscription, including monthly and annual issues, $2.50 domestic, $3.50 foreign. Checks and money orders should be made payable to the Superintendent of Documents. Remittance and correspondence regarding subscriptions should be sent to "Superintendent of Documents, Government Printing Office, Washington 25, D. C."

CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 14 No. 1 JANUARY 1963

GENERAL SUMMARY OF WEATHER CONDITIONS

January 1963 ranks among the coldest months on record. Below-normal temperatures were more extensive than for any other January, covering all the Nation except Maine and soutneast Florida. The thermometer dipped below freezing everywhere except southern Florida and caused some crop damage in the Southwest Border region from Texas to California. Several stations in the Midwest and South recorded their lowest temperatures during records dating back several years before the beginning of the 20th century. In some northern areas the combination of extreme cold, strong winds, and snow at times equaled in severity that of any winter weather in this century. Lake Erie was almost completely frozen over, a very rare occurrence. Precipitation over most of the Country was well below normal. Snowfall was heavy in the Great Lakes region and Northeast, but very light in the Far West where the mountain snowpack remained much below normal. The weather was mild, relative to normal, in Alaska where Anchorage had above normal temperatures the last two-thirds of the month with 17 days of fog, a new record; Fairbanks had its warmest January in 26 years; Barrow had 33° on the 17th equaling the highest of record there for January; and Juneau on the 5th had its first thunderstorm on record for January.

TEMPERATURE. --The month was generally 2° to 6° colder than normal west of the Continental Divide, 6° to 12° in the Midcontinent, and 2° to 4° colder than normal east of the Appalachians. This was the coldest January since 1940 in the East and since 1949 or 1937 in most of the Far West. The first 9 or 10 days of the month were rather cold in the East and mostly unseasonably mild elsewhere.

Beginning in the northwestern portion of the Country about the 10th, the first severe cold wave of the month overspread the remainder of the Country by the 14th. Temperatures fell to subzero levels from the Cascade-Sierra Nevada Mountains to the Great Lakes and Ohio Valley, and to freezing in extreme southern areas from Mobile, Ala., to San Diego, Calif. At the latter station this was the 10th freeze since 1871. As the cold wave swept across Texas on the 13th and 14th, temperatures fell to near record low levels in the Panhandle and freezing was general in the southern part of the State. Although this freeze in southern Texas was not as severe as that of 1961, crops were unusually susceptible to continuous freezing for 24 to 30 hours in the Winter Garden and San Antonio areas as a result of near record high temperatures for the season in the 80's and 90's preceding the freeze. In southern Arizona freezing was continuous as long as 15 hours in the Salt River Valley where a low of 12° was reported. Of the several cold waves during the month three reached Brownsville, the most there in 1 month since 1884.

During the third and fourth weeks the weather was unusually cold, particularly in the Midwest and South where several stations reported alltime low temperatures, and many others their lowest for January. Also during this period lowest readings in Texas ranged from 19° to 24° in the lower Rio Grande Valley and 15° to 18° in the Winter Garden and San Antonio areas. In north-central areas periods of continuous subzero temperatures were among the longest on record, and the number of days with subzero minima were the greatest for January at a few places. Milwaukee, Wis., had -10° or lower on 14 days, a new record, and a 15-day period (January 14 through 28) for which the average temperature was -4.2°, the coldest such period on record at that city. Minneapolis, Minn., had 157 continuous hours of subzero temperatures beginning at 2:00 a.m. on the 18th, the second longest such period on record. The longest such period at Minneapolis was 186 hours beginning at 8:00 p.m. December 31, 1911, followed by 4 hours of above zero, then another 113 hours of zero or colder from 6:00 p.m. January 8, 1912.

In the following table are listed some stations that recorded alltime low temperatures during January 1963:

Station	Lowest	Date	Previous Low
Nashville, Tenn.	-15°	24	-13° Feb. 1951
Lexington, Ky.	-21°	24	-20° Feb. 1899
Cleveland, Ohio	-19°	24	-17° Jan. 1873
Toledo, Ohio	-17°	24	-16° Feb. 1899
Louisville, Ky.	-20°	24	-20° Jan. 1884
Akron, Ohio	-21°	24	-20° Feb. 1899
Grand Junction, Colo.	-23°	13	-21° Feb. 1933

Low temperatures set new records for January in the following listed states:

State	Lowest	Date	Station	Previous Low
*Arizona	-37°	13	Maverick	-33° 1949
Florida	7°	24	Milton Exp. Station	8° 1940
Indiana	-34°	28	Greensburg	-33° 1887
*Kentucky	-34°	28	2 Stations	-25° 1936
Tennessee	-30°	24	Kingston Springs	-23° 1942
*Texas	-24°	19	Sunray	-19° 1912
Hawaii	20°	8	Haleakala Summit	22° 1955

* Also lowest for any month.

Frost penetration at the end of the month was about 3 feet in Iowa, and ranged from 12 to 15 inches in Kansas, and 20 to 24 inches in the agricultural areas of Washington.

PRECIPITATION. --During the first week precipitation was negligible in most of the Country. Significant amounts fell only along the north Pacific coast where totals ranged up to 2 inches or more, and parts of the southwestern Great Plains and lower Mississippi Valley where amounts ranged up to an inch. Precipitation during the second week was mostly limited to areas east of the Mississippi with heavy rains in the South where totals ranged up to over 2 inches.

Precipitation the third week totaled 0.50 except for 0.50 inch or more in parts of the Pacific Northwest and upper Rocky Mountains, Gulf coastal areas, and east of the Appalachians. Heaviest amounts of 2 to over 4 inches fell in the Carolinas, Georgia, Alabama, and southern portions of Mississippi and Louisiana where thunderstorms occurred on the 17th. Significant amounts in the fourth week were almost all limited to the middle of the Florida Peninsula, the Appalachian region, and the Northeast.

Storms the last 3 days of the month were responsible for heavy precipitation in the Pacific States, except extreme southern California, and in all northern areas west of the Continental Divide. In Utah 5.08 inches in 24 hours at Deer Creek Dam set a new alltime record for Utah.

Totals for the month ranged up to 6 inches or more along the central and east Gulf coast and in most of Alabama, Georgia, and South Carolina where some stations measured more than twice their usual February amounts. The northern and central Rockies and west-central portion of the Great Plains was another area with above normal precipitation. In this area totals ranged up to more than 2 inches, over 200 percent of normal in the northern Rockies. Parts of the Sierra Nevada Mountains also had over 200 percent of normal.

SNOWFALL. --Unusually light snowfall in most of the Far West kept the mountain snowpack much below normal. In parts of Washington and Oregon the pack was near the lowest of record. Heavy amounts, however, fell in parts of the northern Rockies where Missoula, Mont., reported 42.5 inches, the most for January since the beginning of records there in 1892.

In the Northeast, storms on the 23d and 24th and 26th and 27th each yielded 1 to over 2 feet of snow in northern portions of New York and New England, and over a foot in the northern Great Lakes region. Watertown, N. Y., measured over 5 feet of new snow in one week near the end of the month. Snow depths in the Great Lakes region and Northeast increased by as much as a foot during the month. Akron, Ohio, had a continuous cover for 37 days, from December 6, 1962, to January 10, 1963, the second longest such period on record there.

SEVERE STORMS. --Minor damage by unusual weather during January was widespread, but the overall total was considerable. The damage was caused mostly by freezing, glaze, wind, and snow. Freezing caused some crop damage in the Southwest Border area, and froze pipes and sewers locally, in many sections.

CONDENSED CLIMATOLOGICAL SUMMARY

JANUARY 1963

Section	Temperature: Monthly extremes						Precipitation: Monthly extremes			
	Station	Highest °F	Date	Station	Lowest °F	Date	Station	Greatest In.	Station	Least In.
Alabama	Thomasville	79	11	Waterloo	-8	24	Brookwood	9.66	Waterloo	1.26
Alaska	Cape Sarichef Lgt. Sta.	57	28	Allakaket	-60	8+	Port Alexander	16.63	Farewell FAA	.13
Arizona	Tombstone	88	26	2 Stations	-37	13+	Maverick	3.47	7 Stations	.00
Arkansas	Crossett 7S	79	10	Mammoth Spring	-15	24	Arkadelphia	2.80	Lead Hill	.00
California	Santa Monica Pier	84	7	Bridgeport	-19	12	Strawberry Valley	17.77	6 Stations	.00
Colorado	Eversoll Ranch	76	31	Taylor Park	-54	12	Wolf Creek Pass 4W	5.40	Two Buttes	.00
Connecticut	Coventry	55	1	2 Stations	-16	29	Trap Falls Reservoir	4.30	Norwalk Gas Plant	1.99
Delaware	2 Stations	62	12+	Newark University Farm	-2	29	Bridgeville 1NW	2.81	Wilmington Porter Reservoir	1.88
Florida	Canal Point USDA	90	19	Milton Exp. Sta.	7	24	Pensacola FAA AP	8.50	Perrine	.00
Georgia	2 Stations	80	19+	Blue Ridge	-9	24	Butler	9.66	Brunswick FAA AP	1.54
Hawaii	Pahala 21, Hawaii	93	31	Haleakala Summit, Maui	20	8	Kanalohuluhulu, 1075, Kauai	20.39	Pepeekeo Makai 144, Hawaii	1.07
Idaho	Glenns Ferry	56	2	Idaho Falls 16SE	-51	12	Powell	D 7.33	Idaho Falls 2ESE	T
Illinois	2 Stations	68	9	2 Stations	-26	28	Glendale Exp. Sta.	2.00	Quincy FAA AP	.15
Indiana	Evansville	66	9	Greensburg 3SW	-34	28	Evans Landing Dam 43	2.40	West Lafayette 6NW	.36
Iowa	2 Stations	59	8	Saratoga 2E	-40	15	Fort Madison	D 1.55	Waukon	.04
Kansas	Elkhart	75	31+	Ellsworth	-21	27	Russell Springs	3.05	3 Stations	T
Kentucky	Dewey Dam	70	12	2 Stations	-34	28+	Princeton	5.81	Hartford 6NW	.26
Louisiana	Urania	82	10	Chatham	3	24	Eunice	9.34	Logansport	1.00
Maine	3 Stations	48	24+	Bridgewater	-37	26	Jonesboro	5.47	St. Francis	1.10
Maryland	Waldorf Police Barracks	65	14	Oakland 1SE	-27	29	Crisfield Hammock Point	3.10	Luke	.65
Massachusetts	Plymouth	57	20	Birch Hill Dam	-22	29	Sandwich	4.42	Adams	2.00
Michigan	North Manitou Is. No. 2	55	9	Fife Lake 2S	-38	15	Pellston FAA AP	3.95	Saginaw Center Road St.	.20
Minnesota	Willmar State Hospital	58	8	Big Fork	-47	19	Winnebago	1.29	Argyle	.00
Mississippi	Edinburg	84	9	Aberdeen	-7	24	Decatur	9.75	Clarksdale	.79
Missouri	Hermitage	73	9	Greenville 4NNW	-25	24	Festus 2NW	2.01	Praire Hill 3WNW	.02
Montana	2 Stations	64	8+	West Yellowstone	-60	12	Bozeman 12NE	4.11	3 Stations	T
Nebraska	Trenton Dam	64	9	Anselmo	-37	27	Winside	2.69	Lamar	.09
Nevada	Mesquite	70	31	Mountain City RS	-40	12	Mt. Rose Highway Sta.	10.27	Pahrump	.00
New Hampshire	Tamworth 2	55	6	2 Stations	-31	25+	Gilmanton	4.45	Marlow	1.55
New Jersey	Freehold	60	10	Layton	-20	29	Bass River State Forest	3.18	Manville	D 1.39
New Mexico	Bitter Lakes WL Refuge	83	31	Garilan	-46	13	Clines Corner	3.15	3 Stations	.00
New York	N. Y. Westerleigh Stat. Is.	56	10	Angelica	-28	29	Hooker	6.93	Brookport 2NW	.65
North Carolina	Whiteville	77	11	Banner Elk	-17	24	Sloan 3S	7.36	Southern Pines 2W	1.15
North Dakota	La Moure	57	2	Medora 3NNE	-40	27	Amidon	1.18	2 Stations	.00
Ohio	Ironton	67	11	Jackson 2NW	-31	29+	Piketon AEC Pump Sta.	D 2.68	Montpelier	.24
Oklahoma	Antlers 2ENE	78	9	Boise City 2E	-17	12	Bear Mountain Tower	1.75	2 Stations	.00
Oregon	Brookings	67	4	Hardman	-32	11	Valsetz	7.33	Drain 1NNE	.21
Pennsylvania	Johnstown	62	12+	Titusville Water Works	-30	29	Johnstown	4.00	Kegg	.31
Puerto Rico	2 Stations	91	24+	Guineo Reservoir	52	31+	Estate Belvedere	13.31	Puerto Real	1.05
Rhode Island	Providence WBAP	55	20	Greenville	-2	25	Kingston	3.65	Greenville	3.19
South Carolina	3 Stations	77	12+	Caesars Head	-5	24	Fort Mill 4NW	8.30	Edisto Island 5SW	2.07
South Dakota	7 Stations	62	8	Custer	-43	19	Lead	2.58	Britton	.03
Tennessee	Memphis WBAP	74	10	Kingston Springs 3NE	-30	24	Athens 2SE	5.53	Samburg Wild Life Rfg.	D .65
Texas	Agua Nueva	95	10	Sunray 4SW	~~-04~~ -4	19	Orange Gulf States Uti.	6.24	65 Stations	.00
Utah	Zion NP	64	9	2 Stations	-38	12	Silver Lake Brighton	6.60	3 Stations	.00
Vermont	Bennington 2NNW	52	20	Chelsea	-26	30	Peru	4.92	Burlington WBAP	1.14
Virginia	Norfolk WBAP	72	11	Wise 1SE	-23	24	Suffolk Lake Kilby	4.11	Galax Radio WBOB	.40
Washington	Packwood	65	2	Mount Spokane Summit	-23	10	Amanda Park	8.57	3 Stations	T
West Virginia	Williamson	70	12	Birch River 6SSW	-28	28	Pickens 1	3.35	Peterburg	.45
Wisconsin	Prairie Du Chien	50	8	Hatfield Hydro Plant	-47	15	Fontana	D 1.60	Superior 7SE	.06
Wyoming	3 Stations	60	8+	Dixon	-55	12	Moran 5WNW	3.75	Wamsutter 1N	.04

\+ And also on an earlier date or dates.

NOTE: Dates in the above Condensed Climatological Summary apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

Should be Dalhart FAA -10° on Jan 13 according to CD for Year.
7/65
See original record for correction 8/66

CLIMATOLOGICAL DATA

ENGLISH UNITS

JANUARY 1963

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90°F. or above	No. of days: Min. 32°F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Average speed	Wind: Prevailing direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	F.	F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	610	995.7	1021.9	49	28	38.2	- 7.3	70	10	- 2	24	0	20	31	79	7.32	2.29	2.99	14	3	T	T	9.4	NNW	31	NW	23	7	4	20	7.1	39
HUNTSVILLE	605	997.7	1021.9	46	25	35.6	- 7.3	67	11	- 4	24	0	22	26	69	3.59	-1.63	0.75	11	1	2.6	2	9.7	SE	36*	NNW	23	9	5	17	6.4	
MOBILE	211	1018.4	1020.7	56	36	46.2	- 6.3	73	10	8	24	0	12	36	69	7.14	2.50	4.57	13	2	0.0	0	8.7	N	34*	NW	23	6	4	21	7.7	
MONTGOMERY	195	1013.2	1021.6	53	31	41.8	- 6.3	74	11+	5	24	0	20	29	64	7.14	3.08	2.53	13	5	T	T	9.4	NW	32	NW	23	5	6	20	7.5	37
ALASKA												B																				
ANCHORAGE	90	1014.9	1019.9	25	14	19.2	6.8	43	20+	-22	9	0	31	13	76	2.09	1.29	0.70	11	0	15.5	10	5.7	N	21*	SE	19	4	4	23	8.0	26
ANNETTE	110	1019.3	1023.4	41	33	36.9	2.5	50	6	17	10	0	12	31	81	8.15	-3.21	2.76	19	0	3.2	6	6.3	N	33*	SSE	4	1	4	26	9.0	
BARROW	22	1026.4	1026.9	- 1	-17	- 9.0	7.2	35	29	-44	8+	0	31	-18	63	0.52	0.34	0.19	10	0	3.1	9	14.8	ENE	40*	ESE	31	0V	1V	7V	9.3	
BARTER ISLAND	39	1025.7	1027.7	- 2	-19	-10.6	6.2	36	29	-44	8+	0	31	-20	59	1.79	1.39	0.84	8	0	10.5	20	14.3	E	37*	W	25	10X	12X	9X		
BETHEL	125	1013.5	1014.8	25	15	19.6	16.0	48	17	-32	8	0	22	14	78	2.35	1.23	0.69	14	0	3.1	3	12.4	NNE	28*	E	17	4	4	23	7.9	
COLD BAY	94	1003.4	1007.2	38	31	34.1	6.3	48	27+	8	5	0	12	31	87	4.91	2.59	1.86	21	0	0.9	1	21.2	SE	58*	SSE	11	1	4	26	8.8	
CORDOVA	40	1017.3	1018.9	35	21	27.8	4.7	42	18	-10	9+	0	30	25	90	8.13	2.03	0.22	15	0	19.7	13	3.9	ESE	21*	ESE	2	3	5	23	8.1	
FAIRBANKS	436	1005.1	1024.3	9	- 6	1.7	12.8	35	20+	-50	8	0	31	- 3	80	1.78	0.89	0.52	15	0	17.5	17	3.5	N	14*	NNW	19	3	6	22	8.3	
JUNEAU	17	1021.3	1022.3	33	23	27.7	2.6	50	6	- 1	9+	0	25	24	84	6.55	2.55	1.91	20	1	12.2	6	6.2	ESE	37*	ESE	4	1	5	25	9.0	15
KING SALMON	43	1012.5	1014.8	32	18	24.9	11.5	53	27	-30	7	0	20	19	77	1.55	0.48	0.49	14	0	2.6	2	11.6	E	37*	E	21	8	4	19	7.0	
KOTZEBUE	10	1021.3	1021.7	15	5	10.3	16.0	37	18	-32	7+	0	30	6	81	1.01	0.62	0.81	7	0	2.1	9	15.9	ESE	43*	E	21	7	0	24	7.6	
MC GRATH	334	1008.8	1022.5	8	- 1	3.8	12.8	38	20	-56	8	0	31	- 4	76	0.46	-0.80	0.24	9	0	9.5	17	2.3	N	17*	N	21	4	6	21	7.8	
NOME	13	1018.0	1018.6	25	15	20.3	15.9	43	26	-36	7	0	23	14	79	2.03	1.01	1.23	11	0	4.5	14	15.8	E	33*	E	17	7	2	22	7.6	16
ST. PAUL ISLAND	22	1004.1	1005.2	34	27	30.3	4.9	43	27	4	5+	0	18	28	90	2.03	0.22	0.68	17	0	1.6	3	20.7	E	49*	E	25	0	0	31	10.0	
SHEMYA	122	989.7	993.4	37	32	34.5	3.2	40	22+	24	3	0	13	32	89	1.34	-1.16	0.29	21	0	2.7	1	19.6	NNE	44*	ENE	20	0	3	28	9.2	
YAKUTAT	28	1019.0	1020.0	35	27	30.6	3.6	44	5	2	1	0	19	29	93	12.20	1.34	2.32	22	0	19.6	10	6.2	ENE	35*	SE	3	3	3	25	8.6	
ARIZONA																																
FLAGSTAFF	6993	789.2	1020.7	39	12	25.4	- 2.9	53	22+	-20	12	0	29	12	61	0.96	-0.87	0.55	6	0	9.9	5	8.4	NE	35	SSW	18	20	2	9	3.5	
PHOENIX	1117	978.7	1018.5	62	35	48.4	- 2.3	77	31	20	13	0	11	24	42	0.55	-0.18	0.50	3	0	0.0	0	5.3	E	25*	NW	19	20	1	10	3.6	84
PRESCOTT	5014	847.3	1019.8	49	22	35.5	- 1.6	63	31	1	13	0	27	16	51	0.24	-0.77	0.19	2	0	T	T	8.5	S	45	N	19	20	4	7	3.3	81
TUCSON	2584	927.5	1017.4	61	35	48.3	- 1.0	77	31	21	13	0	11	27	50	0.59	-0.23	0.36	3	0	0.0	0	8.5	SSE	29	W	19	13	8	10	4.6	83
WINSLOW	4880	853.0	1024.0	42	14	27.7	- 3.8	68	31	-13	13	0	28	15	65	0.52	-0.09	0.30	3	0	6.2	4	7.4	SW	32*	WSW	18	15	7	9	4.0	
YUMA	199	1013.9	1019.1	67	40	53.2	- 3.2	76	27+	28	14+	0	4	25	41	0.50	0.11	0.50	1	0	0.0	0	7.5	N	34	N	19	18	6	7	3.5	85
ARKANSAS																																
FORT SMITH	449	1004.5	1022.3	43	21	31.8	- 8.0	69	9	1	24	0	23	20	67	0.70	-1.96	0.65	3	0	T	T	8.1	ENE	26	N	23	13	4	14	5.6	55
LITTLE ROCK	257	1008.3	1022.2	45	23	34.0	- 6.6	77	10	2	24	0	25	23	69	0.87	-4.35	0.35	11	0	0.7	T	8.0	N	31	NW	22	11	5	15	5.9	50
TEXARKANA	361		1021.9	48	27	37.4	- 7.7	75	10	6	24	0	18	28	74	1.48	-3.36	0.89	12	0	0.2	T	8.6	NW								82
CALIFORNIA																																
BAKERSFIELD	494	1003.4	1021.6	57	33	44.9	- 2.5	70	31	20	13	0	19	28	58	0.12	-1.05	0.10	2	0	0.0	0	6.0	SE	28*	SE	12	20	2	9	3.5	
BISHOP	4108	876.1		56	17	36.5	- 0.3	69	22	2	13	0	29			3.22	2.23	1.91	3	0	0.0	0						22	4	5	2.3	
BLUE CANYON	5280	839.8		48	33	40.2	4.1	60	7	15	12+	0	14			15.68	3.98	9.10	4	0	7.4	7	9.5	ENE	67*	SSW	31	23	2	6	2.5	
BURBANK	699	993.0	1019.3	63	42	52.5	- 1.1	77	7	30	14	0	1	32	53	0.47	-2.67	0.51	2	0	0.0	0	4.8	S	28*	NE	12	17	3	11	4.1	
EUREKA U	43	1019.0		52	40	46.0	- 1.4	65	31	30	12	0	2			1.70	-5.00	0.89	5	0	0.0	0	5.6		38	SW	31	14	6	11	4.8	60
FRESNO	326	1008.4	1020.6	55	30	42.2	- 3.3	65	31+	19	13	0	23	31	73	2.16	0.13	1.18	4	0	0.0	0	5.4	NW	24	SE	31	17	6	8	3.7	71
LONG BEACH	34	1018.3	1019.9	65	44	54.2	1.8	82	7	25	13	0	1	38	60	0.29	-1.70	0.34	1	0	0.0	0	5.7	ENE	29*	ENE	12	16	5	10	4.5	
LOS ANGELES	97	1016.3	1019.9	64	47	55.2	1.8	81	7	30	13	0	1	38	60	0.62	-2.04	0.63	2	0	0.0	0	6.7	E	25*	W	10	15	6	10	4.3	
LOS ANGELES U	312			63	48	55.6	- 0.2	77	7	34	13	0	0			0.52	-2.55	0.53	3	0	0.0	0	6.0	W	23	W	10	16	5	10	4.2	69
MT SHASTA R	3544	895.7		47	24	35.2	1.9	58	24+	5	12	0	28			4.38	-1.98	2.42	3		11.1	8						24	0	7	2.8	
OAKLAND	3	1020.3	1020.6	54	38	46.1	- 1.9	63	5	30	14	0	8	35	70	2.68	-1.15	1.51	3	0	0.0	0	6.9	SE	32*	SSW	31	14	10	7	4.3	
POINT ARGUELLO	367	1003.7		60	39	49.5	- 0.2	77	7	25	14	0	10			0.71	-1.64	0.52	3	0	0.0	0	7.2		32*	SE	30	15	5	11	4.5	
RED BLUFF	341	1007.8	1021.1	55	31	43.0	- 2.5	72	6	24	14	0	21	27	64	3.49	-0.80	2.06	4	0	T	T	8.8	WNW	56	SSE	31	22	2	7	2.9	78
SACRAMENTO	17	1020.3	1021.2	50	32	41.1	- 5.1	62	31	23	13	0	21	33	79	4.71	1.53	2.47	6	0	0.0	0	4.6	NNW	34	NW	11	14	6	11	5.0	56
SACRAMENTO U	23			52	34	42.9	- 4.0	61	31+	27	13	0	16			3.65	0.07	1.92	4		0.0	0										
SANDBERG R	4517	863.9		48	33	40.4	0.5	64	22	11	12	0	10			0.07	-2.48	0.07	2	0	0.0	0	15.4		43*	ENE	12	22	3	6	2.7	
SAN DIEGO	13	1015.9	1019.2	64	46	55.1	- 0.4	81	7	31	13	0	1	40	60	0.11	-1.90	0.08	3	0	0.0	0	5.3	ENE	17	NW	13	12	7	12	5.0	67
SAN FRANCISCO	8	1020.3	1020.9	54	38	45.6	- 3.0	64	31	29	13	0	7	37	73	4.47	0.46	2.11	4	0	0.0	0	7.8	SSE	60	SSE	30	13	10	8	4.3	
SAN FRANCISCO U	52			55	45	50.4	- 0.3	66	8+	41	21+	0	0			3.35	-1.20	1.95	3	0	0.0	0	5.8		38	SE	30					55
SANTA MARIA	238	1011.2	1020.0	62	37	49.3	- 0.9	76	7	23	13	0	12	37	67	1.03	-1.81	0.82	4	0	0.0	0	5.2	WNW	23*	SE	30	17	6	8	3.8	
COLORADO																																
ALAMOSA	7536	767.6		33	- 8	12.5	- 4.9	54	30	-41	13	0	30			0.42	0.16	0.29	4	0	4.2	3						18	10	3	3.4	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90°F. or above	No. of days: Min. 32°F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Average speed	Wind: Prevailing direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
COLORADO																																
COLORADO SPRINGS	6173	808.1	1020.9	36	8	21.9	- 6.7	66	31	-21	12	0	31	2	46	0.53	0.24	0.32	9	0	5.8	2	10.2	NNE	35*	N	26+	13	9	9	4.8	
DENVER	5283	834.9	1020.2	33	5	19.1	-10.9	65	31	-25	12+	0	31	4	57	0.71	0.16	0.26	9	0	9.1	3	11.3	S	38	NW	8	10	11	10	5.5	76
GRAND JUNCTION	4849	862.9	1027.8	23	2	12.1	-13.9	47	31	-23	13	0	30	4	73	0.99	0.35	0.39	8	0	17.7	12	3.1	ENE	21	NE	19	11	7	13	5.6	56
PUEBLO	4639	855.3	1021.5	36	3	19.3	-10.7	67	8	-26	12	0	30	4	57	0.33	0.02	0.18	5	0	7.0	4	7.9	SE	43	NW	4	17	6	8	4.1	80
CONNECTICUT																																
BRIDGEPORT	7	1018.3	1019.2	34	21	27.6	- 2.6	51	10	3	25+	0	28	19	70	2.34	-1.35	0.89	9	0	8.3	7	13.4	NE	46*	NNW	23	11	5	15	5.7	
HARTFORD	169	1011.6	1018.0	32	15	23.6	- 3.0	44	10	-10	29	0	31	16	73	2.92	-0.66	1.00	9	0	7.7	7	8.2	N	38	NW	27	9	6	16	6.5	59
NEW HAVEN	6	1017.9		35	20	27.5	- 2.1	49	10	3	25	0	30			2.84	-1.12	1.01	11	0	6.5	5	8.3		33	NW	24	12	5	14	5.7	63
DELAWARE																																
WILMINGTON	78	1016.3	1019.7	36	20	28.4	- 5.0	49	10	1	29	0	27	20	72	2.05	-1.35	0.67	10	0	5.2	4	9.3	WNW	45*	NW	23+	9	6	16	6.1	
DIST.OF COLUMBIA																																
WASHINGTON U	72			42	26	34.1	- 2.4	60	20	5	24	0	23			1.96	-1.45	0.53	10													
WASH NATL AP	14	1015.3	1020.0	39	24	31.4	- 5.5	59	20	3	24	0	27	19	62	1.86	-1.17	0.51	10	1	2.1	5	7.7	S	39	WNW	27	12	6	13	5.4	58
FLORIDA																																
APALACHICOLA U	13	1018.3		58	42	50.3	- 4.8	72	12	19	24	0	4			1.58	-1.56	0.41	11	4	0.0	0	6.2		34	NW	23	5	8	18	7.2	56
DAYTONA BEACH	31	1018.6	1020.5	68	47	57.4	- 1.8	84	20	32	25+	0	2	50	79	2.91	0.95	0.93	10	2	0.0	0	8.8	NW	23*	SSW	20	7	9	15	6.3	
FORT MYERS	13	1018.9		75	52	63.2	- 0.3	84	19	40	25+	0	0			0.81	-0.71	0.28	7		0.0	0	9.8		23*	S		12	12	7	5.0	
JACKSONVILLE	24	1019.7	1021.1	64	42	53.2	- 2.7	81	20+	24	24	0	8	43	74	5.39	2.94	3.02	8	1	0.0	0	8.0	NW	35	NW	23	6	9	16	6.8	59
KEY WEST	5	1017.7	1019.0	75	65	70.0	0.4	83	13	57	9	0	0	62	77	0.89	-0.64	0.51	6	0	0.0	0	11.2	ENE	33	N	21	12	10	9	5.0	78
LAKELAND U	214			70	45	59.4	- 2.3	83	20	34	25	0	0			2.19	0.14	0.61	9	1	0.0	0	8.0					9	10	12	5.5	60
MIAMI BEACH	9			75	64	69.2	0.1	80	27	47	9	0	0			0.58	-1.10	0.25	7	0	0.0	0	13.3		26	NW	7	8	13	10	5.3	56
MIAMI	7	1018.0	1019.3	75	59	67.1	0.2	85	27	44	9	0	0	59	76	0.65	-1.38	0.25	7	1	0.0	0	7.8	NNW	23*	ENE	29+	7	13	11	5.9	
ORLANDO	106	1015.5	1020.2	71	48	59.5	- 0.9	87	20	34	25	0	0	49	74	3.17	1.17	1.60	9	1	0.0	0	9.2	N	24*	WSW	21	10	9	12	5.8	
PENSACOLA U	13			57	39	48.2	- 5.9	70	11	10	24	0	9			7.29	3.01	2.76	13	2	0.0	0	10.1	N	28	NW	23					40
TALLAHASSEE	58	1018.3	1021.2	60	38	49.2	- 4.7	79	18	17	25+	0	12	40	72	5.30	1.88	2.81	10	2	0.0	0	9.6	N	46*	SW	20	4	6	21	7.8	
TAMPA	19	1018.8	1020.5	69	48	58.6	- 2.6	79	19	35	25	0	0	49	76	2.25	0.12	0.79	8	1	0.0	0	12.2	NE	29*	WSW	21+	7	11	13	6.1	60
WEST PALM BEACH	15	1018.5	1019.7	75	57	65.8	- 1.1	84	27	40	9	0	0	58	77	1.05	-1.43	0.41	5	0	0.0	0	10.1	NNW	21*	E	29+	3	18	10	6.5	
GEORGIA																																
ATHENS	803	991.3	1021.3	49	28	38.5	- 6.1	68	12	4	24	0	23	28	69	5.91	1.02	1.68	9	2	0.0	0	8.0	WNW	27*	NW	23	9	7	15	6.3	
ATLANTA	1005	977.6	1021.0	48	27	37.2	- 7.6	66	12	- 3	24	0	21	25	66	5.10	0.66	1.64	11	1	T	T	8.3	WNW	23*	WNW	27+	6	6	19	7.1	47
AUGUSTA	143	1013.7	1020.8	54	30	42.2	- 5.4	73	11	14	25+	0	22	32	72	5.25	2.26	1.93	12	2	T	T	5.8	NW	26*	WNW	21	8	7	16	6.5	
COLUMBUS	385	1006.4		54	30	42.1	- 5.7	71	12	3	24	0	20			6.24	2.18	2.42	13	4	T	T	8.5		27*	NW	27+	6	6	19	7.2	
MACON	356	1007.0	1021.0	54	32	43.0	- 6.2	71	12	6	24	0	21	31	67	6.92	3.55	3.08	12	4	T	T	7.6	NW	32	NNW	20	6	8	17	6.7	50
ROME	637	997.9		48	23	35.1	- 7.0	66	11	- 5	24	0	23			5.95	0.44	2.22	12	1	T	T						9	3	19	6.6	
SAVANNAH	48	1018.5	1021.3	57	36	46.8	- 4.9	76	11	19	25+	0	12	37	73	3.32	0.54	1.39	13	2	0.0	0	8.7	NE	40	NW	23	9	4	18	6.7	51
THOMASVILLE U	283			58	39	48.5	- 5.2	74	11	13	24	0	9			5.26	1.68	2.11	12	3	0.0	0						5	6	20	7.5	
HAWAII																																
HILO	31	1009.8		81	62	71.1	0.3	88	16	57	15	0	0			1.14	-0.68	0.52	12		0.0	0	7.9		37*	SSW	16	11	11	9	5.2	55
HONOLULU	7	1011.4	1011.8	78	64	71.1	- 1.4	81	29+	56	14	0	0	63	77	10.58	6.82	6.72	14	3	0.0	0	10.5	WSW	54	E	7	9	7	15	6.3	54
KAHULUI	44	1008.7	1011.7	80	62	71.0		82	30+	54	1	0	0	63	76	6.67		2.61	15	2	0.0	0	16.8	SSW	52	SSW	16	11	12	8	5.2	63
LIHUE	115	1005.7		79	63	71.3	0.4	83	29+	57	17	0	0			12.31	6.80	4.39	16		0.0	0	11.0		36	SW	31+	9	9	13	5.7	57
IDAHO																																
BOISE	2838	925.8	1025.9	32	15	23.3	- 5.3	46	1	- 7	12	0	30	11	64	1.13	-0.19	0.87	8	0	10.1	7	6.3	SE	29	W	10	7	6	18	6.9	59
IDAHO FALLS 42NW R	4790			23	- 5	8.9	- 4.5	46	4	-43	12	0	31			0.79	0.24	0.94	5	0			3.5	N	32Y	SSW	31					
IDAHO FALLS 46W R	4933	849.2		24	- 2	11.2	- 4.2	46	4	-35	12	0	31			1.04	0.31	1.08	6	0	4.2	3	4.9	NNE	29A	SW	31					
LEWISTON	1413	972.2		32	17	24.2	- 6.5	51	3	-11	11	0	28			0.78	-0.32	0.32	9	0	7.8	6						3	4	24	8.2	
POCATELLO	4444	865.9	1026.0	29	7	18.0	- 4.3	50	31	-22	12	0	31	10	72	1.48	0.27	0.78	10	0	8.9	6	8.9	SSW	47	S	31	5	8	18	7.4	51
ILLINOIS																																
CAIRO U	314	1008.5		37	20	28.2	- 9.2	64	9	- 5	24	0	26			0.79	-3.67	0.35	9	1	3.5	3	8.4	N	32	N	23	11	5	15	5.6	60
CHICAGO O HARE	658	994.3	1020.6	19	4	11.5		43	8	-19	23+	0	30	3	67	0.84		0.29	9	0	16.8	8	11.3	WSW	28*	NNW	23+	6	7	18	7.2	
CHICAGO MIDWAY	610	997.0	1021.3	21	6	13.3	-12.8	42	9+	-18	23	0	30	5	69	1.01	-0.85	0.34	10	0	21.1	8	12.0	W	31	NE	10	4	7	20	7.7	29
MOLINE	582	998.1	1022.1	18	1	9.7	-13.4	45	8	-26	28	0	30	2	67	0.91	-0.70	0.23	10	0	14.7	6	10.4	WSW	42	NW	20	5	8	18	7.4	41

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Average speed	Wind: Prevailing direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ILLINOIS																																
PEORIA	652	998.6	1022.4	21	5	12.8	-12.9	49	9	-20	28	0	31	5	71	0.56	-1.32	0.17	9	0	7.0	5	10.7	WSW	31	W	20	7	3	21	7.3	36
ROCKFORD	728	992.6	1021.2	18	1	9.3	-12.7	45	8	-22	23	0	30	4	75	0.40	-1.38	0.25	11	0	11.3	6	10.5	WSW	27*	WNW	20	6	8	17	6.9	
SPRINGFIELD	588	997.3	1021.9	25	9	16.9	-11.5	53	9	-17	28	0	31	8	69	0.41	-1.48	0.18	10	0	5.2	4	12.1	WSW	36	W	12	7	6	18	7.1	41
INDIANA																																
EVANSVILLE	381	1005.3	1022.1	34	14	23.9	-10.3	65	9	-18	28	0	27	15	69	0.85	-3.13	0.26	9	2	3.2	3	6.6	NW	28	NW	23	11	3	17	6.2	50
FORT WAYNE	791	987.6	1020.7	24	7	15.9	-10.6	50	10	-18	31+	0	31	10	76	0.93	-1.74	0.34	12	0	8.8	7	9.7	W	37	W	20	4	9	18	7.3	31
INDIANAPOLIS	793	989.5	1021.1	28	11	19.5	- 9.6	54	10	-18	28	0	30	12	73	1.15	-1.90	0.43	10	1	9.0	6	11.6	WSW	33*	NW	23	7	7	17	6.9	59
SOUTH BEND	768	991.0	1020.2	21	6	13.3	-12.3	39	9	-17	23	0	30	7	74	1.28	-0.92	0.35	12	0	16.4	15	11.3	SW	25*	SW	12+	4	3	24	8.2	
IOWA																																
BURLINGTON	694	994.4	1022.3	21	4	12.9	-11.5	50	8	-18	23	0	31	6	74	0.99	-0.65	0.29	12	0	14.4	9	10.8	WSW	36	NW	20	6	6	19	7.2	47
DES MOINES	948	989.6	1023.0	17	1	8.5	-12.8	52	8	-22	23	0	31	2	75	0.83	-0.47	0.17	12	0	15.9	8	9.2	WNW	37	NW	20	6	5	20	7.5	40
DUBUQUE	1065	994.4		15	- 1	7.1	-12.1	41	8	-24	23	0	31			1.08	-0.75	0.52	12	0	11.8	9			31*	WSW	23+	6	6	19	7.3	
SIOUX CITY	1095	979.1	1023.3	20	- 1	9.2	- 9.5	59	8	-18	27	0	31	0	70	0.89	0.11	0.40	12	0	13.6	9	10.3	NNW	50	N	20	5	9	17	7.0	50
WATERLOO	868	988.4	1022.2	16	- 2	6.9	-11.5	48	8	-28	15	0	31	1	76	0.48	-0.67	0.26	7	0	6.8	5	10.3	NW	46*	WNW	20	5	7	19	7.3	
KANSAS																																
CONCORDIA	1470	971.3	1022.6	27	7	16.9	-11.1	60	9	-13	27	0	30	9	75	0.57	-0.13	0.22	10	0	8.3	4	12.2	N	40*	NW	12	10	8	13	5.8	54
DODGE CITY	2594	929.2	1021.9	35	9	22.2	- 8.9	67	8	-12	12	0	31	10	63	0.56	-0.01	0.45	8	0	0.4	T	11.4	NNE	40	NE	22	13	6	12	4.9	77
GOODLAND	3645	888.1	1021.7	31	5	17.8	- 9.6	61	8	-19	12	0	31	7	68	0.52	0.13	0.23	8	0	9.4	3	13.2	WSW	37*	NNW	11	13	6	12	5.2	
TOPEKA	877	984.9	1022.9	28	8	18.0	-10.8	65	8	- 9	23	0	31	11	73	0.56	-0.46	0.34	5	0	5.5	3	12.2	N	35	N	22	6	7	18	6.9	46
WICHITA	1321	970.7	1021.9	33	12	22.2	- 9.8	62	8	- 7	12	0	29	12	67	1.22	0.41	0.94	5	0	3.7	3	13.0	NNE	47	N	22	11	6	14	5.5	60
KENTUCKY																																
COVINGTON	869	987.2	1020.7	33	12	22.2	-10.4	56	9	-19	24	0	29	14	72	2.04	-1.52	1.12	11	1	9.6	7	6.9	SSW	21*	NNW	23	9	4	18	6.7	
LEXINGTON	979	984.2	1021.5	37	17	26.6	- 7.9	60	11	-21	24	0	26	20	77	1.47	-3.47	0.68	9	2	6.8	5	8.8	SSW	23*	WNW	11	9	8	14	5.9	
LOUISVILLE	474	1001.5	1021.5	37	16	26.1	- 8.4	63	9	-20	24	0	28	16	67	1.18	-2.92	0.44	11	1	6.0	5	7.5	W	25	S	9	9	5	17	6.5	50
LOUISIANA																																
ALEXANDRIA	92	1017.2	1022.1	54	31	42.0		77	10	11	24	0	16	34	76	4.14		0.95	12	3	T	T	6.5	NNE				5	8	18	7.2	
BATON ROUGE	64	1018.0	1021.3	58	36	47.1	- 5.3	78	10	12	24	0	13	37	73	3.64	-1.14	1.34	8	3	T	T	9.4	NNW				3	8	20	7.6	
LAKE CHARLES	14	1019.6	1021.2	55	37	45.9	- 7.3	73	11+	17	24	0	12	40	80	5.07	0.63	1.70	8	5	T	T	10.0	N	29*	N	23	3	7	21	7.9	
NEW ORLEANS	3	1018.7	1021.0	57	38	47.5	- 6.6	78	30	14	24	0	9	41	80	5.21	1.37	3.20	9	2	T	T	8.9	ENE	28*	N	23	4	7	20	7.8	
NEW ORLEANS AUDUBON	6	1013.8		59	41	50.1		78	30	17	24	0	10			4.59		2.23	9	1	0.0	0	5.7		25	NW	23	5	4	22	7.7	34
SHREVEPORT	252	1012.6	1022.2	50	29	39.6	- 7.9	78	10	9	24	0	17	29	71	1.46	-3.34	0.53	11	0	T	T	9.7	SE				10	4	17	6.3	44
MAINE																																
CARIBOU	624	990.9	1015.3	22	5	13.4	2.9	39	1	-25	26	0	31	9	79	2.40	0.29	0.78	13	0	30.7	32	11.2	WSW	37*	W	28+	5	7	19	7.5	
PORTLAND	61	1012.4	1016.5	32	15	23.6	1.8	46	10	- 7	29	0	31	16	74	2.73	-1.64	1.02	8	0	18.4	14	9.1	N	33	W	27	8	3	20	6.9	46
MARYLAND																																
BALTIMORE	146	1015.8	1019.9	38	20	28.8	- 6.0	57	10	- 7	29	0	27	18	72	1.84	-1.59	0.48	10	1	3.7	3	8.0	WNW	40	NW	24	14	4	13	5.3	53
BALTIMORE U	14			39	25	31.7	- 5.6	55	10	4	24	0	25			1.78	-1.65	0.52	9													
FREDERICK	294			35	16	25.5	- 7.4	50	10	-10	29	0	29																			
MASSACHUSETTS																																
BLUE HILL OBS R	629	991.7	1016.0	34	19	26.1	- 0.9	51	20	- 1	25	0	30		74	3.55	-0.94	1.02	11		8.0	6	14.2	WNW	55	NW	24					49
BOSTON	15	1011.7	1016.8	37	22	29.5	- 0.4	54	20+	4	25	0	27	18	66	3.13	-0.81	0.85	11	0	6.5	5	14.6	WNW	43	W	27	10	5	16	6.2	56
NANTUCKET	43	1016.3	1016.9	39	25	31.8	- 0.7	50	11	8	25	0	22	25	78	4.39	0.17	1.23	15	0	3.9	2	13.4	NW	42	NW	24	7	6	18	7.0	42
PITTSFIELD	1170			30	12	20.7	- 1.1	51	10	- 8	25	0	31			2.07	-0.90	0.55	9		23.4	15										
WORCESTER	986	979.3	1016.4	30	15	22.5	- 1.5	48	10	- 4	25	0	31	15	74	3.10	-0.61	0.88	13	0	11.7	12	9.9	WSW	30*	W	28+	10	6	15	6.0	
MICHIGAN																																
ALPENA	689	990.7		20	1	10.2	-10.5	37	9	-28	15	0	31			0.96	-0.99	0.37	12	0	16.8	16	6.6	SW	24	NE	12+	9	6	16	6.5	58
DETROIT	619	991.4	1019.7	22	12	17.2	- 9.7	41	9	-13	24	0	30	22	12	0.64	-1.41	0.22	11	0	7.5	6	10.5	SW	35	SW	20	6	6	19	7.3	35
DETROIT M WAYNE CO	633	994.6	1020.1	23	9	15.8	-10.2	40	9	-13	24	0	30	9	74	0.85	-1.08	0.23	12	0	9.2	7	9.1	SSW				7	6	18	7.0	
DETROIT WILLOW RUN	711	989.8	1019.8	22	10	15.7	-10.9	37	9	-13	24+	0	30	10	75	0.82	-1.12	0.26	10	0	9.2	5	11.6	SSW	35*	SW	20+	7	3	21	7.2	
ESCANABA U	594	994.2		15	1	8.2	-10.2	38	8	-25	23	0	31		69	0.66	-0.79	0.15	11	0	6.9	7	9.6	S	28	N	18	11	6	14	6.0	51
FLINT	766	990.6	1020.1	20	6	13.1	-10.5	39	9	-14	15	0	30	8	76	0.63	-1.07	0.28	10	0	9.5	6	9.6	SW	25*	SW	20+	4	9	18	7.4	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Average speed	Wind: Prevailing direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MICHIGAN																																
GRAND RAPIDS	689	992.8	1019.5	22	10	15.9	- 8.5	39	9	- 7	15	0	30	11	81	2.26	0.35	0.63	17	0	42.6	22	10.8	SSW	28	WNW	20	0	5	26	8.9	23
LANSING	852	985.4	1019.3	21	6	13.1	-11.2	40	9	-15	15	0	30	6	70	1.02	-0.94	0.40	14	0	12.2	14	13.5	SSW	41	W	20	5	8	18	7.3	47
MARQUETTE U	677	988.6		16	3	9.2	-10.3	38	8	-21	23	0	31			1.25	-0.64	0.68	13	0	16.5	17	9.2	SW	26	NW	20+	7	5	19	7.2	51
MUSKEGON	627	995.2	1019.2	22	12	17.0	- 8.0	40	9	- 3	28+	0	30	11	78	2.25	0.15	0.29	22	0	64.7	31	11.3	WNW	30	WNW	20+	1	0	30	9.5	
SAULT STE MARIE	721	992.4	1016.5	15	- 1	6.8	- 8.5	34	9+	-24	23	0	31	0	72	1.12	-0.95	0.28	18	0	15.6	17	8.4	WSW	25	WNW	9	6	7	18	7.3	45
MINNESOTA																																
DULUTH	1426	974.8	1019.0	9	- 8	.9	- 7.8	40	8	-31	23	0	31	- 8	66	0.32	-0.83	0.18	10	0	3.6	7	11.9	WNW	37	W	20	8	8	15	6.5	54
INTERNATIONAL FALLS	1179	975.0	1019.5	5	-14	- 4.8	- 7.9	37	8	-40	19	0	31	-14	62	0.22	-0.62	0.11	8	0	2.0	4	9.6	W	27*	W	23	9	8	14	6.2	
MINNEAPOLIS	822	985.4	1021.5	12	- 6	2.9	- 9.5	42	8	-32	15	0	31	- 3	71	0.46	-0.24	0.28	10	0	5.0	5	11.4	WSW	33	NW	20	6	5	20	7.1	42
ROCHESTER	1297	970.0	1021.4	12	- 4	4.0	-10.6	44	8	-30	15	0	31	- 2	75	0.82	-0.09	0.29	11	0	11.8	8	13.7	W				5	5	21	7.5	
ST CLOUD	1034	980.7		11	- 7	1.9	- 8.2	42	7	-28	22	0	31			0.43	-0.29	0.24	11	0	4.4	3						9	5	17	6.4	
MISSISSIPPI																																
JACKSON	305	1008.8	1021.5	52	30	40.5	- 7.5	78	10	5	24	0	17	33	76	5.33	0.39	1.32	12	3	T	T	8.1	N	32	SW	11	8	4	19	7.0	40
MERIDIAN	292	1007.4	1022.1	52	28	40.1	- 8.0	77	10	4	24	0	22	32	77	7.07	2.38	2.23	13	2	1.0	1	7.2	N	29*	N	23	8	5	18	6.9	
VICKSBURG U	234	1009.5		51	32	41.6	- 7.4	76	10	5	24	0	14			3.70	-1.43	0.85	11	3	T	T	8.6		28	N	23+	6	6	19	6.9	51
MISSOURI																																
COLUMBIA	778	991.2	1021.2	29	11	19.9	-10.4	66	9	-10	23	0	30	11	72	0.40	-1.31	0.19	5	0	3.3	3	11.2	WSW	34	NE	11	7	4	20	7.0	48
KANSAS CITY	742	985.2	1022.2	28	11	19.8	-10.9	60	9	- 9	23	0	30	11	68	0.59	-0.82	0.26	8	0	5.9	4	7.2	N	29	NE	22	7	6	18	6.9	57
ST JOSEPH	809	985.8		25	8	16.6	-10.6	58	8	-12	23	0	31			0.41	-0.79	0.17	5	0	4.7	3	11.1		31*	N	22	6	7	18	7.0	
ST LOUIS	535	1000.1	1022.1	30	12	21.3	-10.6	62	9	-11	23	0	30	12	70	0.74	-1.24	0.33	7	0	3.5	3	10.5	WNW	30	NW	20	10	4	17	6.5	46
ST LOUIS RFC	465			32	15	23.3	-10.2	66	9	-10	23	0	27			0.72	-1.44	0.32	8	0	1.8	1										
SPRINGFIELD	1265	971.6	1021.3	37	14	25.4	- 8.2	69	9	-10	24+	0	29	15	68	0.59	-1.37	0.42	5	0	2.0	2	10.1	SSE	36	N	22	10	8	13	5.7	58
MONTANA																																
BILLINGS	3567	892.7	1022.9	25	3	13.9	- 9.3	53	2	-26	19	0	28	2	61	2.23	1.69	0.44	18	0	27.7	17	15.2	WSW	50	SW	19	6	6	19	7.4	48
GLASGOW	2277	944.7		15	- 8	3.3	- 6.5	50	7	-28	12	0	31			0.32	-0.16	0.18	6	0	3.2	3						4	7	20	7.4	
GREAT FALLS	3662	890.6	1025.6	25	1	12.8	- 9.8	54	3	-26	11	0	28	3	65	1.71	1.10	0.37	16	0	17.7	9	16.2	SW	44	NW	9	1	7	23	8.4	29
HAVRE	2582	930.0		20	- 7	6.7	- 7.2	54	7+	-33	11	0	30			0.54	0.05	0.24	9	0	6.8	5	10.6	SW	42	SW	19	7	3	21	7.3	47
HELENA	3893	876.1	1027.1	22	- 2	10.5	- 8.1	51	2	-28	23	0	31	1	65	0.50	0.03	0.12	12	0	9.8	6	7.3	WNW	36	NW	21	2	4	25	8.4	42
KALISPELL	2965	917.4		20	1	10.4	- 5.9	45	3+	-26	30	0	30			1.61	0.24	0.69	16	0	27.2	16	5.6					3	2	26	8.6	
MILES CITY	2629			19	- 4	7.5	- 9.0	55	7	-29	19	0	31			0.80	0.36	0.22	8	0	9.6	10	9.4	W	34*	WSW	19	4	10	17		
MISSOULA	3190	907.2	1028.4	17	1	8.9	-10.3	47	2+	-27	11	0	30	3	74	2.38	1.46	0.67	16	0	42.5	18	5.6	SE	35	E	22	2	6	23	8.4	26
NEBRASKA																																
GRAND ISLAND	1841	954.4	1023.4	21	0	10.4	-13.7	54	8	-28	27	0	31	3	76	0.70	0.07	0.32	8	0	7.9	4	11.2	N				5	13	13	6.5	
LINCOLN U	1150			24	6	15.1	-10.0	55	9+	-15	23	0	30			0.64	-0.28	0.28	8	0	6.5	3	9.2	NW	31	NE	18	4	15	12	6.7	48
NORFOLK	1544	963.3		22	- 1	10.5	- 8.9	57	8	-23	27	0	31			0.59	-0.19	0.21	10	0	8.6	6						7	11	13	6.1	
NORTH PLATTE	2779	916.7	1022.2	26	1	13.1	-10.9	59	8	-23	23	0	31	5	74	0.48	0.05	0.23	6	0	8.7	5	11.6	N	40	NE	22	7	11	13	6.1	64
OMAHA	978	980.5	1023.0	22	5	13.7	- 8.6	55	8	-17	23	0	30	6	73	1.09	0.27	0.43	12	0	14.5	8	10.9	NNW	29	N	22+	5	10	16	6.8	50
OMAHA N OMAHA AP	1323	971.4		20	3	11.8	- 8.5	51	8	-20	27+	0	31			0.92	0.01	0.30	10	0	11.2	9						6	7	18	7.0	
SCOTTSBLUFF	3950	879.1	1022.3	29	1	14.8	-10.0	58	8	-32	19	0	31	4	65	1.14	0.85	0.51	9	0	14.7	7	13.9	WNW	44*	WNW	19	10	8	13	6.0	
VALENTINE	2587	926.2		24	- 4	10.1	- 9.9	62	8	-29	19	0	31			0.48	0.08	0.19	9	0	5.9	6	10.8		40	N	19	7	9	15	6.2	75
NEVADA																																
ELKO	5075	846.9	1024.7	39	3	21.0	- 1.6	53	31	-26	12	0	30	6	54	1.74	0.58	1.04	6	0	11.4	8	5.7	SW	25*	W	9	15	8	8	4.4	
ELY	6257	808.9	1022.1	40	5	22.9	0.1	57	21+	-25	12	0	29	5	52	0.11	-0.67	0.09	3	0	T	T	9.9	S	34	SW	31	17	6	8	4.0	73
LAS VEGAS	2162	942.1	1021.2	53	29	41.1	- 2.5	68	29	8	13	0	23	14	37	0.12	-0.41	0.12	1	0	0.0	0	7.4	SW	39*	NNW	18	21	3	7	2.9	81
RENO	4404	865.6	1024.5	46	10	28.2	- 3.7	60	9	- 5	12	0	29	14	63	2.51	1.32	1.89	4	0	1.7	1	4.3	SE	30	NW	28	23	3	5	2.5	83
WINNEMUCCA	4299	871.7		42	3	22.6	- 4.6	55	31	-24	12	0	30			0.39	-0.26	0.67	4	0	4.4	4	5.5	S	42	SW	31	16	9	6	3.9	81
NEW HAMPSHIRE																																
CONCORD	339	1005.7	1017.1	31	11	20.8	- 0.4	50	10	-13	29	0	31	13	72	2.05	-1.13	0.63	7	0	15.3	15	6.5	NW	39	NW	28	10	3	18	6.7	45
MT WASHINGTON OBS	6262	793.8		13	- 3	5.4	- 0.9	31	20	-26	24	0	31		89	4.46	-0.78	1.31	14	0	31.0	12	39.5	W	121Y	W	28	5	9	17	7.2	36
NEW JERSEY																																
ATLANTIC CITY	58	1017.2	1019.5	40	22	31.3	- 3.5	56	10	3	29	0	26	22	71	2.94	-0.62	1.00	13	1	4.4	2	9.4	WNW	37*	WNW	27	10	9	12	5.6	63
ATLANTIC CITY U	10			39	26	32.5	- 3.5	52	20	8	24	0	24			2.80	-0.85		13	0			11.2		48*	NW	23					

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

JANUARY 1963

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Average speed	Wind: Prevailing direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
NEW JERSEY																																
NEWARK	11	1017.8	1019.1	36	23	29.6	- 2.7	51	10	4	24	0	25	19	63	2.19	-1.14	0.66	9	0	7.5	6	10.3	NNE	35	W	27+	10	6	15	6.1	
TRENTON U	56	1011.2		36	22	29.0	- 4.1	52	10	2	24	0	26			2.36	-0.74	0.97	12	0	6.6	4	8.7	S	41	W	27	11	7	13	5.7	60
NEW MEXICO																																
ALBUQUERQUE	5310	848.9	1020.4	42	17	29.4	- 5.6	67	31	- 7	20	0	30	13	53	0.29	-0.12	0.20	3	0	2.5	2	7.5	N	32	N	11	16	7	8	3.6	81
CLAYTON	4969	843.0		43	8	25.5	- 7.7	73	31	-17	12	0	31			T	-0.35	T	0	0	T	T						17	9	5	3.4	
RATON	6379	801.9		40	5	22.0	- 7.0	63	30	-31	12	0	29			0.46	0.10	0.33	5	0	4.9	3						17	7	7	3.8	
ROSWELL	3619	982.0	1018.0	51	13	31.9	- 4.5	80	31	-22	13	0	30	18	43	0.44	-0.04	0.35	4	0	4.5	4	7.9		32	NE	18	15	7	9	4.3	87
SILVER CITY	5373	835.8		50	23	36.4		68	31	2	20	0	28			0.67		0.29	4	0	2.8	2						18	2	11	3.9	
NEW YORK																																
ALBANY	277	1014.6	1018.5	28	12	20.3	- 2.4	44	10	-12	25+	0	30	13	71	2.38	-0.09	0.70	12	0	24.5	17	7.2	S	41	W	27	6	5	20	7.4	43
BINGHAMTON	1590	955.4	1017.0	26	13	19.3	- 3.5	47	10	-10	24	0	31	13	76	1.79	-0.71	0.58	13	0	19.1	12	9.7	NNW	32	W	27	4	5	22	7.9	32
BUFFALO	705	989.3	1018.9	25	13	18.9	- 4.6	45	10	-11	24	0	31	13	79	1.51	-1.33	0.38	18	0	31.5	23	13.3	WSW	47	W	24	1	6	24	8.5	29
NEW YORK U	132	1006.4	1018.2	36	24	30.1	- 3.1	51	10	4	24	0	23	27	61	1.93	-1.38	0.53	11		5.3	4	9.2	W#	35	W	23	12	6	13	5.5	58
NEW YORK LA GUARDIA	19	1017.0	1018.8	35	23	29.3	- 4.3	52	10	3	24	0	24	19	66	2.18	-1.13	0.76	11	0	6.9	6	11.9	NE	42	NW	24	9	7	15	6.1	
ROCHESTER	543	998.8	1019.0	26	12	19.3	- 5.9	46	10	-10	24	0	31	14	78	1.24	-1.16	0.53	9	0	23.7	14	11.3	WSW	45	W	20	6	4	21	7.7	37
SCHENECTADY	217			30	14	22.0	- 0.6	44	10	- 9	25	0	31			2.09	-0.48	0.55	10		21.8	22						11	13	7	5.0	
SYRACUSE	417	995.0	1018.2	28	14	20.8	- 3.2	46	20+	- 6	24	0	30	14	75	1.85	-1.30	0.56	16	0	22.2	16	12.5	W	45	W	27	5	3	23	7.9	35
NORTH CAROLINA																																
ASHEVILLE U	2203	938.6		46	23	34.4	- 5.3	67	12	- 7	24	0	24			1.73	-1.44	0.76	9	1	T	T	8.4	N	39	NW	23	11	9	11	5.1	65
CAPE HATTERAS R	7	1018.8	1019.5	51	35	42.9	- 3.7	70	12	23	24	0	13	35	77	4.05	0.15	1.40	14	3	T	T	9.6	NNE				9	8	14	6.0	50
CHARLOTTE	735	991.3	1020.4	48	27	37.3	- 6.1	69	11	7	24	0	22	25	66	2.71	-0.82	1.11	9	1	T	T	6.6	N	22	NW	27	12	3	16	5.8	54
GREENSBORO	891	987.4	1020.4	46	25	35.2	- 4.5	66	12	4	24	0	24	24	68	2.41	-0.99	0.89	11	3	T	T	6.8	SW	33	NW	23	12	4	15	5.5	56
RALEIGH	433	1005.8	1020.2	48	26	36.7	- 4.9	70	11	7	24	0	22	27	71	2.96	-0.26	1.00	12	0	0.1	T	7.8	SW	29*	NNW	23	13	6	12	5.3	58
WILMINGTON	30	1017.3	1020.4	54	33	43.0	- 4.9	76	11	17	25+	0	20	33	71	2.54	-0.31	0.74	13	1	0.0	0	9.9	N	37	NW	24	9	8	14	5.8	59
WINSTON SALEM	967	983.7	1020.2	45	27	36.0	- 4.7	66	12	4	24	0	23	21	58	2.38	-1.30	0.69	12	2	T	T	8.1	SW	29*	NW	23	13	3	15	5.3	
NORTH DAKOTA																																
BISMARCK	1647	958.0	1022.8	14	- 8	3.0	- 5.9	52	7	-31	27	0	30	- 8	56	0.32	-0.12	0.13	5	0	3.7	3	10.5	WNW	54	NW	19	12	7	12	5.5	58
DEVILS LAKE U	1471	963.7		9	- 8	.4	- 4.2	41	7	-31	22	0	31			0.07	-0.46	0.04	3	0	1.3	3	9.0	NW	30	NW	19	6	8	17	6.5	67
FARGO	900	984.5	1021.6	11	- 7	2.0	- 4.8	44	7	-27	22	0	31	- 8	64	0.13	-0.40	0.04	6	0	1.3	1	12.3	NNW	40	NW	20	4	11	16	6.7	63
WILLISTON U	1899	950.4		15	- 9	2.7	- 7.1	48	7+	-31	19	0	30			0.35	-0.20	0.12	5	0	3.5	3	12.0	SW	56	N	19	9	10	12	5.7	64
OHIO																																
AKRON	1209	980.2	1020.0	28	11	19.2	- 8.1	46	10	-21	24	0	30	13	75	1.08	-1.78	0.27	11	0	14.3	8	8.9	SW	22*	WSW	20	8	2	21	7.2	
CINCINNATI OBS	761			34	16	24.7	- 9.0	57	9	-14	24	0	27			2.03	-1.64	1.14	11	1	9.3	8	6.0	S	19	W	20					43
CINCINNATI U	553	996.8		36	19	27.3	- 7.3	61	9	-12	24	0	26			1.83	-1.61	0.99	10	1	9.0											
CLEVELAND	777	990.9	1020.0	26	10	18.0	- 9.6	44	10	-19	24	0	31	12	75	1.06	-1.61	0.31	12	0	12.4	10	10.8	SW	32	SW	20	6	3	22	7.4	40
COLUMBUS	812	989.6	1020.9	31	12	21.7	- 9.2	51	10+	-15	28+	0	28	14	70	1.39	-1.77	0.78	13	1	10.1	7	8.8	SSW	28	SW	20	8	6	17	6.9	42
COLUMBUS U	724			32	16	23.8	- 8.0	54	10	-15	24	0	27			1.50	-1.40	0.90	10	1	7.4	6										
DAYTON	997	986.4	1020.5	29	11	20.3	- 9.3	53	10	-19	24	0	30	14	73	0.96	-2.22	0.56	10	1	7.1	5	10.5	SSW	32	SW	20	6	6	19	7.0	40
MANSFIELD	1296			26	9	17.8	- 9.5	47	10	-20	24	0	31			0.91	-2.31	0.27	14	0	12.4	6						8	3	20	7.0	
SANDUSKY U	606	996.9		26	11	18.4	-10.9	49	10	-15	24+	0	29			1.31	-1.09	0.45	9	0	11.8	11	9.1		48	SW	20	11	7	13	5.8	62
TOLEDO	676	993.6	1020.3	23	7	14.9	-11.4	43	9	-17	24+	0	31	9	75	0.93	-1.42	0.29	10	0	12.4	6	9.6	WSW	34	SW	20	5	6	20	7.4	34
YOUNGSTOWN	1178	973.5	1019.7	26	11	18.3	-10.0	47	10	-18	24	0	30	12	76	1.12	-2.04	0.33	15	0	17.8	8	9.8	SW	25*	W	20+	6	4	21	7.5	
OKLAHOMA																																
OKLAHOMA CITY	1280	976.5	1022.0	41	16	28.3	- 8.2	69	8	- 3	12	0	26	15	63	0.21	-1.10	0.16	2	0	0.5	1	13.7	NNW	37	N	22	14	6	11	4.5	66
TULSA	676	996.5	1022.2	41	17	28.6	- 8.6	69	8	- 2	23	0	26	16	64	0.98	-0.73	0.85	5	0	0.6	T	11.0	S	32	N	22	12	9	10	4.9	65
OREGON																																
ASTORIA	8	1023.4	1024.1	44	30	36.9	- 3.8	54	2	15	11	0	19	31	82	4.76	-6.95	1.48	17	0	0.3	T	8.2	E	35*	SSW	1	7	6	18	7.0	
BURNS U	4151	876.4		38	12	25.3	0.5	57	21	-11	12	0	30			1.42	-0.20	0.95	8	0	11.0	9						13	7	11	5.2	
EUGENE	361	1010.8		42	27	34.4	- 4.7	54	3	11	12	0	22			2.55	-3.78	1.45	7	0	3.9	3	6.6		40*	SW	31	7	5	19	6.9	
MEACHAM	4050			30	14	21.5	- 4.5	45	31+	-23	11	0	31			2.83	-1.37	0.59	18	0	18.9	12						6	4	21	7.5	
MEDFORD	1298	975.3	1024.7	42	20	30.8	- 6.1	51	23	8	12	0	31	24	83	1.75	-1.39	1.36	6	0	1.2	1	2.5	S	21*	SSE	11	12	5	14	5.5	
PENDLETON	1482	970.5	1026.4	35	19	27.0	- 4.7	55	3	-11	11	0	27	20	74	1.40	-0.02	0.52	9	0	12.1	6	7.1	S	30*	WSW	8	8	6	17	6.6	
PORTLAND	21	1020.0	1025.4	41	29	35.0	- 3.4	55	2	11	11	0	21	27	74	2.27	-3.10	1.16	13	0	5.0	3	7.7	ESE	34	E	30	4	8	19	7.4	45

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90°F. or above	No. of days: Min. 32°F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Average speed	Wind: Prevailing direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
OREGON																																
PORTLAND U	30			42	31	36.3	- 3.9	55	2	13	11	0	17			3.00	-3.34	1.50	11		6.6	5										
ROSEBURG	505	1005.1		43	26	34.5	- 5.8	60	31	7	12	0	25			1.47	-4.04	0.68	9	0	2.0	1	3.1	N#	22	SW	31	8	5	18	6.8	42
SALEM	195	1018.0	1025.2	41	26	33.7	- 5.3	53	3	12	12+	0	24	26	76	2.80	-3.90	1.22	7	0	6.6	5	7.2	S	25*	SSW	31	6	7	18	6.4	70
SEXTON SUMMIT R	3836	886.6		45	31	37.9	4.3	59	8+	12	11	0	16			3.95	-1.64	3.28	8	0	4.3	3	11.1	N				16	6	9	4.1	
PACIFIC AREA																																
CANTON ISLAND	11	1008.8	1009.1	88	77	82.8	- 0.3	89	5+	74	22	0	0	70	69	0.22	-2.39	0.16	3	0	0.0	0	14.8	NE	25*	NNE	31	18	10	3	3.9	
ENIWETOK	16	1009.5		86	78	81.8	0.6	87	29+	75	17+	0	0			0.49	-0.53	0.33	3	0	0.0	0	13.8									
TAGUAC GUAM R	361			83	70	76.4	- 1.8	86	27+	63	14+	0	0			9.33	4.70	2.41	18	1	0.0	0	6.5	E#	20	NE	30					54
JOHNSTON	7	1011.5		81	73	77.1	0.0	85	28+	71	5	0	0			0.29	-3.60	0.08	6	0	0.0	0	9.0		29	W		19	11	1	3.5	83
KOROR R	94	1005.8	1008.3	87	75	80.7	0.4	90	20+	71	21	2	0	75	88	18.63	6.90	4.52	23	3	0.0	0	6.8	NE	25	E	4	0	0	31	9.9	49
MAJURO	10	1009.1	1009.4	85	77	80.5	0.3	86	31+	72	5	0	0	73	78	17.46	0.48	3.92	19	0	0.0	0	12.1	E	27	E	19+	1	12	18	7.8	49
PONAPE R	123	1004.1	1008.4	85	74	79.5	- 1.0	88	12+	70	24	0	0	74	84	20.99	9.92	4.50	25	3	0.0	0	5.7	NE	23	NW	4	0	1	30	9.5	43
TRUK MOEN ISLAND	5	1008.8	1009.0	85	75	80.0	- 0.7	87	23+	71	25+	0	0	74	80	11.27	2.87	2.37	23	0	0.0	0	6.6	NNE	26	N	27	0	3	28	9.2	50
WAKE	11	1012.5	1013.0	84	73	78.1	0.7	86	29+	68	12	0	0	68	72	0.55	-0.59	0.21	8	0	0.0	0	8.9	NE	23*	N	30+	14	13	4	4.2	
YAP R	53	1007.5	1008.3	85	75	80.2	0.2	90	13	73	26	1	0	75	86	11.26	3.39	2.44	22	0	0.0	0	9.3	NE	34	N	29	0	4	27	9.4	57
PENNSYLVANIA																																
ALLENTOWN	376	1004.5	1019.5	33	15	24.0	- 5.0	46	10	- 9	29	0	29	17	75	3.00	-0.17	0.75	10	0	12.2	8	8.1	W	36*	WSW	27	9	6	16	6.3	
ERIE	732	992.0	1019.5	27	13	19.8	- 7.5	49	10	-15	24	0	30	14	77	1.51	-1.16	0.34	16	0	18.7	11	14.3	WSW	32*	S	9	3	5	23	8.1	
HARRISBURG	335	1005.0	1019.6	34	19	26.2	- 5.6	47	10	- 4	29	0	28	16	67	2.19	-0.57	0.54	11	0	9.1	6	7.7	NW	35	W	27	11	7	13	6.0	50
PHILADELPHIA	5	1014.4	1019.2	36	19	27.5	- 4.8	49	17+	- 5	29	0	27	20	72	2.31	-1.01	0.82	12	1	6.1	4	8.6	NW	42	NW	27	9	6	16	6.3	57
PHILADELPHIA U	35			39	25	31.9	- 3.0	54	10	3	24	0	23			2.10		0.83	10	0												
PITTSBURGH	1137	988.7	1020.5	30	12	21.1	- 7.8	51	10	-18	24	0	29	15	76	1.96	-1.01	0.56	13	0	12.7	8	8.0	WSW	28*	WSW	23	6	7	18	7.1	49
PITTSBURGH U	749			35	18	26.6	- 6.7	57	10	-13	24	0	26			1.35	-1.47	0.45	10		6.2											44
READING U	266	1006.7	1019.3	35	20	27.8	- 4.9	52	10	- 2	24	0	28			2.50	-0.57	0.74	9	0	6.1	5	8.8	W	54	W	27	9	6	16	6.1	45
SCRANTON	940	982.7	1019.0	31	16	23.2	- 3.5	48	10	- 7	29	0	28	15	70	2.06	-0.23	0.53	11	0	15.2	8	7.3	SW	29	SW	27	8	2	21	7.1	47
WILLIAMSPORT	527	999.5	1019.4	32	15	23.2	- 5.6	43	10	-12	29	0	29	14	69	2.09	-0.58	0.54	12	1	11.9	9	8.6	W	32*	WSW	27	6	6	19	7.0	
RHODE ISLAND																																
BLOCK ISLAND	110	1012.3		36	24	30.1	- 2.5	48	20	8	25+	0	24			3.39	-0.45	1.40	12	0	5.2	3						8	9	14	6.4	
PROVIDENCE	55	1011.1	1017.6	37	21	28.9	- 0.3	55	20	2	25	0	28	19	68	3.40	-0.41	1.11	12	0	5.3	4	11.0	NNW	36	WNW	28	10	7	14	6.0	60
SOUTH CAROLINA																																
CHARLESTON	41	1018.2	1020.4	56	35	45.3	- 5.0	73	11	16	25	0	12	34	69	3.14	0.60	1.23	14	1	0.0	0	8.4	NNE	42Y	W	23	9	6	16	6.4	52
CHARLESTON U	9			55	40	47.4	- 4.1	68	11	24	24	0	7			2.69	0.29	1.20	10	0	0.0	0	9.7		34	W	23					
COLUMBIA	217	1007.5	1021.0	53	29	41.3	- 5.6	76	11	14	25+	0	22	30	68	5.38	2.36	1.52	12	2	T	T	6.4	WSW	25*	WNW	23	9	7	15	6.1	67
FLORENCE	146	1008.9	1020.5	52	31	41.7	- 5.8	75	11	16	24	0	19	29	65	5.05	2.41	1.68	13	2	T	T	7.7	NE	23*	NNW	24+	10	9	12	5.8	
GNVLE SPARTANBURG	957	982.2	1020.3	50	29	39.7	- 4.3	70	12	9	24	0	22	26	62	3.93	-0.35	1.66	11	1	0.0	0	6.3	NE	30	N	24	9	6	15	6.1	57
SOUTH DAKOTA																																
HURON	1282	972.4	1023.1	17	- 7	5.0	- 8.5	61	8	-33	15	0	31	- 4	67	0.63	0.15	0.32	7	0	10.4	7	13.0	WNW	42	NW	20+	11	3	17	6.2	53
RAPID CITY	3165	901.9	1022.5	25	- 1	12.3	- 9.7	60	8+	-26	19	0	30	1	63	1.03	0.67	0.22	16	0	10.8	5	11.8	NNW	43	NW	19	12	2	17	6.3	49
SIOUX FALLS	1420	967.3	1022.5	17	- 3	6.7	- 8.5	54	8	-22	23	0	31	- 1	70	0.90	0.28	0.33	8	0	11.0	8	10.7	WNW	37*	NNW	20+	10	5	16	6.4	
TENNESSEE																																
BRISTOL	1507	964.7	1020.8	41	20	30.6	- 7.7	62	12	- 8	24	0	24	21	71	3.20	-0.49	0.85	13	1	4.1	1	4.7	W	40*	WNW	11	11	5	15	6.0	
CHATTANOOGA	670	993.4	1022.1	44	22	32.6	- 9.1	66	11	- 7	24	0	26	23	71	4.81	-0.80	1.59	11	3	0.4	T	7.2	N	31	W	27	9	4	18	6.5	48
KNOXVILLE	950	985.1	1021.8	44	23	33.4	- 7.5	68	11	- 6	24	0	24	25	73	4.20	-0.68	1.03	11	1	4.2	3	7.4	NE	39	S	11	9	7	15	6.2	41
MEMPHIS	263	1006.8	1022.2	45	24	34.4	- 7.6	74	10	0	24	0	23	25	73	1.28	-4.79	0.50	8	0	1.2	1	8.7	S	30	N	23	10	7	14	6.1	54
MEMPHIS U	271			45	27	35.8	- 6.3	73	10	0	24	0	18			1.15	-4.66	0.52	9		1.0	1										
NASHVILLE	577	1001.0	1021.7	43	19	30.9	- 9.0	65	11	-15	24	0	24	23	75	1.60	-3.89	0.85	8	2	6.8	5	7.4	S	27*	NW	23	10	4	17	6.2	52
OAK RIDGE	905	987.6		42	21	31.2	- 8.7	68	11	- 8	24	0	24			2.83	-3.11	0.67	12	0	2.6	2	3.9		26Y		11	12	5	14	5.5	
TEXAS																																
ABILENE	1759	957.0	1020.3	54	24	38.7	- 5.9	76	9	6	12	0	22	19	52	0.01	-0.87	0.01	1	0	0.7	1	11.8	N	34	N	22+	15	6	10	4.7	71
AMARILLO	3607	888.5	1018.9	46	11	28.9	- 7.3	78	31	- 9	12	0	31	7	47	0.06	-0.59	0.02	4	0	0.5	T	15.1	N	35	W	31+	18	11	2	3.4	81
AUSTIN	597	998.7	1021.4	55	33	43.6	- 6.8	86	10	12	24	0	15	28	61	0.59	-1.76	0.27	5	0	T	T	10.0	N	36	N	23	9	6	16	6.4	50
BROWNSVILLE	16	1017.2	1020.0	67	46	56.3	- 5.1	88	11	26	24	0	5	46	73	0.23	-1.12	0.13	4	0	0.0	0	11.8	NNW	30	NE	26	3	11	17	7.6	38
CORPUS CHRISTI	43	1019.6	1020.8	61	39	50.1	- 7.3	85	10	18	24	0	10	39	72	0.19	-1.44	0.09	5	0	T	T	12.2	NNE	42	NE	26	4	8	19	7.7	45

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

JANUARY 1963

State and Station	Elevation (ground)	Pressure: Station ⊙	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Average speed	Wind: Prevailing direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
TEXAS																																
DALLAS	461	1002.8	1022.2	49	23	38.2	- 7.7	76	10	8	24	0	17	23	52	0.49	-1.83	0.35	3	0	0.7	1	12.9	N	36	N	23	13	5	13	5.2	60
DEL RIO U	957			60	34	46.8	- 5.3	85	10	16	24	0	14			T	-0.89	T	0	0	0.0	0										
EL PASO	3918	887.5	1018.0	55	27	40.5	- 3.4	75	31	10	14	0	19	18	43	0.13	-0.33	0.08	3	0	0.8	1	8.3	WSW	52	W	11	17	5	9	4.0	86
FORT WORTH	544	1000.3	1022.0	49	27	37.8	- 7.7	76	10	9	24+	0	19	24	63	0.86	-1.18	0.47	5	0	T	T	13.7	NNW	40*	N	23	13	5	13	5.2	
GALVESTON U	7			56	42	48.9	- 6.0	73	10	19	24	0	9			1.49	-1.97	0.80	8	0	T	T	23.2		37	NW	23					39
GALVESTON	5	1018.6	1021.0	55	41	47.9	- 6.5	73	10	19	24	0	10	40	76	1.54	-2.22	0.77	7	1	0.0	0	11.9	N				3	7	21	7.7	
HOUSTON U	41			57	41	49.0	- 5.6	82	10	18	24	0	10			3.83	0.11	2.39	12	0	0.0	0										
HOUSTON	50	1018.0	1020.8	58	39	48.3	- 6.3	83	10	17	24	0	13	40	76	3.09	-0.69	2.38	8	0	T	T	11.0	NNW				6	3	22	7.6	42
LAREDO	500	1004.8	1020.6	64	39	51.4	- 6.3	89	10	21	24	0	11	33	57	0.30	-0.83	0.13	6	0	0.0	0	9.2	NNW	29*	NNE	23	5	13	13	6.6	
LUBBOCK	3243	904.0		50	16	32.8	- 6.4	77	31+	-16	13	0	30			0.05	-0.62	0.05	3	0	2.3	2	15.1	WSW	38*	WSW	31	17	9	5	3.5	
MIDLAND	2854	917.1	1018.3	55	24	39.8	- 4.2	80	31+	50	12	0	24	16	46	0.21	-0.79	0.01	1	0	T	T	11.9	SW	35*	W	10	14	8	9	4.4	
PORT ARTHUR	16	1018.9	1020.6	56	36	46.4	- 6.7	78	10	16	24	0	12	39	79	6.14	1.91	3.07	13	3	T	T	10.3	N	48	N	27	5	6	20	7.6	35
SAN ANGELO	1903	951.0	1020.1	58	25	41.8	- 5.1	85	31	6	24	0	22	18	44	0.06	-0.91	0.03	3	0	T	T	9.1	SSE	25*	W	10	16	6	9	4.4	
SAN ANTONIO	792	995.5	1020.6	58	34	46.2	- 5.8	86	10	15	24	0	14	31	61	0.27	-1.47	0.17	5	1	0.0	T	9.3	N	40	N	23	12	6	13	5.6	63
VICTORIA	104	1016.1		58	37	47.5	- 7.9	83	10	17	24	0	12			0.22	-2.12	0.10	5	0	0.0	0	11.5		55*		23	6	8	17	7.0	
WACO	500	999.9	1021.9	52	30	40.9	- 7.1	80	10	11	24	0	16	28	65	0.49	-1.78	0.24	3	1	T	T	14.4	SSE	44*	NNW	23	12	6	13	5.7	
WICHITA FALLS	994	982.7	1021.1	48	22	35.3	- 6.5	72	8	5	24	0	25	17	53	0.21	-0.91	0.18	3	0	0.2	T	9.9	N	31*	N	23+	15	5	11	4.5	
UTAH																																
MILFORD	5028	845.9		37	9	22.7	- 1.9	54	25	-19	13	0	29			0.19	-0.38	0.15	3	0	2.2	2						16	7	8	4.1	
SALT LAKE CITY	4220	871.0	1025.8	31	8	19.5	- 8.7	53	31+	-18	12	0	29	12	72	0.53	-0.82	0.23	6	0	7.4	4	7.5	SSE	41	S	31	8	8	15	6.7	49
WENDOVER	4237	874.0		31	10	20.7	- 6.3	59	31	-10	12	0	30			0.20	-0.12	0.12	2	0	1.4	1						15	5	13	4.7	
VERMONT																																
BURLINGTON	331	1002.0	1017.5	24	9	16.6	- 1.6	39	20+	-17	29	0	31	9	71	1.14	-0.81	0.30	12	0	12.8	10	8.8	S	27	S	29	3	6	22	8.1	31
VIRGINIA																																
LYNCHBURG	947	993.8		43	23	33.2	- 4.4	67	12+	- 1	24	0	26			1.92	-1.37	0.71	12	2	T	T	7.5		33	SW	23	13	6	12	5.2	61
NORFOLK	26	1018.8	1020.2	44	30	37.1	- 4.1	72	11	17	25+	0	23	27	70	3.36	0.03	0.93	15	1	1.9	2	11.3	N	36	NW	23	10	8	13	5.7	54
RICHMOND	162	1013.7	1020.2	45	26	35.9	- 2.8	68	12	9	29	0	25	25	68	1.55	-1.91	0.61	11	0	1.6	1	7.4	SSW	29	NW	23	11	11	9	4.9	54
ROANOKE	1174	976.4	1020.1	44	22	32.9	- 5.2	67	12	- 4	24	0	25	19	59	1.10	-2.02	0.41	10	1	T	1	8.6	WNW	33	SW	20	13	7	11	5.1	
WASHINGTON																																
OLYMPIA	190	1018.6	1025.6	40	25	33.0	- 5.1	53	2	5	12	0	21	27	78	3.47	-4.38	1.45	13	0	2.0	2	6.5	SW	25*	NE	15	4	7	20	7.6	
SEATTLE TACOMA	400	1010.5	1025.0	39	25	33.9	- 4.4	52	2	12	11	0	23	26	74	2.25	-3.48	0.77	9	0	3.1	1	7.5	N	25*	SSW	3+	4	6	21	7.7	
SEATTLE U	14			41	34	37.4	- 3.8	52	3+	17	11	0	14			1.91	-3.28	0.61	10		1.8	1	5.3	SSE	35	SW	2					33
SPOKANE	2356	954.3	1027.7	26	13	19.2	- 6.0	45	5+	- 7	11	0	29	10	57	0.89	-1.55	0.84	5	0	8.7	8	8.1	NE	30	SW	1	5	6	20	7.5	37
STAMPEDE PASS R	3958	882.2		28	15	21.8	- 1.7	46	5	-10	11	0	30			5.52	-6.51	1.60	15	0	25.1	45						6	4	21	7.6	
TATOOSH ISLAND	101	1021.7	1024.7	43	36	39.5	- 2.5	52	3	22	11	0	8	31	71	2.86	-7.96	2.42	10	0	T	T	18.1	ENE	66	NE	30	6	4	21	7.7	38
WALLA WALLA U	949	989.3		35	22	28.8	- 4.4	60	3+	0	11	0	25			0.93	-0.96	0.44	10	0	5.5	4	4.1	W#	17	N	10	5	7	19	7.5	34
YAKIMA	1061	986.5	1027.1	35	15	25.2	- 2.3	56	3	- 3	11	0	30	14	67	1.42	-0.23	1.37	3	0	14.5	14	5.5	WNW	35*	NE	28	9	6	16	6.4	
WEST INDIES																																
SAN JUAN P.R.	15	1014.2	1017.2	82	69	75.7	1.3	86	9	63	11	0	0	68	78	3.13	-1.57	0.64	24	0	0.0	0	7.6	ENE	27	NE	23	3	22	6	5.8	57
SWAN ISLAND	28	1014.2		83	75	78.8	10.5	85	30+	71	4+	0	0			1.29	-2.15	0.80	8		0.0	0						12	15	4	4.4	
WEST VIRGINIA																																
CHARLESTON	939	984.1	1020.9	39	17	27.9	- 8.7	65	11	-12	24	0	26	19	69	1.85	-2.47	0.78	14	2	10.7	4	5.6	SW	21*	WSW	27+	10	5	16	6.1	
ELKINS	1970	947.9	1019.7	38	13	25.9		62	11	-20	29	0	29	18	72	1.66		0.33	18	0	12.5	5	6.5	S	38*	WNW	24+	9	5	17	6.4	
HUNTINGTON U	827	989.9	1021.3	38	16	27.0		66	11	-15	24	0	27	19	72	1.86	-1.98	0.80	13	1	7.9	6	6.4	S	23*	NW	23	9	6	16	6.3	
PARKERSBURG U	615			37	16	26.6	- 8.0	63	11+	-14	24	0	27			1.80	-1.54	0.69	10	1	8.4	7	6.3		27	W	27+					49
WISCONSIN																																
GREEN BAY	682	995.3	1019.5	14	0	7.0	- 9.3	39	9	-27	23	0	31	0	71	0.68	-0.47	0.44	12	0	8.0	8	8.3	WNW	35	NW	20	6	6	19	6.9	36
LA CROSSE	652	995.0	1021.7	15	- 2	6.3	-10.2	43	8	-31	15	0	31	- 1	67	0.67	-0.52	0.42	10	0	13.3	9	9.8	S	35*	NW	20	5	6	20	7.3	
MADISON	858	982.5	1020.6	13	- 3	5.4	-12.6	36	9+	-30	15	0	31	0	75	0.76	-0.64	0.40	9	0	12.0	7	8.9	SW	31	NE	11	6	7	18	6.9	45
MILWAUKEE	672	993.6	1020.4	15	2	8.7	-11.9	38	8	-24	15	0	30	1	68	0.66	-1.17	0.39	10	0	8.1	5	12.0	W	34	W	20	9	5	17	6.6	48
WYOMING																																
CASPER	5319	835.1	1021.5	26	2	13.7	- 9.7	51	31	-27	11	0	30	2	61	0.38	-0.18	0.10	12	0	10.6	3	15.4	SW	36*	WSW	31+	8	9	14	6.1	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

JANUARY 1963

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90°F. or above	Temperature: No. of days: Min. 32°F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Sleet: Total	Precipitation: Snow, Sleet: Maximum depth on ground	Wind: Average speed	Wind: Prevailing direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
WYOMING																																
CHEYENNE	6126	809.0	1019.9	29	5	16.7	- 9.2	52	8	-27	11	0	30	3	59	0.51	-0.01	0.13	8	0	8.9	3	17.1	WNW	56	W	20	12	7	12	5.4	67
LANDER	5563	834.4	1023.6	20	- 6	6.9	-12.4	51	31	-37	12	0	31	- 1	72	1.13	0.67	0.81	9	0	17.8	10	4.5	W	56	SW	31	9	7	15	6.0	65
SHERIDAN	3942	885.2	1023.3	26	- 2	12.1	- 9.2	56	7	-35	19	0	30	6	71	1.31	0.67	0.25	18	0	23.9	14	8.5	NW#	54	NW	9	5	6	20	7.4	52

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

* Data entered in column "Fastest Mile" is the fastest mile observed. This station is not equipped with automatic wind recording instrument.

A Maximum hourly average.

\+ And also on an earlier date or dates.

Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

B Number of days maximum 70°F. or above for Alaskan Stations.

\# Wind direction to 8 compass points only.

Y Peak Gust.

V Sun below horizon January 1-23, inclusive.

X Sun below horizon January 1-17, inclusive.

CLIMATOLOGICAL DATA

METRIC UNITS

JANUARY 1963

State and Station	Elevation (ground)	Pressure: Station 0	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 32.2 °C or above	No. of days: Min. 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Average speed	Wind: Prevailing direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
ALABAMA																																
BIRMINGHAM	186	995.7	1021.9	9.4	- 2.2	3.4	-4.1	21.1	10	-18.9	24	0	20	- 0.6	79	186	58	76	14	3	T	T	4.2	NNW	13.9	NW	23	7	4	20	7.1	39
HUNTSVILLE	184	997.7	1021.9	7.8	- 3.9	2.0	-4.1	19.4	11	-20.0	24	0	22	- 3.3	69	91	- 41	19	11	1	66	51	4.3	SE	16.1*	NNW	23	9	5	17	6.4	
MOBILE	64	1018.4	1020.7	13.3	2.2	7.9	-3.5	22.8	10	-13.3	24	0	12	2.2	69	181	64	116	13	2	0	0	3.9	N	15.2*	NW	23	6	4	21	7.7	
MONTGOMERY	59	1013.2	1021.6	11.7	- 0.6	5.4	-3.5	23.3	11+	-15.0	24	0	20	- 1.7	64	181	78	64	13	5	T	T	4.2	NW	14.3	NW	23	5	6	20	7.5	37
ALASKA																																
ANCHORAGE	27	1014.9	1019.9	- 3.9	-10.0	- 7.1	3.8	6.1	20+	-30.0	9	0	31	-10.6	76	53	33	18	11	0	394	254	2.5	N	9.4*	SE	19	4	4	23	8.0	26
ANNETTE	34	1019.3	1023.4	5.0	0.6	2.7	1.4	10.0	6	- 8.3	10	0	12	- 0.6	81	207	- 82	70	19	0	81	152	2.8	N	14.8*	SSE	4	1	4	26	9.0	
BARROW	7	1026.4	1026.9	-18.3	-27.2	-22.8	4.0	1.7	29	-42.2	8+	0	31	-27.8	62	13	9	5	10	0	79	229	6.6	ENE	17.9*	ESE	31	0X	1X	7X	9.3	
BARTER ISLAND	12	1025.7	1027.7	-18.9	-28.3	-23.7	3.4	2.2	29	-42.2	8+	0	31	-28.9	59	45	35	21	8	0	267	508	6.4	E	16.5*	W	25	10X	12X	9X		
BETHEL	38	1013.5	1014.8	- 3.9	- 9.4	- 6.9	8.9	8.9	17	-35.6	8	0	22	-10.0	78	60	31	18	14	0	79	76	5.5	NNE	12.5*	E	17	4	4	23	7.9	
COLD BAY	29	1003.4	1007.2	3.3	- 0.6	1.2	3.5	8.9	27+	-13.3	5	0	12	- 0.6	87	125	66	47	21	0	23	25	9.5	SE	25.9*	SSE	11	1	4	26	8.8	
CORDOVA	12	1017.3	1018.9	1.7	- 6.1	- 2.3	2.6	5.6	18	-23.3	9+	0	30	- 3.9	90	207	52	6	15	0	500	330	1.7	ESE	9.4*	ESE	2	3	5	23	8.1	
FAIRBANKS	133	1005.1	1024.3	-12.8	-21.1	-16.8	7.1	1.7	20+	-45.6	8	0	31	-19.4	80	45	23	13	15	0	445	432	1.6	N	6.3*	NNW	19	3	6	22	8.3	
JUNEAU	5	1021.3	1022.3	0.6	- 5.0	- 2.4	1.4	10.0	6	-18.3	9+	0	25	- 4.4	84	166	65	49	20	1	310	152	2.8	ESE	16.5*	ESE	4	1	5	25	9.0	15
KING SALMON	13	1012.5	1014.8	0.0	- 7.8	- 3.9	6.4	11.7	27	-34.4	7	0	20	- 7.2	77	39	12	12	14	0	66	51	5.2	E	16.5*	E	21	8	4	19	7.0	
KOTZEBUE	3	1021.3	1021.7	- 9.4	-15.0	-12.1	8.9	2.8	19	-35.6	7+	0	30	-14.4	81	26	16	21	7	0	53	229	7.1	ESE	19.2*	E	21	7	0	24	7.6	
MC GRATH	102	1008.8	1022.5	-13.3	-18.3	-15.7	7.1	3.3	20	-48.9	8	0	31	-20.0	76	12	- 20	6	9	0	241	432	1.0	N	7.6*	N	21	4	6	21	7.8	
NOME	4	1018.0	1018.6	- 3.9	- 9.4	- 6.5	8.8	6.1	26	-37.8	7	0	23	-10.0	79	52	26	31	11	0	114	356	7.1	E	14.8*	E	17	7	2	22	7.6	16
ST. PAUL ISLAND	7	1004.1	1005.2	1.1	- 2.8	- 0.9	2.7	6.1	27	-15.6	5+	0	18	- 2.2	90	52	6	17	17	0	41	76	9.3	E	21.9*	E	25	0	0	31	10.0	
SHEMYA	37	989.7	993.4	2.8	0.0	1.4	1.8	4.4	22+	- 4.4	3	0	13	0.0	89	34	- 29	7	21	0	69	25	8.8	NNE	19.7*	ENE	20	0	3	28	9.2	
YAKUTAT	9	1019.0	1020.0	1.7	- 2.8	- 0.8	2.0	6.7	5	-16.7	1	0	19	- 1.7	93	310	34	59	22	0	498	254	2.8	ENE	15.6*	SE	3	3	3	25	8.6	
ARIZONA																																
FLAGSTAFF	2131	789.2	1020.7	3.9	-11.1	- 3.7	-1.6	11.7	22+	-28.9	12	0	29	-11.1	61	24	- 22	14	6	0	251	127	3.8	NE	15.6	SSW	18	20	2	9	3.5	
PHOENIX	340	978.7	1018.5	16.7	1.7	9.1	-1.3	25.0	31	- 6.7	13	0	11	- 4.4	42	14	- 5	13	3	0	0	0	2.4	E	11.2*	NW	19	20	1	10	3.6	84
PRESCOTT	1528	847.3	1019.8	9.4	- 5.6	1.9	-0.9	17.2	31	-17.2	13	0	27	- 8.9	51	6	- 20	5	2	0	T	T	3.8	S	20.1	N	19	20	4	7	3.3	81
TUCSON	788	927.5	1017.4	16.1	1.7	9.1	-0.6	25.0	31	- 6.1	13	0	11	- 2.8	50	15	- 6	9	3	0	0	0	3.8	SSE	13.0	W	19	13	8	10	4.6	83
WINSLOW	1487	853.0	1024.0	5.6	-10.0	- 2.4	-2.1	20.0	31	-25.0	13	0	28	- 9.4	65	13	- 2	8	3	0	157	102	3.3	SW	14.3*	WSW	18	15	7	9	4.0	
YUMA	61	1013.9	1019.1	19.4	4.4	11.8	-1.8	24.4	27+	- 2.2	14+	0	4	- 3.9	41	13	3	13	1	0	0	0	3.4	N	15.2	N	19	18	6	7	3.5	85
ARKANSAS																																
FORT SMITH	137	1004.5	1022.3	6.1	- 6.1	- 0.1	-4.4	20.6	9	-17.2	24	0	23	- 6.7	67	18	- 50	17	3	0	T	T	3.6	ENE	11.6	N	23	13	4	14	5.6	55
LITTLE ROCK	78	1008.3	1022.2	7.2	- 5.0	1.1	-3.7	25.0	10	-16.7	24	0	25	- 5.0	69	22	-110	9	11	0	18	T	3.6	N	13.9	NW	22	11	5	15	5.9	50
TEXARKANA	110		1021.9	8.9	- 2.8	3.0	-4.3	23.9	10	-14.4	24	0	18	- 2.2	74	38	- 85	23	12	0	5	T	3.8	NW								82
CALIFORNIA																																
BAKERSFIELD	151	1003.4	1021.6	13.9	0.6	7.2	-1.4	21.1	31	- 6.7	13	0	19	- 2.2	58	3	- 27	3	2	0	0	0	2.7	SE	12.5*	SE	12	20	2	9	3.5	
BISHOP	1252	876.1		13.3	- 8.3	2.5	-0.2	20.6	22	-16.7	13	0	20			82	57	49	3	0	0	0						22	4	5	2.3	
BLUE CANYON	1609	839.8		8.9	0.6	4.6	2.3	15.6	7	- 9.4	12+	0	14			398	101	231	4	0	188	178	4.2	ENE	30.0*	SSW	31	23	2	6	2.5	
BURBANK	213	993.0	1019.3	17.2	5.6	11.4	-0.6	25.0	7	- 1.1	14	0	1	0.0	53	12	- 68	13	2	0	0	0	2.1	S#	12.5*	NE	12	17	3	11	4.1	
EUREKA U	13	1019.0		11.1	4.4	7.8	-0.8	18.3	31	- 1.1	12	0	2			43	-127	23	5	0	0	0	2.5		17.0	SW	31	14	6	11	4.8	60
FRESNO	99	1008.4	1020.6	12.8	- 1.1	5.7	-1.8	18.3	31+	- 7.2	13	0	23	- 0.6	73	55	3	30	4	0	0	0	2.4	NW	10.7	SE	31	17	6	8	3.7	71
LONG BEACH	10	1018.3	1019.9	18.3	6.7	12.3	1.0	27.8	7	- 3.9	13	0	1	3.3	60	7	- 43	9	1	0	0	0	2.5	ENE	13.0*	ENE	12	16	5	10	4.5	
LOS ANGELES	30	1016.3	1019.9	17.8	8.3	12.9	1.0	27.2	7	- 1.1	13	0	1	3.3	60	16	- 52	16	2	0	0	0	3.0	E	11.2*	W	10	15	6	10	4.3	
LOS ANGELES U	95			17.2	8.9	13.1	-0.1	25.0	7	- 1.1	13	0	0			13	- 65	13	3	0	0	0	2.7	W	10.3	W	10	16	5	10	4.2	69
MT SHASTA R	1080	895.7		8.3	- 4.4	1.8	1.1	14.4	24+	-15.0	12	0	28			111	- 50	61	3		282	203						24	0	7	2.8	
OAKLAND	1	1020.3	1020.6	12.2	3.3	7.8	-1.1	17.2	5	- 1.1	14	0	8	1.7	70	68	- 29	38	3	0	0	0	3.1	SE	14.3*	SSW	31	14	10	7	4.3	
POINT ARGUELLO	112	1003.7		15.6	3.9	9.7	-0.1	25.0	7	- 3.9	14	0	10			18	- 42	13	3	0	0	0	3.2		14.3*	SE	30	15	5	11	4.5	
RED BLUFF	104	1007.8	1021.1	12.8	- 0.6	6.1	-1.4	22.2	6	- 4.4	14	0	21	- 2.8	64	89	- 20	52	4	0	T	T	3.9	WNW	25.0	SSE	31	22	2	7	2.9	78
SACRAMENTO	5	1020.3	1021.2	10.0	0.0	5.1	-2.8	16.7	31	- 5.0	13	0	21	0.6	79	120	39	63	6	0	0	0	2.1	NNW	15.2	NW	11	14	6	11	5.0	56
SACRAMENTO U	7			11.1	1.1	6.1	-2.2	16.1	31+	- 2.8	13	0	16			93	2	49	4		0	0										
SANDBERG R	1377	863.9		8.9	0.6	4.7	0.3	17.8	22	-11.7	12	0	10			2	- 63	2	2	0	0	0	6.9		19.2*	ENE	12	22	3	6	2.7	
SAN DIEGO	4	1015.9	1019.2	17.8	7.8	12.8	-0.2	27.2	7	- 0.6	13	0	1	4.4	60	3	- 48	2	3	0	0	0	2.4	ENE	7.6	NW	13	12	7	12	5.0	67
SAN FRANCISCO	2	1020.3	1020.9	12.2	3.3	7.6	-1.7	17.8	31	- 1.7	13	0	7	2.8	73	114	12	54	4	0	0	0	3.5	SSE	26.8	SSE	30	13	10	8	4.3	
SAN FRANCISCO U	16			12.8	7.2	10.2	-0.2	18.9	9+	5.0	21+	0	0			85	- 30	50	3	0	0	0	2.6		17.0	SE	30					55
SANTA MARIA	73	1011.2	1020.0	16.7	2.8	9.6	-0.5	24.4	7	- 5.0	13	0	12	2.8	67	26	- 46	21	4	0	0	0	2.3	WNW	10.3*	SE	30	17	6	8	3.8	
COLORADO																																
ALAMOSA	2297	767.6		0.6	-22.2	-10.8	-2.7	12.2	30	-40.6	13	0	30			11	4	7	4	0	107	76						18	10	3	3.4	
COLORADO SPRINGS	1882	808.1	1020.9	2.2	-13.3	- 5.6	-3.7	18.9	31	-29.4	12	0	31	-16.7	46	13	6	8	9	0	147	51	4.6	NNE	15.6*	N	26+	13	9	9	4.8	
DENVER	1610	834.9	1020.2	0.6	-15.0	- 7.2	-6.1	18.3	31	-31.7	12+	0	31	-15.6	57	18	4	7	9	0	231	76	5.1	S	17.0	NW	8	10	11	10	5.5	76
GRAND JUNCTION	1478	862.9	1027.8	- 5.0	-16.7	-11.1	-7.7	8.3	31	-30.6	13	0	30	-15.6	73	25	9	10	8	0	450	305	1.4	ENE	9.4	NE	19	11	7	13	5.6	56

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

JANUARY 1963

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 32.2 °C or above	No. of days: Min. 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Average speed	Wind: Prevailing direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
COLORADO																																
PUEBLO	1414	855.3	1021.5	2.2	-16.1	- 7.1	-5.9	19.4	8	-32.2	12	0	30	-15.6	57	8	1	5	5	0	178	102	3.5	SE	19.2	NW	4	17	6	8	4.1	80
CONNECTICUT																																
BRIDGEPORT	2	1018.3	1019.2	1.1	- 6.1	- 2.4	-1.4	10.6	10	-16.1	25+	0	28	- 7.2	70	59	- 34	23	9	0	211	178	6.0	NE	20.6*	NNW	23	11	5	15	5.7	
HARTFORD	52	1011.6	1018.0	0.0	- 9.4	- 4.7	-1.7	6.7	13	-23.3	29	0	31	- 8.9	73	74	- 17	25	9	0	196	178	3.7	N	17.0	NW	27	9	6	16	6.5	59
NEW HAVEN	2	1017.9		1.7	- 6.7	- 2.5	-1.2	9.4	10	-16.1	25	0	30			72	- 28	26	11	0	165	127	3.7		14.8	NW	24	12	5	14	5.7	63
DELAWARE																																
WILMINGTON	24	1016.3	1019.7	2.2	- 6.7	- 2.0	-2.8	9.4	10	-17.2	29	0	27	- 6.7	72	52	- 34	17	10	0	132	102	4.2	WNW	20.1*	NW	23+	9	6	16	6.1	
DIST.OF COLUMBIA																																
WASHINGTON U	22			5.6	- 3.3	1.2	-1.3	15.6	20	-15.0	24	0	23			47	- 30	13	10	1	53	127	3.4	S	17.4	WNW	27	12	6	13	5.4	58
WASH NATL AP	4	1015.3	1020.0	3.9	- 4.4	- 0.3	-3.1	15.0	20	-16.1	24	0	27	- 7.2	62	50	- 37	13	10													
FLORIDA																																
APALACHICOLA U	4	1018.3		14.4	5.6	10.2	-2.7	22.2	12	- 7.2	24	0	4			40	- 40	10	11	4	0	0	2.8		15.2	NW	23	5	8	18	7.2	56
DAYTONA BEACH	9	1018.6	1020.5	20.0	8.3	14.1	-1.0	28.9	20	0.0	25+	0	2	10.0	79	74	24	24	10	2	0	0	3.9	NW	10.3*	SSW	20	7	9	15	6.3	
FORT MYERS	4	1018.9		23.9	11.1	17.3	-0.2	28.9	19	4.4	25+	0	0			21	- 18	7	7		0	0	4.4		10.3*	S		12	12	7	5.0	
JACKSONVILLE	7	1019.7	1021.1	17.8	5.6	11.8	-1.5	27.2	20+	- 4.4	24	0	8	5.1	74	137	75	77	8	1	0	0	3.6	NW	15.6	NW	23	6	9	16	6.8	59
KEY WEST	2	1017.7	1019.0	23.9	18.3	21.1	0.2	28.3	13	13.9	9	0	0	16.7	77	23	- 16	13	6	0	0	0	5.0	ENE	14.8	N	21	12	10	9	5.0	78
LAKELAND U	65			21.1	9.4	15.2	-1.3	28.3	20	1.1	25	0	0			56	4	15	9	1	0	0	3.6					9	10	12	5.5	60
MIAMI BEACH	3			23.9	17.8	20.7	0.1	26.7	27	8.3	9	0	0			15	- 28	6	7	0	0	0	5.9		11.6	NW	7	8	13	10	5.3	56
MIAMI	2	1018.0	1019.3	23.9	15.0	19.5	0.1	29.4	27	6.7	9	0	0	15.0	76	17	- 35	6	7	1	0	0	3.5	NNW	10.3*	ENE	29+	7	13	11	5.9	
ORLANDO	32	1015.5	1020.2	21.7	8.9	15.3	-0.5	30.6	20	1.1	25	0	0	9.4	74	81	30	41	9	1	0	0	4.1	N	10.7*	WSW	21	10	9	12	5.8	
PENSACOLA U	4			13.9	3.9	9.0	-3.2	21.1	11	-12.2	24	0	9			185	76	70	13	2	0	0	4.5	N	12.5	NW	23					40
TALLAHASSEE	18	1018.3	1021.2	15.6	3.3	9.6	-2.6	26.1	18	- 8.3	25+	0	12	4.4	72	135	48	71	10	2	0	0	4.3	N	20.6*	SW	20	4	6	21	7.8	
TAMPA	6	1018.8	1020.5	20.6	8.9	14.8	-1.4	26.1	19	1.7	25	0	0	5.4	76	57	3	20	8	1	0	0	5.5	NE	13.0*	WSW	21+	7	11	13	6.1	60
WEST PALM BEACH	5	1018.5	1019.7	23.9	13.9	18.8	-0.6	28.9	27	4.4	9	0	0	14.4	77	27	- 36	10	5	0	0	0	4.5	NNW	9.4*	E	29+	3	18	10	6.5	
GEORGIA																																
ATHENS	245	991.3	1021.3	9.4	- 2.2	3.6	-3.4	20.0	12	-15.6	24	0	23	- 2.2	65	150	26	43	9	2	0	0	3.6	WNW	12.1*	NW	23	9	7	15	6.3	
ATLANTA	306	977.6	1021.0	8.9	- 2.8	2.9	-4.2	18.9	12	-19.4	24	0	21	- 3.9	65	130	17	42	11	1	T	T	3.7	WNW	10.3*	WNW	27+	6	6	19	7.1	47
AUGUSTA	44	1013.7	1020.8	12.2	- 1.1	5.7	-3.0	22.8	11	-10.0	25+	0	22	0.0	72	133	57	49	12	2	T	1	2.6	NW	11.6*	WNW	21	8	7	16	6.5	
COLUMBUS	117	1006.4		12.2	- 1.1	5.6	-3.2	21.7	12	-16.1	24	0	20			158	55	61	13	4	T	T	3.8		12.1*	NW	27+	6	6	19	7.2	
MACON	109	1007.0	1021.0	12.2	0.0	6.1	-3.4	21.7	12	-14.4	24	0	21	- 0.5	67	176	90	78	12	4	T	T	3.4	NW	14.3	NNW	20	6	8	17	6.7	50
ROME	194	997.9		8.9	- 5.0	1.7	-3.9	18.9	11	-20.6	24	0	23			151	11	56	12	1	T	T						9	3	19	6.6	
SAVANNAH	15	1018.5	1021.3	13.9	2.2	8.2	-2.7	24.4	11	- 7.2	25+	0	12	2.8	73	84	14	35	13	2	0	0	3.9	NE	17.9	NW	23	9	4	18	6.7	51
THOMASVILLE U	86			14.4	3.9	9.2	-2.9	23.3	21	-10.6	24	0	9			134	43	54	12	3	0	0						5	6	20	7.5	
HAWAII																																
HILO	9	1009.8		27.2	16.7	21.7	0.2	31.1	16	13.9	15	0	0			29	-271	13	12		0	0	3.5		16.5*	SSW	16	11	11	9	5.2	55
HONOLULU	2	1011.4	1011.8	25.6	17.8	21.7	-0.8	27.2	29+	13.3	14	0	0	17.2	77	269	173	171	14	3	0	0	4.7	WSW	24.1	E	7	9	7	15	6.3	54
KAHULUI	13	1008.7	1011.7	26.7	16.7	21.7		27.8	30+	12.2	1	0	0	17.2	76	169		66	15	2	0	0	7.5	SSW	23.2	SSW	16	11	12	8	5.2	63
LIHUE	35	1005.7		26.1	17.2	21.8	0.2	28.3	29+	13.9	17	0	0			313	173	112	16		0	0	4.9		16.1	SW	31+	9	9	13	5.7	57
IDAHO																																
BOISE	865	925.8	1025.9	0.0	- 9.4	- 4.8	-2.9	7.8	1	-21.7	12	0	30	-11.7	64	29	- 5	22	8	0	257	178	2.8	SE	13.0	W	10	7	6	18	6.9	59
IDAHO FALLS 42NW R	1460			- 5.0	-20.6	-12.8	-2.5	7.8	4	-41.7	12	0	31			20	6	24	5	0			1.6	N	14.3Y	SSW	31					
IDAHO FALLS 46W R	1504	849.2		- 4.4	-18.9	-11.6	-2.3	7.8	4	-37.2	12	0	31			26	8	27	6	0	107	76	2.2	NNE	13.0A	SW	31					
LEWISTON	431	972.2		0.0	- 8.3	- 4.3	-3.6	10.6	3	-23.9	11	0	28			20	- 8	8	9	0	108	152						3	4	24	8.2	
POCATELLO	1355	865.9	1025.0	- 1.7	-13.9	- 7.8	-2.4	10.0	31	-30.0	12	0	31	-12.2	72	38	7	29	10	0	226	152	4.0	SSW	21.0	S	31	5	9	18	7.4	51
ILLINOIS																																
CAIRO U	96	1008.5		2.8	- 6.7	- 2.1	-5.1	17.8	9	-20.6	24	0	26			20	- 93	9	9	1	93	76	3.3	NW	14.3	N	23	11	5	15	5.6	60
CHICAGO O HARE	201	994.3	1020.6	- 7.2	-15.6	-11.4		6.1	8	-28.3	23+	0	30	-16.1	67	21		7	9	0	427	203	5.1	WSW	12.5*	NNW	23+	6	7	18	7.2	
CHICAGO MIDWAY	186	997.0	1021.3	- 6.1	-14.4	-10.4	-7.1	5.6	9+	-27.8	23	0	30	-15.0	69	26	- 22	9	10	0	536	203	5.4	W	13.9	NE	10	4	7	20	7.7	29
MOLINE	177	998.1	1022.1	- 7.8	-17.2	-12.4	-7.4	7.2	8	-32.2	28	0	30	-16.7	67	23	- 18	6	10	0	373	152	4.6	WSW	18.8	NW	20	5	8	18	7.4	41
PEORIA	199	998.6	1022.4	- 6.1	-15.0	-10.7	-7.2	9.4	9	-28.9	28	0	31	-15.0	71	14	- 34	4	9	0	178	127	4.8	WSW	13.9	W	20	7	3	21	7.3	36
ROCKFORD	222	992.6	1021.2	- 7.8	-17.2	-12.6	-7.1	7.2	8	-30.0	23	0	30	-15.6	75	15	- 35	6	11	0	287	152	4.7	WSW	12.1*	WNW	20	6	8	17	6.9	
SPRINGFIELD	179	997.3	1021.9	- 3.9	-12.8	- 8.4	-6.4	11.7	9	-27.2	28	0	31	-13.3	69	10	- 38	5	10	0	132	102	5.4	WSW	16.1	W	12	7	6	18	7.1	41
INDIANA																																
EVANSVILLE	116	1005.3	1022.1	1.1	-10.0	- 4.5	-5.7	18.3	9	-27.8	24	0	27	- 9.4	69	22	- 80	9	9	2	81	76	3.0	NW	12.5	NW	23	11	3	17	6.2	50

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

JANUARY 1963

State and Station	Elevation (ground)	Pressure: Station ⌀	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 32.2 °C or above	No. of days: Min. 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Average speed	Wind: Prevailing direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
INDIANA																																
FORT WAYNE	241	987.6	1020.7	- 4.4	-13.9	- 8.9	-5.9	10.0	10	-27.8	31+	0	31	-12.2	76	24	- 44	9	12	0	224	178	4.3	W	16.5	W	20	4	9	18	7.3	31
INDIANAPOLIS	242	989.5	1021.1	- 2.2	-11.7	- 6.9	-5.3	12.2	10	-27.8	28	0	30	-11.1	73	29	- 48	11	10	1	229	152	5.2	WSW	14.8*	NW	23	7	7	17	6.9	59
SOUTH BEND	234	991.0	1020.2	- 6.1	-14.4	-10.4	-6.8	3.9	9	-27.2	23	0	30	-13.9	74	33	- 23	9	12	0	417	381	5.1	SW	11.2*	SW	12+	4	3	24	8.2	
IOWA																																
BURLINGTON	212	994.4	1022.3	- 6.1	-15.6	-10.6	-6.4	10.0	8	-27.8	23	0	31	-14.4	74	25	- 17	7	12	0	366	229	4.8	WSW	16.1	NW	20	6	6	19	7.2	47
DES MOINES	289	989.6	1023.0	- 8.3	-17.2	-13.1	-7.1	11.1	8	-30.0	23	0	31	-16.7	75	21	- 12	4	12	0	404	203	4.1	WNW	16.5	NW	20	6	5	20	7.5	40
DUBUQUE	325	994.4		- 9.4	-18.3	-13.8	-6.7	5.0	8	-31.1	23	0	31			27	- 19	13	12	0	300	229			13.9*	WSW	23+	6	6	19	7.3	
SIOUX CITY	334	979.1	1023.3	- 6.7	-18.3	-12.7	-5.3	15.0	8	-27.8	27	0	31	-17.8	70	23	3	10	12	0	345	229	4.6	NNW	22.4	N	20	5	9	17	7.0	50
WATERLOO	265	988.4	1022.2	- 8.9	-18.9	-13.9	-6.4	8.9	8	-33.3	15	0	31	-17.2	76	12	- 17	7	7	0	173	127	4.6	NW	20.6*	WNW	20	5	7	19	7.3	
KANSAS																																
CONCORDIA	448	971.3	1022.6	- 2.8	-13.9	- 8.4	-6.2	15.6	9	-25.0	27	0	30	-12.8	75	14	- 3	6	10	0	211	102	5.5	N	17.9*	NW	12	10	8	13	5.8	54
DODGE CITY	791	929.2	1021.9	1.7	-12.8	- 5.4	-4.9	19.4	8	-24.4	12	0	31	-12.2	63	14	-	11	8	0	10	T	5.1	NNE	17.9	NE	22	13	6	12	4.9	77
GOODLAND	1111	888.1	1021.7	- 0.6	-15.0	- 7.9	-5.3	16.1	8	-28.3	12	0	31	-13.9	68	13	3	6	8	0	239	76	5.9	WSW	16.5*	NNW	11	13	6	12	5.2	
TOPEKA	267	984.9	1022.9	- 2.2	-13.3	- 7.8	-6.0	18.3	8	-22.8	23	0	31	-11.7	73	14	- 12	9	5	0	140	76	5.5	N	15.6	N	22	6	7	18	6.9	46
WICHITA	403	970.7	1021.9	0.6	-11.1	- 5.4	-5.4	16.7	8	-21.7	12	0	29	-11.1	67	31	10	24	5	0	94	76	5.8	NNE	21.0	N	22	11	6	14	5.5	60
KENTUCKY																																
COVINGTON	265	987.2	1020.7	0.6	-11.1	- 5.4	-5.8	13.3	9	-28.3	24	0	29	-10.0	72	52	- 39	28	11	1	244	178	3.1	SSW	9.4*	NNW	23	9	4	18	6.7	
LEXINGTON	298	984.2	1021.5	2.8	- 8.3	- 3.0	-4.4	15.6	11	-29.4	24	0	26	- 6.7	77	37	- 88	17	9	2	173	127	3.9	SSW	10.3*	WNW	11	9	8	14	5.9	
LOUISVILLE	144	1001.5	1021.5	2.8	- 8.9	- 3.3	-4.7	17.2	9	-28.9	24	0	28	- 8.9	67	30	- 74	11	11	1	152	127	3.4	W	11.2	S	9	9	5	17	6.5	50
LOUISIANA																																
ALEXANDRIA	28	1017.2	1022.1	12.2	- 0.6	5.6		25.0	10	-11.7	24	0	16	1.1	76	105		24	12	3	T	T	2.9	NNE				5	8	18	7.2	
BATON ROUGE	20	1018.0	1021.3	14.4	2.2	8.4	-2.9	25.6	10	-11.1	24	0	13	2.8	73	92	- 29	34	8	3	T	T	4.2	NNW				3	8	20	7.6	
LAKE CHARLES	4	1019.6	1021.2	12.8	2.8	7.7	-4.1	22.8	11+	- 8.3	24	0	12	4.4	80	129	16	43	8	5	T	T	4.5	N	13.0*	N	23	3	7	21	7.9	
NEW ORLEANS	1	1018.7	1021.0	13.9	3.3	8.6	-3.7	25.6	30	-10.0	24	0	9	5.0	80	132	35	81	9	2	T	T	4.0	ENE	12.5*	N	23	4	7	20	7.8	
NEW ORLEANS AUDUBON	2	1013.8		15.0	5.0	10.1		25.6	30	- 8.3	24	0	10			117		57	9	1	0	0	2.5		11.2	NW	23	5	4	22	7.7	34
SHREVEPORT	77	1012.6	1022.2	10.0	- 1.7	4.2	-4.4	25.6	10	-12.8	24	0	17	- 1.7	71	37	- 85	13	11	0	T	T	4.3	SE				10	4	17	6.3	44
MAINE																																
CARIBOU	190	990.9	1015.3	- 5.6	-15.0	-10.3	1.6	3.9	1	-31.7	26	0	31	-12.8	79	61	7	20	13	0	780	813	5.0	WSW	16.5*	W	28+	5	7	19	7.5	
PORTLAND	19	1012.4	1016.5	0.0	- 9.4	- 4.7	1.0	7.8	10	-21.7	29	0	31	- 8.9	74	69	- 42	26	8	0	467	356	4.1	N	14.8	W	27	8	3	20	6.9	46
MARYLAND																																
BALTIMORE	45	1015.8	1019.9	3.3	- 6.7	- 1.8	-3.3	13.9	10	-21.7	29	0	27	- 7.8	72	47	- 40	12	10	1	94	76	3.6	WNW	17.9	NW	24	14	4	13	5.3	53
BALTIMORE U	4			3.9	- 3.9	- 0.2	-3.1	12.8	10	-15.6	24	0	25			45	- 42	13	9													
FREDERICK	90			1.7	- 8.9	- 3.6	-4.1	10.0	10	-23.3	29	0	29																			
MASSACHUSETTS																																
BLUE HILL OBS R	192	991.7	1016.0	1.1	- 7.2	- 3.3	-0.5	10.6	20	-18.3	25	0	30		74	90	- 24	26	11		203	152	6.3	WNW	24.6	NW	24					49
BOSTON	5	1011.7	1016.8	2.8	- 5.6	- 1.4	-0.2	12.2	20+	-15.6	25	0	27	- 7.8	66	80	- 21	22	11	0	165	127	6.5	WNW	19.2	W	27	10	5	16	6.2	56
NANTUCKET	13	1016.3	1016.9	3.9	- 3.9	- 0.1	-0.4	10.0	11	-13.3	25	0	22	- 3.9	78	112	4	31	15	0	99	51	6.0	NW	18.8	NW	24	7	6	18	7.0	42
PITTSFIELD	357			- 1.1	-11.1	- 6.3	-0.6	10.6	10	-22.2	25	0	31			53	- 23	14	9		594	381										
WORCESTER	301	979.3	1016.4	- 1.1	- 9.4	- 5.3	-0.8	8.9	10	-20.0	25	0	31	- 9.4	74	79	- 15	22	13	0	297	305	4.4	WSW	13.4*	W	28+	10	6	15	6.0	
MICHIGAN																																
ALPENA	210	990.7		- 6.7	-17.2	-12.1	-5.8	2.8	9	-33.3	15	0	31			24	- 25	9	12	0	427	406	3.0	SW#	10.7	NE	12+	9	6	16	6.5	58
DETROIT	189	991.4	1019.7	- 5.6	-11.1	- 8.2	-5.4	5.0	9	-25.0	24	0	30	- 5.6	12	16	- 36	6	11	0	191	152	4.7	SW	15.6	SW	20	6	6	19	7.3	35
DETROIT M WAYNE CO	193	994.6	1020.1	- 5.0	-12.8	- 9.0	-5.7	4.4	9	-25.0	24	0	30	-12.8	74	22	- 27	6	12	0	234	178	4.1	SSW				7	6	18	7.0	
DETROIT WILLOW RUN	217	989.8	1019.8	- 5.6	-12.2	- 9.1	-6.1	2.8	9	-25.0	24+	0	30	-12.2	75	21	- 28	7	10	0	234	127	5.2	SSW	15.6*	SW	20+	7	3	21	7.2	
ESCANABA U	181	994.2		- 9.4	-17.2	-13.2	-5.7	3.3	8	-31.7	23	0	31		69	17	- 20	4	11	0	175	178	4.3	S	12.5	N	18	11	6	14	6.0	51
FLINT	233	990.6	1020.1	- 6.7	-14.4	-10.5	-5.8	3.9	9	-25.6	15	0	30	-13.3	76	16	- 27	7	10	0	241	152	4.3	SW	11.2*	SW	20+	4	9	18	7.4	
GRAND RAPIDS	210	992.8	1019.6	- 5.6	-12.2	- 8.9	-4.7	3.9	9	-21.7	15	0	30	-11.7	81	57	9	16	17	0	1082	559	4.8	SSW	12.5	WNW	20	0	5	26	8.9	23
LANSING	260	985.4	1019.3	- 6.1	-14.4	-10.5	-6.2	4.4	9	-26.1	15	0	30	-14.4	70	26	- 24	10	14	0	310	356	6.0	SSW	18.3	W	20	5	8	18	7.3	47
MARQUETTE U	206	988.6		- 8.9	-16.1	-12.7	-5.7	3.3	8	-29.4	23	0	31			32	- 16	17	13	0	419	432	4.1	SW#	11.6	NW	20+	7	5	19	7.2	51
MUSKEGON	191	995.2	1019.2	- 5.6	-11.1	- 8.3	-4.4	4.4	9	-19.4	28+	0	30	-11.7	78	57	4	7	22	0	1643	787	5.1	WNW	13.4*	WNW	20+	1	0	30	9.5	
SAULT STE MARIE	220	992.4	1016.5	- 9.4	-18.3	-14.0	-4.7	1.1	9+	-31.1	23	0	31	-17.8	72	28	- 24	7	18	0	396	432	3.8	WSW	11.2*	WNW	9	6	7	18	7.3	45
MINNESOTA																																
DULUTH	435	974.8	1019.0	-12.8	-22.2	-17.3	-4.3	4.4	8	-35.0	23	0	31	-22.2	66	8	- 21	5	10	0	91	178	5.3	WNW	16.5	W	20	8	8	15	6.5	54
INTERNATIONAL FALLS	359	975.0	1019.5	-15.0	-25.6	-20.4	-4.4	2.8	8	-40.0	19	0	31	-25.6	62	6	- 16	3	8	0	51	102	4.3	W	12.1*	W	23	9	8	14	6.2	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 32.2 °C or above	No. of days: Min. 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Average speed	Wind: Prevailing direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
MINNESOTA																																
MINNEAPOLIS	251	985.4	1021.5	-11.1	-21.1	-16.2	-5.3	5.6	8	-35.6	15	0	31	-19.4	71	12	- 6	7	10	0	127	127	5.1	WSW	14.8	NW	20	6	5	20	7.1	42
ROCHESTER	395	970.0	1021.4	-11.1	-20.0	-15.6	-5.9	6.7	9	-34.4	15	0	31	-18.9	75	21	- 2	7	11	0	300	203	6.1	W				5	5	21	7.5	
ST CLOUD	315	980.7		-11.7	-21.7	-16.7	-4.6	5.6	7	-33.3	22	0	31			11	- 7	6	11	0	112	76						9	5	17	6.4	
MISSISSIPPI																																
JACKSON	93	1008.8	1021.5	11.1	- 1.1	4.7	-4.2	25.6	10	-15.0	24	0	17	0.6	76	135	10	34	12	3	T	T	3.6	N	14.3	SW	11	8	4	19	7.0	40
MERIDIAN	89	1007.4	1022.1	11.1	- 2.2	4.5	-4.4	25.0	10	-15.6	24	0	22	0.0	77	180	60	57	13	2	25	25	3.2	N	13.0*	N	23	8	5	18	6.9	
VICKSBURG U	71	1009.5		16.6	0.0	5.3	-4.1	24.4	10	-15.0	24	0	14			94	- 36	22	11	3	T	T	3.8		12.5	N	23+	6	6	19	6.9	51
MISSOURI																																
COLUMBIA	237	991.2	1021.2	- 1.7	-11.7	- 6.7	-5.8	18.9	9	-23.3	23	0	30	-11.7	72	10	- 33	5	5	0	84	76	5.0	WSW	15.2	NE	11	7	4	20	7.0	48
KANSAS CITY	226	985.2	1022.2	- 2.2	-11.7	- 6.8	-6.1	15.6	9	-22.8	23	0	30	-11.7	68	15	- 21	7	8	0	150	102	3.2	N	13.0	NE	22	7	6	18	6.9	57
ST JOSEPH	247	985.8		- 3.9	-13.3	- 8.6	-5.9	14.4	8	-24.4	23	0	31			10	- 20	4	5	0	119	76	5.0		13.9*	N	22	6	7	18	7.0	
ST LOUIS	163	1000.1	1022.1	- 1.1	-11.1	- 5.9	-5.9	16.7	9	-23.9	23	0	30	-11.1	70	19	- 31	8	7	0	89	76	4.7	WNW	13.4	NW	20	10	4	17	6.5	46
ST LOUIS RFC	142			0.0	- 9.4	- 4.8	-5.7	18.9	9	-23.3	23	0	27			18	- 37	8	8	0	46	25										
SPRINGFIELD	386	971.6	1021.3	2.8	-10.0	- 3.7	-4.6	20.6	9	-23.3	24+	0	29	- 9.4	68	15	- 35	11	5	0	51	51	4.5	SSE	16.1	N	22	10	8	13	5.7	58
MONTANA																																
BILLINGS	1087	892.7	1022.9	- 3.9	-16.1	-10.1	-5.2	11.7	2	-32.2	19	0	28	-16.7	61	57	43	11	18	0	704	432	6.8	WSW	22.4	SW	19	6	6	19	7.4	48
GLASGOW	694	944.7		- 9.4	-22.2	-15.9	-3.6	10.0	7	-33.3	12	0	31			8	- 4	5	6	0	81	76						4	7	20	7.4	
GREAT FALLS	1116	890.6	1025.6	- 3.9	-17.2	-10.7	-5.4	12.2	3	-32.2	11	0	28	-16.1	65	43	28	9	16	0	450	229	7.2	SW	19.7	NW	9	1	7	23	8.4	29
HAVRE	787	930.0		- 6.7	-21.7	-14.1	-4.0	12.2	7+	-36.1	11	0	30			14	1	6	9	0	173	127	4.7	SW	18.8	SW	19	7	3	21	7.3	47
HELENA	1187	876.1	1027.1	- 5.6	-18.9	-11.9	-4.5	10.6	2	-33.3	23	0	31	-17.2	65	13	1	3	12	0	249	152	3.3	WNW	16.1	NW	21	2	4	25	8.4	42
KALISPELL	904	917.4		- 6.7	-17.2	-12.0	-3.8	7.2	3+	-32.2	30	0	30			41	6	18	16	0	691	406	2.5					3	2	26	8.6	
MILES CITY	801			- 7.2	-20.0	-13.6	-5.0	12.8	7	-33.9	19	0	31			20	9	6	8	0	244	254	4.2	W	15.2*	WSW	19	4	10	17		
MISSOULA	972	907.2	1028.4	- 8.3	-17.2	-12.8	-5.7	8.3	2+	-32.8	11	0	30	-16.1	74	60	37	17	16	0	1080	457	2.5	SE	15.6	E	22	2	6	23	8.4	26
NEBRASKA																																
GRAND ISLAND	561	954.4	1023.4	- 6.1	-17.8	-12.0	-7.6	12.2	8	-33.3	27	0	31	-16.1	76	18	2	8	8	0	201	102	5.0	N				5	13	13	6.5	
LINCOLN U	351			- 4.4	-14.4	- 9.4	-5.6	12.8	9+	-26.1	23	0	30			16	- 7	7	8	0	165	76	4.1	NW	13.9	NE	18	4	15	12	6.7	48
NORFOLK	471	963.3		- 5.6	-18.3	-11.9	-4.9	13.9	8	-30.6	27	0	31			15	- 5	5	10	0	218	152						7	11	13	6.1	
NORTH PLATTE	847	916.7	1022.2	- 3.3	-17.2	-10.5	-6.1	15.0	8	-30.6	22	0	31	-15.0	74	12	1	6	6	0	221	127	5.2	N	17.9	NE	22	7	11	13	6.1	64
OMAHA	298	980.5	1023.0	- 5.6	-15.0	-10.2	-4.8	12.8	8	-27.2	23	0	30	-14.4	73	28	7	11	12	0	368	203	4.9	NNW	13.0	N	22+	5	10	16	6.8	50
OMAHA N OMAHA AP	403	971.4		- 6.7	-16.1	-11.2	-4.7	10.6	8	-28.9	27+	0	31			23	-	8	10	0	284	229						6	7	18	7.0	
SCOTTSBLUFF	1204	879.1	1022.3	- 1.7	-17.2	- 9.6	-5.6	14.4	8	-35.6	19	0	31	-15.6	65	29	22	13	9	0	373	178	6.2	WNW	19.7*	WNW	19	10	8	13	6.0	
VALENTINE	789	926.2		- 4.4	-20.0	-12.2	-5.5	16.7	8	-33.9	19	0	31			12	2	5	9	0	150	152	4.8		17.9	N	19	7	9	15	6.2	75
NEVADA																																
ELKO	1547	846.9	1024.7	3.9	-16.1	- 6.1	-0.9	11.7	31	-32.2	12	0	30	-14.4	54	44	15	26	6	0	290	203	2.5	SW	11.2*	W	9	15	8	8	4.4	
ELY	1907	808.9	1022.1	4.4	-15.0	- 5.1	0.1	13.9	21+	-31.7	12	0	29	-15.0	52	3	- 17	2	3	0	T	T	4.4	S	15.2	SW	31	17	6	8	4.0	73
LAS VEGAS	659	942.1	1021.2	11.7	- 1.7	5.1	-1.4	20.0	29	-13.3	13	0	23	-10.0	37	3	- 10	3	1	0	0	0	3.3	SW	17.4*	NNW	18	21	3	7	2.9	81
RENO	1342	865.6	1024.5	7.8	-12.2	- 2.1	-2.1	15.6	9	-20.6	12	0	29	-10.0	63	64	34	48	4	0	43	25	1.9	SE	13.4	NW	28	23	3	5	2.5	83
WINNEMUCCA	1310	871.7		5.6	-16.1	- 5.2	-2.6	12.8	31	-31.1	12	0	30			20	- 7	17	4	0	112	102	2.5	S	18.8	SW	31	16	9	6	3.9	81
NEW HAMPSHIRE																																
CONCORD	103	1005.7	1017.1	- 0.6	-11.7	- 6.2	-0.2	10.0	10	-25.0	29	0	31	-10.6	72	52	- 30	16	7	0	389	381	2.9	NW	17.4	NW	28	10	3	18	6.7	45
MT WASHINGTON OBS	1909	793.8		-10.6	-19.4	-14.8	-0.5	- 0.6	20	-32.2	24	0	31		89	118	- 20	33	14	0	787	305	27.2	W	54.1Y	W	28	5	9	17	7.2	36
NEW JERSEY																																
ATLANTIC CITY	18	1017.2	1019.5	4.4	- 5.6	- 0.4	-1.9	13.3	10	-16.1	29	0	26	- 5.6	71	75	- 16	25	13	1	112	51	4.2	WNW	16.5*	WNW	27	10	9	12	5.6	63
ATLANTIC CITY U	3			3.9	- 3.3	0.3	-1.9	11.1	20	-13.3	24	0	24			74	- 22	9	13	0			5.0		21.5*	NW	23					
NEWARK	3	1017.8	1019.1	2.2	- 5.0	- 1.3	-1.5	10.6	10	-15.6	24	0	25	- 7.2	63	56	- 29	17	9	0	191	152	4.6	NNE	15.6	W	27+	10	6	15	6.1	
TRENTON U	17	1011.2		2.2	- 5.6	- 1.7	-2.3	11.1	10	-16.7	24	0	26			60	- 19	25	12	0	168	102	3.9	SW	18.3	W	27	11	7	13	5.7	60
NEW MEXICO																																
ALBUQUERQUE	1618	848.9	1020.4	5.6	- 8.3	- 1.4	-3.1	19.4	31	-21.7	20	0	30	-10.6	53	7	- 3	5	3	0	64	51	3.4	N	14.3	N	11	16	7	8	3.6	81
CLAYTON	1515	843.0		6.1	-13.3	- 3.6	-4.3	22.8	31	-27.2	12	0	31			T	- 9	T	0	0	T	T						17	9	5	3.4	
RATON	1944	801.9		4.4	-15.0	- 5.6	-3.9	17.2	30	-35.0	12	0	29			12	3	8	5	0	124	76						17	7	7	3.8	
ROSWELL	1103	982.0	1018.0	10.6	-10.6	- 0.1	-2.5	26.7	31	-30.0	13	0	30	- 7.8	43	11	- 1	9	4	0	114	102	3.5		14.3	NE	19	15	7	9	4.3	87
SILVER CITY	1638	835.8		10.0	- 5.0	2.4		20.0	31	-16.7	20	0	28			17		7	4	0	71	51						18	2	11	3.9	
NEW YORK																																
ALBANY	84	1014.6	1018.5	- 2.2	-11.1	- 6.5	-1.3	6.7	10	-24.4	25+	0	30	-10.6	71	60	- 2	18	12	0	622	432	3.2	S	18.3	W	27	6	5	20	7.4	43

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station ⊙	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Average speed	Wind: Prevailing direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
NEW YORK																																
BINGHAMTON	485	955.4	1017.0	- 3.3	-10.6	- 7.1	-1.9	8.3	10	-23.3	24	0	31	-10.6	76	45	- 18	15	13	0	485	305	4.3	NNW	14.3	W	27	4	5	22	7.9	32
BUFFALO	215	989.3	1018.9	- 3.9	-10.6	- 7.3	-2.6	7.2	10	-23.9	24	0	31	-10.6	79	38	- 34	10	18	0	800	584	5.9	WSW	21.0	W	24	1	6	24	8.5	29
NEW YORK U	40	1006.4	1018.2	2.2	- 4.4	- 1.1	-1.7	10.6	10	-15.6	24	0	23	- 2.8	61	49	- 35	13	11		135	102	4.1	W#	15.6	W	23	12	6	13	5.5	58
NEW YORK LA GUARDIA	6	1017.0	1018.8	1.7	- 5.0	- 1.5	-2.4	11.1	10	-16.1	24	0	24	- 7.2	66	55	- 29	19	11	0	175	152	5.3	NE	18.8	NW	24	9	7	15	6.1	
ROCHESTER	166	998.8	1019.0	- 3.3	-11.1	- 7.1	-3.3	7.8	10	-23.3	24	0	31	-10.0	78	31	- 29	13	9	0	602	356	5.1	WSW	20.1	W	20	6	4	21	7.7	37
SCHENECTADY	66			- 1.1	-10.0	- 5.6	-0.3	6.7	10	-22.8	25	0	31			53	- 12	14	10		554	559						11	13	7	5.0	
SYRACUSE	127	995.0	1018.2	- 2.2	-10.0	- 6.2	-1.8	7.8	20+	-21.1	24	0	30	-10.0	75	47	- 33	14	16	0	564	406	5.6	W	20.1	W	27	5	3	23	7.9	35
NORTH CAROLINA																																
ASHEVILLE U	671	938.6		7.8	- 5.0	1.3	-2.9	19.4	12	-21.7	24	0	24			44	- 37	19	9	1	T	T	3.8	N#	17.4	NW	23	11	9	11	5.1	65
CAPE HATTERAS R	2	1018.8	1019.5	10.6	1.7	6.1	-2.1	21.1	12	- 5.0	24	0	13	1.7	77	103	4	36	14	3	T	T	4.3	NNE				9	8	14	6.0	50
CHARLOTTE	224	991.3	1020.4	8.9	- 2.8	2.9	-3.4	20.6	11	-13.9	24	0	22	- 3.9	66	69	- 21	28	9	1	T	T	3.0	N	9.8	NW	27	12	3	16	5.8	54
GREENSBORO	272	987.4	1020.4	7.8	- 3.9	1.8	-2.5	18.9	12	-15.6	24	0	24	- 4.4	68	61	- 25	23	11	3	T	T	3.0	SW	14.8	NW	23	12	4	15	5.5	56
RALEIGH	132	1005.8	1020.2	8.9	- 3.3	2.6	-2.7	21.1	11	-13.9	24	0	22	- 2.8	71	75	- 7	25	12	0	3	T	3.5	SW	13.0*	NNW	23	13	6	12	5.3	58
WILMINGTON	9	1017.3	1020.4	12.2	0.6	6.1	-2.7	24.4	11	- 8.3	25+	0	20	0.6	71	65	- 8	19	13	1	0	0	4.4	N	16.5	NW	24	9	8	14	5.8	59
WINSTON SALEM	295	983.7	1020.2	7.2	- 2.8	2.2	-2.6	18.9	12	-15.6	24	0	23	- 6.1	58	60	- 33	18	12	2	T	T	3.6	SW	13.0*	NW	23	13	3	15	5.3	
NORTH DAKOTA																																
BISMARCK	502	958.0	1022.8	-10.0	-22.2	-16.1	-3.3	11.1	7	-35.0	27	0	30	-22.2	56	8	- 3	3	5	0	94	76	4.7	WNW	24.1	NW	19	12	7	12	5.5	58
DEVILS LAKE U	448	963.7		-12.8	-22.2	-17.6	-2.3	5.0	7	-35.0	22	0	31			2	- 12	1	3	0	33	76	4.0	NW#	13.4	NW	19	6	8	17	6.5	67
FARGO	274	984.5	1021.6	-11.7	-21.7	-16.7	-2.7	6.7	7	-32.8	22	0	31	-22.2	64	3	- 10	1	6	0	33	25	5.5	NNW	17.9	NW	20	4	11	16	6.7	63
WILLISTON U	579	950.4		- 9.4	-22.8	-16.3	-3.9	8.9	7+	-35.0	19	0	30			9	- 5	3	5	0	89	76	5.4	SW#	25.0	N	19	9	10	12	5.7	64
OHIO																																
AKRON	369	980.2	1020.0	- 2.2	-11.7	- 7.1	-4.5	7.8	10	-29.4	24	0	30	-10.6	75	27	- 45	7	11	0	363	203	4.0	SW	9.8*	WSW	20	8	2	21	7.2	
CINCINNATI OBS	232			1.1	- 8.9	- 4.1	-5.0	13.9	9	-25.6	24	0	27			52	- 42	29	11	1	236	203	2.7	S#	8.5	W	20					43
CINCINNATI U	169	996.8		2.2	- 7.2	- 2.6	-4.1	16.1	9	-24.4	24	0	26			46	- 41	25	10	1	229											
CLEVELAND	237	990.9	1020.0	- 3.3	-12.2	- 7.8	-5.3	6.7	10	-28.3	24	0	31	-11.1	75	27	- 41	8	12	0	315	254	4.8	SW	14.3	SW	20	6	3	22	7.4	40
COLUMBUS	247	989.6	1020.9	- 0.6	-11.1	- 5.7	-5.1	10.6	10+	-26.1	28+	0	28	-10.0	70	35	- 45	20	13	1	257	178	3.9	SSW	12.5	SW	20	8	6	17	6.9	42
COLUMBUS U	221			0.0	- 8.9	- 4.6	-4.4	12.2	10	-26.1	24	0	27			38	- 36	23	10	1	188	152										
DAYTON	304	986.4	1020.5	- 1.7	-11.7	- 6.5	-5.2	11.7	10	-28.3	24	0	30	-10.0	73	24	- 56	14	10	1	180	127	4.7	SSW	14.3	SW	20	6	6	19	7.0	40
MANSFIELD	395			- 3.3	-12.8	- 7.9	-5.3	8.3	10	-28.9	24	0	31			23	- 59	7	14	0	315	152						8	3	20	7.0	
SANDUSKY U	185	996.9		- 3.3	-11.7	- 7.6	-6.1	9.4	10	-26.1	24+	0	29			33	- 28	11	9	0	300	279	4.1		21.5	SW	20	11	7	13	5.8	62
TOLEDO	206	993.6	1020.3	- 5.0	-13.9	- 9.5	-6.3	6.1	9	-27.2	24+	0	31	-12.8	75	24	- 36	7	10	0	315	152	4.3	WSW	15.2	SW	20	5	6	20	7.4	34
YOUNGSTOWN	359	973.5	1019.7	- 3.3	-11.7	- 7.6	-5.6	8.3	10	-27.8	24	0	30	-11.1	76	28	- 52	8	15	0	452	203	4.4	SW	11.2*	W	20+	6	4	21	7.5	
OKLAHOMA																																
OKLAHOMA CITY	390	976.5	1022.0	5.0	- 8.9	- 2.1	-4.6	20.6	8	-19.4	12	0	26	- 9.4	63	5	- 28	4	2	0	13	25	6.1	NNW	16.5	N	22	14	6	11	4.5	66
TULSA	206	996.5	1022.2	5.0	- 8.3	- 1.9	-4.8	20.6	8	-18.9	23	0	26	- 8.9	64	25	- 19	22	5	0	15	T	4.9	S	14.3	N	22	12	9	10	4.9	65
OREGON																																
ASTORIA	2	1023.4	1024.1	6.7	- 1.1	2.7	-2.1	12.2	2	- 9.4	11	0	19	- 0.6	82	121	-177	38	17	0	8	T	3.7	E	15.6*	SSW	1	7	6	18	7.0	
BURNS U	1265	876.4		3.3	-11.1	- 3.7	0.3	13.9	21	-23.9	12	0	30			36	- 5	24	8	0	279	229						13	7	11	5.2	
EUGENE	110	1010.8		5.6	- 2.8	1.3	-2.6	12.2	3	-11.7	12	0	22			65	- 96	37	7	0	99	76	3.0		17.9*	SW	31	7	5	19	6.9	
MEACHAM	1234			- 1.1	-10.0	- 5.8	-2.5	7.2	31+	-30.6	11	0	31			72	- 35	15	18	0	480	305						6	4	21	7.5	
MEDFORD	396	975.3	1024.7	5.6	- 6.7	- 0.7	-3.4	10.6	23	-13.3	12	0	31	- 4.4	83	44	- 35	35	6	0	30	25	1.1	S	9.4*	SSE	11	12	5	14	5.5	
PENDLETON	452	970.5	1026.4	1.7	- 7.2	- 2.8	-2.6	12.8	3	-23.9	11	0	27	- 6.7	74	36	- 1	13	9	0	307	152	3.2	S	13.4*	WSW	8	8	6	17	6.6	
PORTLAND	6	1020.0	1025.4	5.0	- 1.7	1.7	-1.9	12.8	2	-11.7	11	0	21	- 2.8	74	58	- 79	29	13	0	127	76	3.4	ESE	15.2	E	30	4	8	19	7.4	45
PORTLAND U	9			5.6	- 0.6	2.4	-2.2	12.8	2	-10.6	11	0	17			76	- 85	38	11		168	127										
ROSEBURG	154	1005.1		6.1	- 3.3	1.4	-3.2	15.6	31	-13.9	12	0	25			37	-103	17	9	0	51	25	1.4	N#	9.8	SW	31	8	5	18	6.8	42
SALEM	59	1018.0	1025.2	5.0	- 3.3	0.9	-2.9	11.7	3	-11.1	12+	0	24	- 3.3	76	71	- 99	31	7	0	168	127	3.2	S	11.2*	SSW	31	6	7	18	6.4	70
SEXTON SUMMIT R	1169	886.6		7.2	- 0.6	3.3	2.4	15.0	8+	-11.1	11	0	16			100	- 42	83	8	0	109	76	5.0	N				16	6	9	4.1	
PACIFIC AREA																																
CANTON ISLAND	3	1008.8	1009.1	31.1	25.0	28.2	-0.2	31.7	5+	23.3	22	0	0	21.1	69	6	- 61	4	3	0	0	0	6.6	NE	11.2*	NNE	31	18	10	3	3.9	
ENIWETOK	5	1009.5		30.0	25.6	27.7	0.3	30.6	29+	23.9	17+	0	0			12	- 13	8	3	0	0	0	6.2									
TAGUAC GUAM R	110			28.3	21.1	24.7	-1.0	30.0	27+	17.2	14+	0	0			237	119	61	18	1	0	0	2.9	E#	8.9	NE	30					54
KOROR R	29	1005.8	1008.3	30.6	23.9	27.1	0.2	32.2	20+	21.7	21	2	0	23.9	88	7	- 91	2	6	0	0	0	4.0		13.0	W		19	11	1	3.5	83
JOHNSTON	2	1011.5		27.2	22.8	25.1	0.0	29.4	28+	21.7	5	0	0			473	175	115	23	3	0	0	3.0	NE	11.2	E	4	0	0	31	9.9	49
MAJURO	3	1009.1	1009.4	29.4	25.0	26.9	0.2	30.0	31+	22.2	5	0	0	22.8	78	443	266	100	19	0	0	0	5.4	E	12.1	E	19+	1	12	18	7.8	49
PONAPE R	37	1004.1	1008.4	29.4	23.3	26.4	-0.6	31.1	12+	21.1	24	0	0	23.3	84	533	252	114	25	3	0	0	2.5	NE	10.3	NW	4	0	1	30	9.5	43
TRUK MOEN ISLAND	2	1008.8	1009.0	29.4	23.9	26.7	-0.4	30.6	23+	21.7	25+	0	0	23.3	80	286	73	60	23	0	0	0	3.0	NNE	11.6	N	27	0	3	28	9.2	50
WAKE	3	1012.5	1013.0	28.9	22.8	25.6	0.4	30.0	29+	20.0	12	0	0	20.0	72	14	- 15	5	8	0	0	0	4.0	NE	10.3*	N	30+	14	13	4	4.2	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

JANUARY 1963

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max. 32.2 °C or above	No. of days: Min. 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Average speed	Prevailing direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	°C.	°C.	°C.	°C.	°C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
PACIFIC AREA																																
YAP R	16	1007.5	1008.3	29.4	23.9	26.8	0.1	32.2	13	22.8	26	1	0	23.9	86	286	86	62	22	0	0	0	4.2	NE	15.2	N	29	0	4	27	9.4	57
PENNSYLVANIA																																
ALLENTOWN	115	1004.5	1019.5	0.6	-9.4	-4.4	-2.8	7.8	10	-22.8	29	0	29	-8.3	75	76	-4	19	10	0	310	203	3.6	W	16.1*	WSW	27	9	6	16	6.3	
ERIE	223	992.0	1019.5	-2.8	-10.6	-6.8	-4.2	9.4	10	-26.1	24	0	30	-10.0	77	38	-29	9	16	0	475	279	6.4	WSW	14.3*	S	9	3	5	23	8.1	
HARRISBURG	102	1005.0	1019.6	1.1	-7.2	-3.2	-3.1	8.3	10	-20.0	29	0	28	-8.9	67	56	-14	14	11	0	231	152	3.4	NW	15.6	W	27	11	7	13	6.0	50
PHILADELPHIA	2	1014.4	1019.2	2.2	-7.2	-2.5	-2.7	9.4	17+	-20.6	29	0	27	-6.7	72	59	-26	21	12	1	155	102	3.8	NW	18.8	NW	27	9	6	16	6.3	57
PHILADELPHIA U	11			3.5	-3.9	-0.1	-1.7	12.2	10	-16.1	24	0	23			53			21	10	0											
PITTSBURGH	347	988.7	1020.5	-1.1	-11.1	-6.1	-4.3	10.6	10	-27.8	24	0	29	-9.4	76	50	-25	14	13	0	323	203	3.6	WSW	12.5*	WS	23	6	7	18	7.1	45
PITTSBURGH U	228			1.7	-7.8	-3.0	-3.7	13.9	10	-25.0	24	0	26			34	-37	11	10		157											44
READING U	81	1006.7	1019.3	1.7	-6.7	-2.3	-2.7	11.1	10	-18.9	24	0	28			64	-14	15	9	0	155	127	3.9	W	24.1	W	27	9	6	16	6.1	45
SCRANTON	287	982.7	1019.0	-0.6	-8.9	-4.9	-1.9	8.9	10	-21.7	29	0	28	-9.4	70	52	-6	13	11	0	386	203	3.3	SW	13.0	SW	27	8	2	21	7.1	47
WILLIAMSPORT	161	999.5	1019.4	0.0	-9.4	-4.9	-3.1	6.1	10	-24.4	29	0	29	-10.0	69	53	-15	14	12	1	302	229	3.8	W	14.3*	WSW	27	6	6	19	7.0	
RHODE ISLAND																																
BLOCK ISLAND	34	1012.3		2.2	-4.4	-1.1	-1.4	8.9	20	-13.3	25+	0	24			86	-11	36	12	0	132	76						8	9	14	6.4	
PROVIDENCE	17	1011.1	1017.6	2.8	-6.1	-1.7	-0.2	12.8	20	-16.7	25	0	28	-7.2	68	86	-10	28	12	0	135	102	4.9	NNW	16.1	WNW	28	10	7	14	6.0	60
SOUTH CAROLINA																																
CHARLESTON	12	1018.2	1020.4	13.3	1.7	7.4	-2.8	22.8	11	-8.9	25	0	12	1.1	69	80	15	31	14	1	0	0	3.8	NNE	18.8Y	W	23	9	6	16	6.4	52
CHARLESTON U	3			12.8	4.4	8.6	-2.3	20.0	11	-4.4	24	0	7			68	7	30	10	0	0	0	4.3		15.2	W	23					
COLUMBIA	66	1007.5	1021.0	11.7	-1.7	5.2	-3.1	24.4	11	-10.0	25+	0	22	-1.1	68	137	60	39	12	2	T	T	2.9	WSW	11.2*	WNW	23	9	7	15	6.1	67
FLORENCE	45	1008.9	1020.5	11.1	-0.6	5.4	-3.2	23.9	11	-8.9	24	0	19	-1.7	65	128	61	43	13	2	T	T	3.4	NE	10.3*	NNW	24+	10	9	12	5.8	
GNVLE SPARTANBURG	292	982.2	1020.3	10.0	-1.7	4.3	-2.4	21.1	12	-12.8	24	0	22	-3.3	62	100	-9	42	11	1	0	0	2.8	NE	13.4	N	24	9	6	16	6.1	57
SOUTH DAKOTA																																
HURON	391	972.4	1023.1	-9.3	-21.7	-15.2	-4.7	16.1	8	-36.1	15	0	31	-20.0	67	16	4	8	7	0	254	178	5.8	WNW	18.8	NW	20+	11	3	17	5.2	53
RAPID CITY	965	901.8	1022.5	-3.9	-18.3	-10.9	-5.4	15.6	8+	-32.2	19	0	30	-17.2	63	26	17	6	16	0	274	127	5.3	NNW	19.2	NW	19	12	2	17	6.3	49
SIOUX FALLS	433	957.3	1022.5	-8.3	-19.4	-14.1	-4.7	12.2	8	-30.0	23	0	31	-18.3	70	23	7	8	8	0	279	203	4.8	WNW	16.5*	NNW	20+	10	5	16	6.4	
TENNESSEE																																
BRISTOL	459	964.7	1020.8	5.0	-6.7	-0.8	-4.3	16.7	12	-22.2	24	0	24	-6.1	71	81	-12	22	13	1	104	25	2.1	W	17.9*	WNW	11	11	5	15	6.0	
CHATTANOOGA	204	993.4	1022.1	6.7	-5.6	0.3	-5.1	18.9	11	-21.7	24	0	26	-5.0	71	122	-20	40	11	3	10	T	3.2	N	13.9	W	27	9	4	18	6.5	48
KNOXVILLE	290	983.1	1021.8	6.7	-5.0	0.8	-4.2	20.0	11	-21.1	24	0	24	-3.9	73	107	-17	25	11	1	107	76	3.3	NE	17.4	S	11	9	7	15	6.2	41
MEMPHIS	80	1006.8	1022.2	7.2	-4.4	1.3	-4.2	23.3	10	-17.8	24	0	23	-3.9	73	33	-122	13	8	0	30	25	3.9	S	13.4	N	23	10	7	14	6.1	54
MEMPHIS U	83			7.2	-2.8	2.1	-3.5	22.8	10	-17.8	24	0	18			29	-118	13	9		25	25										
NASHVILLE	176	1001.0	1021.7	6.1	-7.2	-0.6	-5.0	18.3	11	-26.1	24	0	24	-5.0	75	41	-99	22	8	2	173	127	3.3	S	12.1*	NW	23	10	4	17	6.2	52
OAK RIDGE	276	987.6		5.6	-6.1	-0.4	-4.8	20.0	11	-22.2	24	0	24			72	-79	17	12	0	66	51	1.7		11.6Y		11	12	5	14	5.6	
TEXAS																																
ABILENE	536	957.0	1020.3	12.2	-4.4	3.7	-3.3	24.4	9	-14.4	12	0	22	-7.2	52	T	-22	T	1	0	18	25	5.3	N	15.2	N	22+	15	6	10	4.7	71
AMARILLO	1099	888.5	1018.9	7.8	-11.7	-1.7	-4.1	25.6	31	-22.8	12	0	31	-13.9	47	2	-15	1	4	0	13	T	6.8	N	15.6	W	31+	18	11	2	3.4	81
AUSTIN	182	998.7	1021.4	12.8	0.6	5.4	-3.8	30.0	10	-11.1	24	0	15	-2.2	61	15	-45	7	5	0	T	T	4.5	N	16.1	N	23	5	5	16	6.4	50
BROWNSVILLE	5	1017.2	1020.0	19.4	7.8	13.5	-2.9	31.1	11	-3.3	24	0	5	7.8	73	6	-28	3	4	0	0	0	5.3	NNW	13.4	NE	26	3	11	17	7.6	38
CORPUS CHRISTI	13	1019.6	1020.8	16.1	3.9	10.1	-4.1	29.4	10	-7.8	24	0	10	3.5	72	5	-37	2	5	0	T	T	5.5	NNE	18.8	NE	26	4	8	19	7.7	45
DALLAS	147	1002.8	1022.2	9.4	-2.2	3.4	-4.3	24.4	10	-13.3	24	0	17	-5.0	60	12	-46	9	3	0	18	25	5.8	N	16.1	N	23	13	5	13	5.2	60
DEL RIO U	292			15.6	1.1	8.2	-2.9	29.4	10	-8.9	24	0	14			T	-23	T	0	0	0	0										
EL PASO	1194	887.5	1018.0	12.8	-2.8	4.7	-1.9	23.9	31	-12.2	14	0	19	-7.8	43	3	-8	2	3	0	20	25	3.7	WSW	23.2	W	11	17	5	9	4.0	86
FORT WORTH	166	1000.3	1022.0	9.4	-2.8	3.2	-4.3	24.4	10	-12.8	24+	0	19	-4.4	63	22	-30	12	5	0	T	T	6.1	NNW	17.9*	N	23	13	5	13	5.2	
GALVESTON U	2			13.3	5.6	9.4	-3.3	22.8	10	-7.2	24	0	9			38	-50	20	8	0	T	T	5.9		16.5	NW	23					39
GALVESTON	2	1018.6	1021.0	12.8	5.0	8.8	-3.6	22.8	10	-7.2	24	0	10	4.4	76	39	-56	20	7	1	0	0	5.3	N				3	7	21	7.7	
HOUSTON U	12			13.0	5.0	9.4	-3.1	27.8	10	-7.8	24	0	10			97	3	51	12	0	0	0										
HOUSTON	15	1018.0	1020.8	14.4	3.9	9.1	-3.5	28.3	10	-8.3	24	0	13	4.4	76	78	-18	60	8	0	T	T	4.9	NNW				6	3	22	7.6	42
LAREDO	152	1004.5	1020.6	17.8	3.9	10.9	-3.5	31.7	10	-6.1	24	0	11	0.6	57	8	-21	3	5	0	0	0	4.1	NNW	13.0*	NNE	23	5	13	12	6.6	
LUBBOCK	988	904.0		10.0	-8.9	0.4	-3.6	25.0	31+	-26.7	13	0	30			2	-16	1	3	0	58	51	6.8	WSW	17.0*	WSW	31	17	9	5	3.5	
MIDLAND	870	917.1	1018.3	12.9	-4.4	4.3	-2.3	26.7	31+	10.0	12	0	24	-8.9	46	T	-20	T	1	0	T	T	5.3	SW	15.6*	W	10	14	8	9	4.4	
PORT ARTHUR	5	1019.9	1020.6	13.3	2.2	8.0	-3.7	25.6	10	-8.9	24	0	12	3.9	79	156	49	78	13	3	T	T	4.6	N	21.5	N	27	5	6	20	7.6	39
SAN ANGELO	590	951.0	1020.1	14.4	-3.9	5.4	-2.8	29.4	31	-14.4	24	0	22	-7.8	44	2	-23	1	3	0	T	T	4.1	SSE	11.2*	W	10	16	6	9	4.4	
SAN ANTONIO	241	995.5	1020.6	14.4	1.1	7.9	-3.2	30.0	10	-9.4	24	0	14	-0.6	61	7	-37	4	5	1	0	T	4.2	N	17.9	N	23	12	5	13	5.6	63
VICTORIA	32	1016.1		14.4	2.8	8.6	-4.4	28.3	10	-8.3	24	0	12			6	-54	3	5	0	0	0	5.1		24.6Y		23	6	8	17	7.0	
WACO	152	999.6	1021.9	11.1	-1.1	4.9	-3.9	26.7	10	-11.7	24	0	16	-2.2	65	12	-45	6	3	1	T	T	6.4	SSE	19.7*	NNW	23	12	6	13	5.7	
WICHITA FALLS	303	982.7	1021.1	9.9	-5.6	1.3	-3.6	22.2	8	-15.0	24	0	25	-6.3	53	5	-23	5	3	0	5	T	4.4	N	13.9*	N	23+	15	5	11	4.5	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

JANUARY 1963

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: 25 mm. or more	With thunderstorms	Snow, Sleet: Total	Maximum depth on ground	Wind: Average speed	Prevailing direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
UTAH																																
MILFORD	1533	845.9		2.8	-12.8	- 5.2	-1.1	12.2	25	-28.3	13	0	29			5	- 10	4	3	0	56	51						16	7	8	4.1	
SALT LAKE CITY	1286	871.0	1025.8	- 0.6	-13.3	- 6.9	-4.8	11.7	31+	-27.8	12	0	29	-11.1	72	13	- 21	6	6	0	188	102	3.4	SSE	18.3	S	31	8	8	15	6.7	49
WENDOVER	1291	874.0		- 0.6	-12.2	- 6.3	-3.5	15.0	31	-23.3	12	0	30			5	- 3	3	2	0	36	25						15	5	11	4.7	
VERMONT																																
BURLINGTON	101	1002.0	1017.5	- 4.4	-12.8	- 8.6	-0.9	3.9	20+	-27.2	29	0	31	-12.8	71	29	- 21	8	12	0	325	254	3.9	S	12.1	S	29	3	6	22	8.1	31
VIRGINIA																																
LYNCHBURG	289	993.8		6.1	- 5.0	0.7	-2.4	19.4	12+	-18.3	24	0	26			49	- 35	18	12	2	T	T	3.4		14.8	SW	23	13	6	12	5.2	61
NORFOLK	8	1018.8	1020.2	6.7	- 1.1	2.8	-2.3	22.2	11	- 8.3	25+	0	23	- 2.8	70	85	1	24	15	1	48	51	5.1	N	16.1	NW	23	10	8	13	5.7	54
RICHMOND	49	1013.7	1020.2	7.2	- 3.3	2.2	-1.6	20.0	12	-12.8	29	0	25	- 3.9	68	39	- 49	15	11	0	41	25	3.3	SSW	13.0	NW	23	11	11	9	4.9	54
ROANOKE	358	976.4	1020.1	6.7	- 5.6	0.5	-2.9	19.4	12	-20.0	24	0	25	- 7.2	59	28	- 51	10	10	1	T	25	3.8	WNW	14.8	SW	20	13	7	11	5.1	
WASHINGTON																																
OLYMPIA	58	1018.6	1025.6	4.4	- 3.3	0.6	-2.8	11.7	2	-15.0	12	0	21	- 2.8	78	88	-111	37	10	0	51	51	2.9	SW	11.6*	NE	18	4	7	20	7.6	
SEATTLE TACOMA	122	1010.5	1025.0	3.9	- 1.7	1.1	-2.4	11.1	2	-11.1	11	0	23	- 3.3	74	57	- 88	20	9	0	79	25	3.4	N	10.3*	SSW	3+	4	6	21	7.7	
SEATTLE U	4			5.0	1.1	3.0	-2.1	11.1	3+	- 8.3	11	0	14			49	- 83	15	10		46	T	2.4	SSE	15.6	SW	2					33
SPOKANE	718	954.3	1027.7	- 3.3	-10.6	- 7.1	-3.3	7.2	3+	-21.7	11	0	29	-12.2	67	23	- 39	21	6	0	221	203	3.6	NE	13.4	SW	1	5	6	20	7.5	37
STAMPEDE PASS R	1206	882.2		- 2.2	- 8.9	- 5.7	-0.9	7.8	5	-23.3	11	0	30			140	-165	41	15	0	663	1143						6	4	21	7.6	
TATOOSH ISLAND	31	1021.7	1024.7	6.1	2.2	4.2	-1.4	11.1	3	- 5.6	11	0	8	- 0.6	71	73	-202	61	10	0	T	T	8.1	ENE	29.5	NE	30	6	4	21	7.7	38
WALLA WALLA U	289	989.3		1.7	- 5.6	- 1.8	-2.4	15.6	3+	-17.8	11	0	25			24	- 24	11	10	0	140	102	1.8	W#	7.6	N	10	5	7	19	7.5	34
YAKIMA	323	986.5	1027.1	1.7	- 9.4	- 3.8	-1.3	13.3	3	-19.4	11	0	30	-10.0	67	36	- 6	35	3	0	368	356	2.5	WNW	15.6*	NE	28	9	6	16	6.4	
WEST INDIES																																
SAN JUAN P.R.	5	1014.2	1017.2	27.8	20.6	24.3	0.7	30.0	9	17.2	11	0	0	20.0	78	80	- 40	16	24	0	0	0	3.4	ENE	12.1	NE	23	3	22	6	5.8	57
SWAN ISLAND	9	1014.2		28.3	23.9	26.0	5.8	29.4	30+	21.7	4+	0	0			33	- 55	20	8		0	0						12	15	4	4.4	
WEST VIRGINIA																																
CHARLESTON	286	984.1	1020.9	3.9	- 8.3	- 2.3	-4.8	18.3	11	-24.4	24	0	26	- 7.2	69	47	- 63	20	14	2	272	102	2.5	SW	9.4*	WSW	27+	10	5	16	6.1	
ELKINS	600	947.9	1019.7	3.3	-10.6	- 3.4		16.7	11	-28.9	29	0	29	- 7.8	72	42		8	18	0	318	127	2.9	S	17.0*	WNW	24+	9	5	17	6.4	
HUNTINGTON U	252	989.9	1021.3	3.3	- 8.9	- 2.8		18.9	11	-26.1	24	0	27	- 7.2	72	47	- 50	20	13	1	201	152	2.9	S	10.3*	NW	23	9	6	16	6.3	
PARKERSBURG U	187			2.8	- 8.9	- 3.0	-4.4	17.2	11+	-25.6	24	0	27			46	- 39	18	10	1	213	178	2.8		12.1	W	27+					49
WISCONSIN																																
GREEN BAY	208	995.3	1019.5	-10.0	-17.8	-13.9	-5.2	3.9	9	-32.8	23	0	31	-17.8	71	17	- 12	11	12	0	203	203	3.7	WNW	15.6	NW	20	6	6	19	6.9	36
LA CROSSE	199	995.0	1021.7	- 9.4	-18.9	-14.3	-5.7	6.1	8	-35.0	15	0	31	-18.3	67	17	- 13	11	10	0	338	229	4.4	S	15.6*	NW	20	5	6	20	7.3	
MADISON	262	982.5	1020.6	-10.6	-19.4	-14.8	-7.0	2.2	9+	-34.4	15	0	31	-17.8	75	19	- 16	10	9	0	305	178	4.0	SW	13.9	NE	11	6	7	18	6.9	45
MILWAUKEE	205	993.6	1020.4	- 9.4	-16.7	-12.9	-6.6	3.3	8	-31.1	15	0	30	-17.2	68	17	- 30	10	10	0	206	127	5.4	W	15.2	W	20	9	5	17	6.6	48
WYOMING																																
CASPER	1621	835.1	1021.5	- 3.3	-16.7	-10.2	-5.4	10.6	31	-32.8	11	0	30	-16.7	61	10	- 5	3	12	0	269	76	6.9	SW	16.1*	WSW	31+	8	9	14	6.1	
CHEYENNE	1867	809.0	1019.9	- 1.7	-15.0	- 8.5	-5.1	11.1	8	-32.8	11	0	30	-16.1	59	13		3	8	0	226	76	7.6	WNW	25.0	W	20	12	7	12	5.4	67
LANDER	1696	834.4	1023.6	- 6.7	-21.1	-13.9	-6.9	10.6	31	-38.3	12	0	31	-18.3	72	29	17	21	9	0	452	254	2.0	W	25.0	SW	31	9	7	15	6.0	65
SHERIDAN	1202	885.2	1023.3	- 3.3	-18.9	-11.1	-5.1	13.3	7	-37.2	19	0	30	-14.4	71	33	17	6	18	0	607	356	3.8	NW#	24.1	NW	9	5	6	20	7.4	52

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.
* Value entered in column headed "Fastest Mile" is the highest observed wind speed. This station is not equipped with an automatic recording wind instrument.
A Maximum hourly average.
\+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.
B Number of days maximum 21.1°C. or above for Alaskan Stations.
\# Wind direction to 8 compass points only.
Y Peak Gust.
V Sun below horizon January 1-23, inclusive.
X Sun below horizon January 1-17, inclusive.

Data in this table are obtained by conversion from data in the English Units table.

HEATING DEGREE DAYS

(Base 65°F.)

State and station	Current season: This month	Current season: Period July through this month	Normals: July through this month
ALABAMA			
Birmingham	822	1999	1753
Huntsville	905	2311	1922
Mobile	575	1299	1068
Montgomery	715	1786	1468
ALASKA			
Anchorage	1415	6048	6469
Annette	864	3394	3975
Barrow	2299	10416	11028
Barter Island	2349	10134	10796
Bethel	1404	7178	7570
Cold Bay	949	5046	5402
Cordova	1147	5217	5597
Fairbanks	1959	8054	8794
Juneau	1147	4775	5140
King Salmon	1235	6034	6552
Kotzebue	1691	8190	8846
McGrath	1970	8381	8680
Nome	1384	7542	7918
St. Paul	1068	5889	6000
Shemya	936	5049	5300
Yakutat	1048	4837	5124
ARIZONA			
Flagstaff	1218	3781	3887
Phoenix (U)	441	754	
Phoenix	507	924	1050
Prescott	910	2301	2513
Tucson	515	1001	1183
Winslow	1147	2822	2960
Yuma	359	560	611
ARKANSAS			
Ft. Smith	1020	2255	2074
Little Rock	954	2184	2073
Texarkana	848	1829	1610
CALIFORNIA			
Bakersfield	618	1391	1367
Bishop	877	2331	2555
Blue Canyon	762	2362	2791
Burbank	379	855	893
Eureka (U)	579	2522	2573
Fresno	698	1596	1620
Long Beach	327	727	940
Los Angeles (U)	286	685	708
Los Angeles	296	740	1013
Mt. Shasta (R)	918	2933	3169
Oakland	582	1670	1592
Point Arguello (R)	471	2019	1920
Red Bluff	678	1545	1531
Sacramento (U)	679	1563	1468
Sacramento	736	1717	1506
Sandberg (R)	757	1982	2181
San Diego	299	737	742
San Francisco (U)	445	1749	1648
San Francisco	598	1819	1638
San Jose (U)	521	1266	
Santa Maria	477	1637	1554
COLORADO			
Alamosa	1625	4849	5043
Colorado Springs	1331	3445	3632
Denver	1417	3564	3365
Grand Junction	1633	3646	3451
Pueblo	1411	3270	3201
CONNECTICUT			
Bridgeport	1152	3451	3053
Hartford	1277	4136	3528
Middletown	1263	4018	
New Haven	1158	3516	3202
DELAWARE			
Wilmington	1130	3257	2816
DIST. OF COLUMBIA			
Washington (U)	951	2825	
Washington	1034	2855	2474
FLORIDA			
Apalachicola (U)	450	1038	835
Daytona Beach	264	717	534
Fort Myers	110	314	279
Jacksonville	385	1017	798
Key West	11	73	68
Lakeland (U)	209	534	416
Miami	48	194	139
Miami Beach	24	99	96
Orlando	209	566	481
Pensacola (U)	515	1172	930
Tallahassee	491	1261	961
Tampa	212	552	433
West Palm Beach	73	244	158
GEORGIA			
Athens	817	2124	1806
Atlanta	857	2259	1843
Augusta	702	1843	1512
Columbus	702	1811	1515
Macon	675	1727	1375
Rome	917	2454	2070
Savannah	557	1501	1167
Thomasville (U)	502	1254	983
IDAHO			
Boise	1286	3362	3426
Idaho Falls 46W (R)	1663	4736	4907
Idaho Falls 42NW (R)	1735	4964	5125
IDAHO (Cont'd.)			
Lewiston	1259	3324	3278
Pocatello	1454	3933	4063
ILLINOIS			
Cairo (U)	1134	2716	2360
Chicago (Midway)	1600	3898	3457
Chicago (O'Hare)	1655	4182	
Moline	1717	4283	3712
Peoria	1613	4091	3509
Rockford	1725	4361	3920
Springfield	1486	3687	3248
INDIANA			
Evansville	1269	3274	2756
Ft. Wayne	1516	4003	3564
Indianapolis	1406	3733	3293
South Bend	1598	4142	3612
IOWA			
Burlington	1607	3983	3577
Des Moines	1751	4144	3811
Dubuque	1796	4617	4262
Sioux City	1727	4173	4102
Waterloo	1802	4573	4207
KANSAS			
Concordia	1487	3510	3166
Dodge City	1321	3101	2940
Goodland	1458	3570	3517
Topeka	1452	3407	3101
Wichita	1323	3043	2808
KENTUCKY			
Lexington	1183	3195	2750
Louisville	1200	3207	2795
LOUISIANA			
Alexandria	709	1651	
Baton Rouge	555	1200	1056
Lake Charles	586	1210	961
New Orleans (Audubon Park)	366	840	
New Orleans	540	1202	936
Shreveport	785	1628	1400
MAINE			
Caribou	1597	5517	5480
Greenville (U)	1578	5429	
Portland	1277	4323	4129
MARYLAND			
Baltimore (U)	1023	2750	2367
Baltimore	1114	3206	2738
Frederick	1219	3480	2947
MASSACHUSETTS			
Blue Hill Obs. (R)	1202	3802	3464
Boston	1094	3317	3059
Nantucket	1020	3154	3003
Pittsfield	1366	4580	4228
Worcester	1310	4176	3854
MICHIGAN			
Alpena	1697	4976	4417
Detroit (City AP)	1475	3922	3460
Detroit (M. Wayne Co.)	1520	4108	3591
Detroit (Willow Run)	1522	4083	3491
Escanaba (U)	1759	4889	4590
Flint	1602	4433	3889
Grand Rapids	1513	4102	3816
Lansing	1604	4341	3835
Marquette (U)	1728	4932	4522
Muskegon	1482	4028	3803
S. Ste. Marie	1803	5213	5037
MINNESOTA			
Duluth	1989	5731	5599
Internat. Falls	2166	6027	6126
Minneapolis	1927	5005	4886
Rochester	1894	4915	4694
St. Cloud	1955	5100	5116
MISSISSIPPI			
Jackson	752	1732	1428
Meridian	764	1886	1481
Vicksburg (U)	722	1627	1306
MISSOURI			
Columbia	1392	3338	2999
Kansas City	1394	3185	2901
St. Joseph	1495	3592	3270
St. Louis (RFC)	1286	3023	2675
St. Louis	1347	3239	2882
Springfield	1226	3089	2718
MONTANA			
Billings	1586	3856	3976
Butte	1783	5646	
Glasgow	1917	4739	5237
Great Falls	1615	4153	4192
Havre	1808	4638	4953
Helena	1687	4575	4690
Kalispell	1690	4829	5047
Miles City	1784	4390	4463
Missoula	1745	4894	4804
NEBRASKA			
Grand Island	1689	4236	3641
Lincoln (U)	1541	3704	3411
Norfolk	1686	4216	4038
North Platte	1607	4055	3891
Omaha	1590	3810	3670
Omaha N. Omaha AP	1643	4021	3946
Scottsbluff	1552	3884	3878
Valentine	1701	4237	4253
NEVADA			
Elko	1359	4077	4264
Ely	1299	3947	4328
Las Vegas	733	1578	1736
Reno	1134	3475	3520
Tonopah	1091	3069	
Winnemucca	1305	3722	3919
NEW HAMPSHIRE			
Concord	1363	4349	4158
Mt. Washington Obs. (R)	1844	8053	7709
NEW JERSEY			
Atlantic City	1040	3012	2655
Atlantic City (U)	999	2853	
Newark	1091	3115	2856
Trenton (U)	1108	3196	2810
NEW MEXICO			
Albuquerque	1098	2725	2651
Clayton	1218	2955	2966
Raton	1329	3523	3583
Roswell	1020	2566	2578
Silver City	881	2170	
NEW YORK			
Albany	1381	4259	3879
Binghamton	1414	4452	4092
Buffalo	1420	4146	3888
New York (U)	1074	3084	2682
New York (LaGuardia)	1100	3096	2638
Rochester	1412	4099	3687
Schenectady	1328	4077	
Syracuse	1364	4118	3749
NORTH CAROLINA			
Asheville (U)	943	2764	2407
Cape Hatteras (R)	678	1739	1452
Charlotte	851	2376	1917
Greensboro	918	2603	2300
Raleigh	870	2439	2076
Wilmington	675	1824	1432
Winston-Salem	894	2537	2175
NORTH DAKOTA			
Bismarck	1925	4936	5186
Devils Lake (U)	2007	5481	5705
Fargo	1957	5028	5368
Grand Forks CAA	2006	5022	
Pembina	2078	5190	
Williston (U)	1936	4972	5172
OHIO			
Akron	1412	3925	3547
Cincinnati (U)	1167	3002	
Cincinnati	1321	3551	2928
Cincinnati Obs.	1239	3292	2805
Cleveland	1452	3841	3603
Columbus	1334	3911	3149
Columbus (U)	1270	3442	
Dayton	1380	3744	3216
Mansfield	1458	4077	3589
Sandusky (U)	1438	3764	3208
Toledo	1549	4169	3669
Youngstown	1442	4152	3500
OKLAHOMA			
Oklahoma City	1131	2487	2367
Tulsa	1119	2478	2250
OREGON			
Astoria	864	2849	2882
Burns (U)	1224	3839	4000
Eugene	943	2716	2670
Meacham	1344	4422	4294
Medford	1051	2998	2757
Pendleton	1170	3017	3134
Portland (U)	884	2303	2352
Portland	925	2570	2659
Roseburg	936	2513	2518
Salem	964	2822	2634
Sexton Summit (R)	834	3090	3292
PENNSYLVANIA			
Allentown	1266	3742	3297
Erie	1394	3844	3464
Harrisburg	1198	3468	3000
Philadelphia (U)	1021	2930	
Philadelphia	1159	3273	2958
Pittsburgh (U)	1185	3354	2879
Pittsburgh	1354	3928	3397
Reading (U)	1147	3287	2848
Scranton	1289	4023	3683
Williamsport	1288	3904	3407
RHODE ISLAND			
Block Island	1073	3237	2886
Providence	1115	3524	3277
SOUTH CAROLINA			
Charleston (U)	538	1414	1112
Charleston	604	1643	1283
Columbia	726	1883	1576
Florence	714	1895	1497
Greenville-Spartanburg	774		
SOUTH DAKOTA			
Huron	1860	4747	4621
Pierre	1718	4197	
Rapid City	1634	4005	4082
Sioux Falls	1809	4505	4551
TENNESSEE			
Bristol	1062	2947	2552
Chattanooga	998	2510	2106
Knoxville	973	2570	2193
Memphis (U)	898	2168	1868
Memphis	944	2273	1954
Nashville	1050	2677	2193
Oak Ridge	1042	2792	2312
TEXAS			
Abilene	805	1736	1693
Amarillo	1114	2545	2540
Austin	657	1278	1112
Brownsville	292	488	420
Corpus Christi	466	829	631
Dallas	821	1660	1508
Del Rio (U)	559	1061	
El Paso	753	1759	1723
Ft. Worth	839	1710	1539
Galveston (U)	494	908	758
Galveston	524	958	789
Houston (U)	497	913	816
Houston	515	993	835
Laredo	427	733	589
Lubbock	988	2269	2249
Midland	773	1743	1711
Port Arthur	573	1173	991
San Angelo	711	1512	1428
San Antonio	575	1141	1029
Victoria	538	989	770
Waco	741	1469	1305
Wichita Falls	914	1876	1672
UTAH			
Milford	1305	3646	3802
Salt Lake City	1403	3627	3443
Wendover	1365	3590	3511
VERMONT			
Burlington	1491	4866	4337
VIRGINIA			
Lynchburg	979	2842	2485
Norfolk	859	2347	1980
Richmond	897	2562	2332
Roanoke	989	2879	2488
WASHINGTON			
Olympia	984	3159	2982
Seattle (U)	848	2392	2493
Seattle	874	2586	2823
Seattle-Tacoma	959	2937	2958
Spokane	1411	4011	3972
Stampede Pass (R)	1333	5146	5131
Tatoosh Island (R)	782	3169	3172
Walla Walla	1158	2964	
Walla Walla (U)	1115	2826	2907
Yakima	1227	3503	3636
WEST VIRGINIA			
Charleston	1144	3247	2594
Huntington (U)	1170	3271	2478
Parkersburg (U)	1183	3318	2777
WISCONSIN			
Green Bay	1799	4736	4604
La Crosse	1819	4595	4388
Madison	1850	4810	4384
Milwaukee	1749	4563	4239
WYOMING			
Casper	1590	4092	4139
Cheyenne	1492	3983	4033
Lander	1800	4442	4520
Sheridan	1639	4283	4317

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

JANUARY 1963

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				ø ALL OTHER			
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE	
								PROP-ERTY	CROPS			PROP-ERTY	CROPS			PROP-ERTY	CROPS			PROP-ERTY	CROPS			PROP-ERTY	CROPS			PROP-ERTY	CROPS
Alabama	2	2	0	0	5					1	0	5	4	0	6	0	0									3	0	6	6
Alaska *																													
Arizona																										0	0	4	6
Arkansas *																													
California										0	8	5	0													2	0	6	6
Colorado										0	F	6	0													2	M	4	0
Connecticut *																													
Delaware *																													
Florida *																													
Georgia	9	3	1	8	6					0	0	4	0									0	0	4	0	0	0	4	4
Hawaii										0	9	6	6																
Idaho																											20		
Illinois *																													
Indiana	1	1	0	0	4	0	0	3	0																				
Iowa *																													
Kansas *																													
Kentucky										0	0	4	0					?	?	0	0					0	0	5	6
Louisiana	1	1	0	3	4					2	0	?	0	0	1	?	0					0	?	?	0	4	?	?	?
Maine																		0	0	4	0	0	0	4	0	0	0	5	0
Maryland										0	0	4	0	0	0	5	0												
Massachusetts										0	0	4	0					0	0	4	0	0	0	4	0				
Michigan *																													
Minnesota *																													
Mississippi										0	1	?	?									2	?	?	0	4	?	?	?
Missouri						0	0	3	0									0	0	5	0	1	25	4	0				
Montana *																													
Nebraska																		0	0	4	0								
Nevada *																													
New Hampshire																		0	0	4	0	0	0	3	0	0	0	3	0
New Jersey *																													
New Mexico										0	0	4	0																
New York																				6				5					
North Carolina	1	1	0	0	4					3	0	5	0	0	0	3	0					4	60	5	0	4	0	4	0
North Dakota *																													
Ohio *																													
Oklahoma																										2	0	5	0
Oregon										0	0	4	2									1	M	4	3				
Pacific Area *																													
Pennsylvania *																													
Puerto Rico *																													
Rhode Island *																													
South Carolina										0	0	5	0									1	3	0	0				
South Dakota *																													
Tennessee	1	1	0	4	6					0	1	4	0					0	?	0	0	0	?	0	0	0	?	6	?
Texas										0	2	4	0																
Utah *																													
Vermont																		0	0	4	0	0	0	4	0				
U.S. Virgin Is. *																													
Virginia *																													
Washington *																													
West Virginia *																													
Wisconsin *																													
Wyoming										0	0	5	0																

* No occurrence of storms or unusual weather phenomena.
‡ *Includes heavy sleet storm.*
\# Freezing drizzle and freezing rain, commonly known as glaze.
ø For breakdown of "All Others", and for detailed listing of other storms, see the U. S. Weather Bureau monthly publication STORM DATA.
F Few
M Many

† Storm damages are placed in categories varying from 1 to 9 as follows:
1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5,000,000
7 $5,000,000 to $50,000,000
8 $50,000,000 to $500,000,000
9 $500,000,000 to $5,000,000,000

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

JANUARY 1963

The record-breaking drought in California was ended abruptly on January 29 when a violent storm hit the central part of the State. Precipitation ranged from less than half an inch in Los Angeles to more than 27 inches in the Sierra National Forest. Several mountain stations reported storm totals in excess of those in the big floods of 1950 and 1955. Many highways and railroads were blocked by flood waters and mud slides. Record-breaking stages occurred at many gaging stations in the northern Sierras. These floods continued into February. Flooding reported elsewhere was mostly minor.

ST. LAWRENCE DRAINAGE

Lake Erie. --Prolonged cold weather in the Lake Erie Drainage had frozen the ground to a depth of around 48 inches by the end of January. The snow on the ground averaged from 5 to 8 inches over the watershed with a water equivalent of 0.60 to 0.90 inch. This is the eighth consecutive month with the precipitation total below normal.

ATLANTIC SLOPE DRAINAGE

The snow cover in the Lehigh River Basin on January 31 averaged 14 inches above Blue Mountain and ranged from 11 inches at Walnutport, Pa., to 5 inches at Allentown, Pa. In the Lackawaxen River Basin the snow cover ranged from 17 inches at Pleasant Mount to 9 inches at Hawley, Pa.

The snow cover over central and southern New Jersey at the end of the month ranged from 2 to 4 inches and over northern New Jersey, from 6 to over 10 inches. The ice was thick on all streams.

Rainfall on the 12th caused sufficient runoff and movement of ice on the West Branch of the Juniata in Pennsylvania to cause minor local flooding from ice jams in the Amity Hall area. Streams remained frozen over throughout the remainder of the month, with ice thickness ranging from 10 to over 15 inches. Snow cover at the end of the month averaged 11 inches over the basin, with an average density of approximately 22 percent.

Moderate rises began in the upper James Basin on the 12th and increased to near bankfull stage below Scottsville, Va., on the 13th and 14th. The only station to exceed flood stage was Richmond, Va., at the Westham Bridge site. The runoff which caused this rise came entirely from snowmelt in the upper James and upper Rivanna Basins. Precipitation was negligible. A warming temperature trend began about the 9th, which brought daytime temperatures to the upper 40's and low 50's on the 11th and 12th. No damage resulted.

The minor flooding on the Tar, Neuse, and Cape Fear Rivers in eastern North Carolina was due to rainfall averaging 2.5 inches from the 18th to the 20th. No damage was reported.

Minor flooding occurred on streams in the Pee Dee Basin in South Carolina between the 20th and the 30th. This flooding was due to rainfall that began on the afternoon of the 17th and continued through the early morning of the 21st. Accumulated amounts accounted for about two-thirds of the January totals, with 3 to 5.5 inches over the middle and lower portions. The Rocky River at Norwood, N. C., was out of its banks for 2 days, cresting on the 20th, 4 feet above flood stage. The upper Pee Dee River at Cheraw, S. C., crested close to flood stage on the 22d. Downstream at Peedee, S. C., this stream was out of its banks on 9 days, cresting on the 26th about 2.5 feet over the low banks. The Lynches River at Effingham, S. C., was in flood from the 26th to the 28th and crested about 1 foot over flood stage on the 27th.

Rains over the upper reaches of the Santee System in South Carolina from the 18th through the 21st caused flooding along the Saluda and Broad Rivers beginning on the 20th. Rainfall amounts ranged up to 4 inches. Due to the nature of the flood plains along the Saluda and the Broad, flooding and damage were not extensive. There was considerable lowland flooding along the Congaree and the Wateree with considerable damage to pastures and some interruption of lumbering operations.

Shallow flooding occurred on the North Fork of the Edisto River at Orangeburg, S. C., from the 20th to the 26th. Flooding along the main stem of the Edisto began at Givhans, S. C., on the 23d and was still in progress at the end of the month. No damage or loss resulted from these minor floods, but some inconvenience was experienced along the entire Edisto with low camp sites and approach roads flooded.

The flooding on streams in Georgia was due to heavy rainfall from the 18th to the 25th. Rainfall amounts ranging up to near 2.5 inches in a few places were reported throughout the watershed of the Savannah and Ogeechee Rivers during that period. In the Ocmulgee, Oconee, and Altamaha River Basins, the rainfall averaged 5.7 inches per station. The heaviest amount reported was 8.78 inches at Juliette. Most of the rain fell in the periods from the 12th to the 13th and from the 18th to the 21st. There wasn't any report of any serious flood damage from the high water.

EAST GULF OF MEXICO DRAINAGE

Heavy rain during the period from the 17th to the 20th caused flooding on the Flint River at Albany, Ga., and on the Apalachicola River at Blountstown, Fla. Rainfall during that period ranged from less than 3 inches over the Apalachicola to 6 inches over the other basins. Little or no damage resulted along the Flint River at Albany, Ga., as commercial buildings in low-lying areas are protected by dikes up to 25 feet. No damage occurred along the Apalachicola River at Blountstown, Fla., as the inundated portions were exclusively forest or lumbering areas. However, some work interruptions were caused during the period of high water to lumbering interests, though no real losses from idle labor occurred as they were transferred for work on higher ground.

Minor flooding occurred on the Pearl River at Monticello, Miss., and Bogalusa, La., between the 20th and 26th, due to moderate precipitation between the 18th and 21st. The high water was due mainly to local runoff and flood stages were only momentary and caused no damage.

MISSISSIPPI SYSTEM

Upper Mississippi Basin. --Precipitation was below to much below normal ranging from 1/4 inch in northern Minnesota to 1/2 to 3/4 inch in northeast Iowa and Wisconsin. The observed precipitation was only 40 to 60 percent of normal. January's temperatures averaged from 6° to 13° below normal, with most of the area having

daily minimum temperatures 0°F or colder from January 11 through the 31st. On numerous days temperatures were recorded as low as -30°F to -47°F in parts of the basin. Snowfall was light but what fell was heaviest on the 11-12th, just as the extended cold set in, and helped prevent frost from going deeper than it did.

A comparison of snow depths in the Upper Mississippi Basin on January 31 with that of other years is given in the following table:

COMPARATIVE SNOW DEPTHS (INCHES)

Station	1963	1962	1961	1960	1959	1958	1957	1956	1955
(Minnesota)									
Bemidji	2	13	4	8	8	5	11	26	8
International Falls	4	16	11	8	20	8	11	22	15
Duluth	6	15	9	16	11	11	14	29	17
Alexandria	2	9	0	5	0	5	2	16	6
New Ulm	4	2	T	1	2	3	T	6	4
Minneapolis	4	6	2	2	0	2	2	11	6
Rochester	6	3	T	2	3	2	1	10	3
(Wisconsin)									
Park Falls	10	19	2	14	12	12	13	21	17
Wausau	6	9	T	4	6	5	7	12	--
Portage	9	7	1	2	10	4	4	2	--

Floating ice appeared on the Mississippi at Cape Girardeau, Mo., on the 15th. It became gorged on the 26th above and below that point. There was floating ice in the Mississippi at Cairo, Ill., from the 14th until it became gorged on the 23d at Angelo Towhead about 4 miles above Cairo Point. This gorge remained intact until February 7 and at one time extended upstream to slightly below Cape Girardeau, Mo. Boats were unable to penetrate this gorge and about 400 barges remained tied up in the Cairo Harbor. On February 7 the gorge broke and a large portion of ice moved out, but another gorge formed about 14 miles above Cairo Point on the night of February 7 and continued until the afternoon of February 9, when it broke and moved out. Navigation was resumed on February 10.

Missouri Basin.--River drainages in South Dakota were covered with snow to depths varying from 2 to 6 inches. The heavier snow cover was in eastern South Dakota and western Iowa and extended over most of the Big Sioux Drainage. All streams were frozen over.

Monthly precipitation totals in the Kansas and Marais Des Cygnes River Basins in Kansas during January ranged from 1/2 to 3/4 inch. Snowfall was well distributed and ranged from 4 to 8 inches. Ice conditions became widespread about the 10th, with most streams becoming frozen. Ice depths of 12 to 14 inches were reported on the Kansas River at Wamego and Topeka, Kans., near the end of the month and from 4 to 5 inches on ponds and streams in north-central Kansas. Soil was generally frozen to depths of 18 to 20 inches at the close of the period.

The Missouri River at Nebraska City, Nebr., and small streams in northwestern Missouri were frozen over most of the month. Variable ice cover was reported by downstream stations on the Missouri.

Ohio Basin.--Severely cold weather during the last half of the month caused most of the tributaries and the Ohio River above Gallipolis Dam, W. Va., to freeze over. Record-low temperatures spread over virtually all of the Ohio watershed late on the 23d, with minimum temperature readings of -20° or below common over most of the watershed by the morning of the 24th. Shore ice started forming on the pools in the Ohio River by the 24th, with enough ice to begin to impede navigation by the 26th. Most dams showed solid cover of layered running ice, average depth of 3 inches, by the morning of the 28th. As additional ice accumulated, the ice became layered, with navigation suspended except for local trips behind improvised ice cutters. The ice on the Ohio seriously interfered with the operation of locks and dams and with navigation, especially above the mouth of the Tennessee River.

Red Basin.--Minor flooding occurred on the Sulphur River at Naples, Tex., from the 10th to the 13th. The rains that produced this flood fell during the 4-5th, with an average of about 1.2 inches. The largest 24-hour total reported was 1.65 inches at Cooper, Tex. Little or no damage is known to have occurred.

WEST GULF OF MEXICO DRAINAGE

The Minor flooding on the Calcasieu River at Hineston, La., in the beginning of the month was due to heavy rains on December 28 and 29. General rains from the 17th through the 20th caused another rise on the Calcasieu to within 1 foot of flood stage by the 23d at Hineston in the extreme upper portion. Downstream at Oakdale, it rose 4 feet to 0.8 foot above bankfull by the 21st. Further downstream at Kinder, La., it rose 13 feet between the 17th and 22d to exactly flood stage.

Great Basin.--The heavy storm of January 31 - February 1 resulted in minor flooding in streams in Utah and Nevada. Precipitation at Deer Creek Dam, Utah, reported 24-hour and 48-hour precipitation amounts which exceeded all previous 24- and 48-hour amounts for any month of the year for Utah. The 24-hour amount was 5.08 and the 48-hour amount was 8.88 inches. The depth of frost in the Salt Lake Valley exceeded 20 inches. This was less than a year ago, but the major difference was in the moisture content of the ground before the freezing

occurred. The most extensive damage from the flooding was in Utah County, where raging waters cut Provo City water lines in the South Fork of Provo Canyon above Vivian Park.

In Nevada, the Truckee, Susan, Carson, and Walker Rivers rose to flood stage near midnight on January 31, so most of the flooding occurred during February. There was extensive damage in the downtown sections of Reno and considerable damage in many residential sections. The Truckee River cut Derby Dam about 20 miles downstream from Reno, and took out the approach to the Southern Pacific Railroad Bridge about 25 miles downstream from Reno. The Susan River caused damage to U. S. Highway 395 in the vicinity of Susanville, Calif. Piute Creek in Susanville caused some flooding in the town of Susanville. Flooding along the Carson and Walker Rivers was confined mostly to agricultural lands. The Carson River caused some damage to the approaches to the Cradlebaugh Bridge on U. S. 395 between Carson City and Minden, Nevada.

PACIFIC SLOPE DRAINAGE

California Coast Drainage Basins.--A 23-mile stretch along the North Fork of the Kern River in California above Isabella Dam was subject to flooding on January 31 and February 1. Several levies along the river banks were broken, allowing the waters to flow into those areas which were situated below the high water level of the Kern River. Heavy rains on the 30th and 31st caused two peak inflows into the dam. One was estimated at 28,000 c.f.s. at 7 p.m. on the 31st and the second estimated 30,000 c.f.s. at 11:00 a.m. on the 1st of February. Rainfall was unusually heavy in spots with Johnsondale, Calif., receiving 14.67 inches during the storm and Kern River Intake No. 3, 9.02 inches, with lesser amounts further down the Canyon. Considerable damage resulted to roads, a diversion dam, and state fish hatchery tanks. The water and debris spread over the golf course into low-lying trailer parks and into a few houses situated directly on the river bank in the Kernville, Calif., area.

Heavy rains in the Sierras to high elevations during the period January 30 through February 1 caused flooding along the Merced, Chowchilla, Fresno, and Kaweah Rivers in California. Several mountain stations reported storm totals in excess of those in the big floods of 1950 and 1955. Incomplete storm totals showed that Westfall Ranger Station, in the Sierra National Forest, received 27.15 inches of precipitation, South Entrance 22.93, Giant Forest 21.34, Crane Valley 18.84, Jerseydale 18.75, Grant Grove 17.17, Balch Power House 13.68, and Ash Mountain 11.95 inches. The rain extended at least to the 8,000-foot level during most of the storm. Antecedent conditions over the mountains, however, were entirely different from the 1950 and 1955 floods, as the slopes were completely dry with no snow before the arrival of this storm; consequently, the runoff was considerably less than in the record floods. An estimate of flood damage for the area from the Merced River to the Tule River is about $50,000.

The second longest midwinter drought period in the central valley and coastal areas of California ended abruptly by the heavy rains during the last several days of the month. Little or no rain had fallen during the prolonged record-breaking drought of 42 days. The heavy rains began during the afternoon of January 29 and ended by the morning of February 2. The rainfall amounts were heavy and ranged from 7 to 10 inches in the Russian Basin, 6 to 10 inches in the Napa Basin, 3 to 8 inches in the Pajara Basin, and 2 1/2 to 8 inches in the Salinas Basin. The Indian Guard Station in the Santa Lucia Range in the Salinas River Basin and Boulder Creek reported 22 inches or more. Sacramento set a new 24-hour record with 1.70 inches during the 24-hour period on the 30th. By the month's end all streams in the Sacramento area were rising, but no flood stages were reached. Overflow occurred at all Sacramento Flood Control Project Weirs and a record-breaking flow down the Yuba River during the first part of February. The heavy rains and resulting runoffs caused quite a number of minor streams and creeks and two of the four major rivers in the coastal areas to overflow their banks. The smaller streams caused minor lowland flooding in portions of the towns of Santa Cruz, San Jose, Gilroy, Morgan Hill, Ben Lomond, Ross, and Alviso. Evacuation of some homes was made necessary by the floods. The two major rivers which overflowed were the Russian River at Guerneville and the Napa River at Napa. Damage along the Russian River was minor and chiefly to roads and resort buildings along the banks of the river and tributary creeks in Guerneville and surrounding area. About 40 homes along the Napa River were evacuated. Some agricultural lowlands from Napa northward to near St. Helena were inundated and several bridges were temporarily closed.

Columbia Basin.--Moderate to heavy rain with warming temperatures on the 31st, following 3 to 6 inches of snow on the 29th and 30th, throughout the valleys of southern Idaho over well-frozen ground and streams set the stage for rapid runoff and the flooding that began on the 31st in many local areas. Upper Portneuf River flooded in Caribou County and eastern Bannock County. Bancroft was inundated by 3 to 5 feet of water and residents evacuated their houses during the night. McCammon and Lava Hot Springs on the Portneuf were flooded during the night of the 31st. Sucker Creek, just across the line in Oregon, flowing out of the Mahogany Mountains, flooded during the night of the 31st. A highway bridge was washed out morooning a 7-member family.

Light precipitation and cold temperatures combined to keep streams in the lower Columbia Basin at very low levels. The Yakima River and many smaller streams became frozen over in various parts of their reaches by the end of the month. The mean January stage of the Willamette River at Portland was 3.5 feet or 2.6 feet below the 84-year normal.

FLOOD STAGE DATA

(All dates in January unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest*	
		From—	To—	Stage	Date
ATLANTIC SLOPE DRAINAGE	Ft.			Ft.	
James: Richmond, Va. (Westham)	12	14	15	12.1	14
Tar: Greenville, N. C.	13	25	27	13.3	26
Neuse: Neuse, N. C.	14	22	22	14.3	22
Smithfield, N. C.	13	21	25	17.7	22
Goldsboro, N. C.	14	21	30	19.4	27
Kinston, N. C.	14	23	1/	16.9	29
Cape Fear: Fayetteville, N. C.	35	22	22	35.1	22
Lock No. 2, Elizabethtown, N. C.	20	21	25	28.3	23
Rocky: Norwood, N. C.	16	20	21	E20.0	20
Lynches: Effingham, S. C.	14	26	28	E15.1	27
PeeDee: Peedee, S. C.	19	22	30	E21.3	26
Saluda: Pelzer, S. C.	6	20	21	7.0	21
Broad: Blair, S. C.	14	20	22	17.9	21
North Fork Edisto: Orangeburg, S.C.	8	20	26	E 9.2	22
Edisto: Givhans, S. C.	10	23	1/	E11.8	29
Savannah: Clyo, Ga.	11	25	31	13.4	31
Ogeechee: Midville, Ga.	6	24	27	7.35	25
Dover, Ga.	7	27	31	8.8	30
Ocmulgee: Macon, Ga.	18	20	22	22.6	21
Hawkinsville, Ga.	25	24	25	26.1	25
Abbeville, Ga.	12	25	31	15.8	27
Lumber City, Ga.	15	31	31	15.2	31

River and station	Flood stage	Above flood stages -dates		Crest*	
		From—	To—	Stage	Date
ATLANTIC SLOPE DRAINAGE (Cont'd.)	Ft.			Ft.	
Oconee: Milledgeville, Ga.	20	21 24	22 24	30.1 20.6	21 24
Dublin, Ga.	21	24	27	23.0	25
Mount Vernon, Ga.	16	26	31	18.4	28,29
Altamaha: Charlotte, Ga.	15	29	31	18.4	31
EAST GULF OF MEXICO DRAINAGE					
Flint: Albany, Ga.	20	26	28	22.0	27
Apalachicola: Blountstown, Fla.	15	21	31	20.5	25
Choctawatchee: Caryville, Fla.	12	23	25	13.0	24
Cahaba: Centreville, Ala.	23	20	21	23.9	20
Pearl: Monticello, Miss.	19	20	22	20.7	21
Bogalusa, La.	15	21	26	18.2	24
MISSISSIPPI SYSTEM					
Red Basin					
Sulphur: Naples, Tex.	22	10	13	23.5	11
WEST GULF OF MEXICO DRAINAGE					
Calcasieu: Hineston, La.	12	Dec. 31	3	13.05	1
Kinder, La.	16	22	22	16.0	22
PACIFIC SLOPE DRAINAGE					
Russian: Guerneville, Calif.	29	31	Feb. 2	40.5	Feb. 1
Healdsburg, Calif.	19	31	Feb. 1	20.0	Feb. 1

*Provisional
E Estimated
1/ Continued at end of month

RAWINSONDE DATA

Average monthly values

JANUARY 1963

Standard pressure surface (mb.)	ALBANY, N. Y. 1007 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	ALBUQUERQUE, N. MEX. 838 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	AMARILLO, TEXAS 892 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	86	- 9.1	75	249	2.1	31	1,619	- 5.3	65	347	2.1	31	1,095	- 7.8	59	294	4.3
1000	31	141			257	3.5	31	212					31	192				
950	31	541	- 8.0	66	274	7.2	31	620					31	597				
900	31	959	- 9.7	70	283	13.2	31	1,052					31	1,025				
850	31	1,400	-10.8	72	275	16.7	31	1,510					31	1,470	- 1.8	39	293	12.8
800	31	1,867	-10.8	63	267	22.5	31	1,991	- 2.4	43	295	9.1	31	1,953	- .9	35	297	16.7
750	31	2,364	-11.8	53	265	28.0	31	2,500	- 3.9	44	290	15.5	31	2,465	- 1.6	34	287	16.7
700	31	2,890	-13.5	51	262	32.3	31	3,045	- 5.7	41	294	20.8	31	3,015	- 4.0	31	285	21.6
650	31	3,451	-16.1	50	261	36.1	31	3,620	- 8.5	40	286	25.1	31	3,592	- 7.0		282	25.6
600	31	4,050	-19.7	51	259	39.2	31	4,240	-11.8	37	284	29.9	31	4,216	-10.5		278	29.5
550	31	4,689	-23.7	51	259	42.2	31	4,896	-15.6		282	33.0	31	4,875	-14.7		277	33.6
500	31	5,382	-28.2	48	259	46.4	31	5,615	-19.9		284	35.2	31	5,596	-19.6		277	35.6
450	31	6,124	-33.0	43	250	52.3	30	6,378	-25.5		279	36.7	31	6,361	-25.2		275	38.3
400	31	6,950	-38.4		262	57.9	30	7,232	-31.5		283	37.5	31	7,215	-31.6		274	42.2
350	31	7,857	-44.4		263	60.6	30	8,164	-38.3		284	38.7	31	8,146	-38.5		273	46.2
300	31	8,877	-50.4		265	62.4	30	9,208	-45.8		278	46.6	31	9,188	-46.1		274	51.3
250	30	10,055	-55.7		267	60.6	30	10,399	-54.0		275	56.9	31	10,377	-54.2		275	57.5
200	29	11,471	-56.4		268	57.1	30	11,818	-58.5		274	63.7	29	11,796	-58.9		274	64.3
175	29	12,321	-55.1		269	55.6	30	12,651	-59.3		273	66.5	28	12,639	-59.7		274	64.1
150	29	13,306	-55.3		266	51.5	30	13,614	-60.7		274	62.2	28	13,604	-60.3		274	64.7
125	29	14,467	-56.5		264	49.2	30	14,745	-62.6		275	56.7	27	14,737	-62.8		273	61.4
100	29	15,881	-57.1		262	49.2	30	16,110	-65.9		275	53.4	26	16,104	-64.8		274	59.5
80	29	17,293	-56.5		260	42.9	30	17,465	-65.8		278	47.4	26	17,464	-65.1		273	58.1
70	29	18,147	-55.3		259	44.3	30	18,279	-64.8		279	41.8	25	18,282	-64.4		274	56.0
60	29	19,126	-45.1		259	43.1	30	19,223	-63.0		279	35.6	22	19,222	-62.7		277	52.8
50	29	20,296	-53.6		253	40.0	27	20,355	-60.5		279	29.7	20	20,357	-60.8		277	48.6
40	28	21,734	-51.4		254	41.8	24	21,750	-58.2		271	30.7	19	21,762	-57.4		275	48.6
30	27	23,613	-48.4		252	45.1	22	23,581	-54.5		269	42.7	18	23,600	-53.1		274	49.2
25	25	24,808	-46.6		251	47.8	21	24,751	-52.3		264	47.0	17	24,778	-51.2		273	48.8
20	23	26,294	-44.7		256	51.5	19	26,198	-51.5		259	56.7	16	26,222	-51.1		272	49.0
15	17	28,211	-41.5				13	28,008	-50.8				9	28,071	-50.8			
10	5	31,153	-35.1															

Standard pressure surface (mb.)	ANCHORAGE, ALASKA 1017 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	ANNETTE, ALASKA 1019 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	29	- 7.2	78		.0	31	37	2.2	81	126	1.4
1000	31	158			11	3.5	31	191	1.7	76		.0
950	31	564	- 2.6	66	41	2.7	31	601	- .4	73	265	4.1
900	31	992	- 2.9	61	118	2.9	31	1,035	- 1.6	68	282	8.5
850	31	1,444	- 3.8	57	163	5.1	31	1,490	- 3.0	65	296	13.0
800	31	1,922	- 5.2	56	196	8.0	31	1,970	- 4.6	62	293	16.9
750	31	2,426	- 7.4	56	209	10.9	31	2,474	- 6.8	57	299	20.2
700	31	2,962	- 9.7	50	218	12.4	31	3,012	- 9.4	54	305	23.1
650	31	3,526	-12.7	46	227	13.2	31	3,576	-12.2	52	308	25.6
600	31	4,138	-16.2	45	231	15.3	31	4,191	-15.7	49	313	31.5
550	31	4,782	-20.2	44	236	15.3	31	4,837	-19.7	47	313	35.9
500	31	5,488	-24.7	42	245	15.0	31	5,545	-24.4	44	315	41.0
450	31	6,237	-29.0		246	22.3	31	6,300	-29.5	40	317	42.9
400	31	7,076	-35.0	42	240	27.2	31	7,137	-35.5	40	322	50.7
350	31	7,991	-42.4		244	31.9	31	8,053	-42.4		321	54.2
300	31	9,017	-49.7		248	36.5	31	9,077	-50.4		322	62.2
250	31	10,191	-56.6		248	37.1	31	10,243	-58.6		325	65.5
200	31	11,585	-62.6		254	37.9	29	11,616	-64.6		329	67.6
175	31	12,407	-63.3		262	35.9	28	12,426	-65.2		326	62.4
150	30	13,355	-61.1		274	34.8	28	13,366	-64.6		328	60.0
125	30	14,486	-61.7		279	36.5	28	14,480	-64.6		327	57.5
100	30	15,863	-63.0		284	38.5	28	15,837	-66.1		327	52.5
80	30	17,230	-64.7		294	46.2	26	17,182	-68.5		321	54.4
70	30	18,045	-65.6		295	44.9	25	17,986	-69.3		320	53.6
60	30	18,977	-66.8		302	47.0	23	18,901	-69.7		319	59.3
50	29	20,084	-67.1		311	48.2	21	19,988	-70.7		319	60.4
40	29	21,447	-67.1		321	51.9	15	21,328	-70.3			
30	15	23,193	-65.0		333	57.1	11	23,052	-69.4			
25	13	24,330	-62.1		347	52.5	7	24,148	-65.5			
20	11	25,773	-59.4				5	25,539	-57.1			
15	7	27,643	-54.4									
10												

Standard pressure surface (mb.)	ATHENS, GA. 992 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	BARROW, ALASKA 1026 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	BARTER IS., ALASKA 1026 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	246	- .4	82	317	3.5	31	8	-22.9	63	92	5.2	31	15	-23.5	58	113	1.4
1000	31	176					31	195	-21.1	64	113	6.2	31	201	-21.8	60	110	3.1
950	31	594	2.9	62	269	5.2	31	583	-14.9	62	122	5.4	31	587	-16.8	59	260	2.9
900	31	1,028	2.9	59	272	12.0	31	990	-13.0	61	169	1.0	31	990	-15.5	60	280	8.0
850	31	1,491	2.0	53	278	15.9	31	1,425	-13.4	57	269	2.7	31	1,422	-15.7	59	289	12.8
800	31	1,980	.6	50	270	19.8	31	1,886	-14.4	55	284	5.8	31	1,879	-16.5	56	297	14.2
750	31	2,499	- 1.2	47	269	26.6	31	2,375	-16.4	54	281	10.1	31	2,365	-17.8	51	308	17.1
700	31	3,045	- 3.5	44	268	30.7	31	2,891	-18.7	50	282	13.8	31	2,878	-19.9	48	313	18.1
650	31	3,625	- 6.3	36	265	37.5	31	3,439	-21.3	44	280	18.1	31	3,422	-22.6	44	313	22.7
600	31	4,250	- 9.6		264	46.8	31	4,029	-24.3	42	280	21.8	31	4,009	-25.6	45	311	27.6
550	31	4,913	-13.4		264	50.7	31	4,656	-28.1	40	281	24.5	31	4,632	-29.3		312	31.9
500	31	5,637	-17.8		263	55.0	31	5,337	-32.4		286	28.8	31	5,311	-33.6		311	37.3
450	30	6,410	-23.4		264	61.8	31	6,068	-37.4		288	35.6	31	6,036	-38.6		313	45.3
400	30	7,268	-29.7		262	71.3	31	6,878	-43.0		288	41.0	31	6,843	-44.2		306	42.7
350	30	8,207	-36.8		262	79.5	31	7,765	-49.3		286	45.5	31	7,728	-49.7		303	47.0
300	30	9,257	-44.6		262	88.8	31	8,760	-55.5		285	50.5	31	8,724	-55.5		302	60.4
250	30	10,454	-53.2		265	98.1	31	9,907	-60.9		284	56.7	31	9,871	-60.9		300	61.4
200	30	11,868	-59.3		263	89.6	31	11,285	-63.5		284	54.0	31	11,247	-63.5		297	56.2
175	30	12,704	-59.7		266	92.9	31	12,105	-62.9		285	53.6	30	12,065	-63.9		297	57.1
150	30	13,665	-61.1		267	84.9	29	13,036	-63.4		287	50.1	30	13,008	-64.5		297	58.1
125	28	14,787	-63.2		268	76.0	29	14,154	-64.1		288	51.3	30	14,118	-66.0		301	62.6
100	28	16,153	-64.9		267	63.5	28	15,514	-65.5		292	57.3	29	15,464	-68.2		301	64.9
80	26	17,517	-64.7		267	51.9	23	16,884	-67.1		298	54.8	27	16,818	-69.6		302	68.6
70	25	18,343	-62.7		254	42.2	22	17,705	-67.6		303	57.9	25	17,593	-70.6		303	68.2
60	25	19,289	-60.8		264	32.6	16	18,681	-67.4		310	63.0	22	18,542	-70.6		305	72.3
50	25	20,430	-58.1		262	27.2	13	19,854	-66.7		318	70.5	17	19,667	-70.4			
40	25	21,847	-55.2		259	21.2	11	21,232	-65.5		325	76.9	11	21,112	-65.1			
30	25	23,697	-51.9		251	13.4	6	23,250	-55.0				7	23,055	-56.7			
25	24	24,888	-49.8		242	9.5	6	24,422	-52.1				5	24,290	-48.0			
20	21	26,363	-47.6		246	10.5												
15	13	28,273	-46.7															
10																		

Standard pressure surface (mb.)	BETHEL, ALASKA 1010 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	BISMARCK, N. DAK. 959 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	39	- 7.3	77	54	5.6	31	505	-18.4	62	305	4.5
1000	31	116	- 4.4	72	71	8.5	31	189				
950	31	522	- 2.2	64	118	13.6	31	575			306	8.4
900	31	953	- 3.0	61	138	12.0	31	979	-15.9	54	315	21.0
850	31	1,405	- 3.8	60	152	10.9	31	1,411	-15.4	52	315	25.1
800	31	1,882	- 5.6	57	157	9.9	31	1,869	-16.0	49	313	26.6
750	31	2,384	- 7.9	53	159	11.1	31	2,351	-17.6	47	309	29.1
700	31	2,921	-10.6	50	164	12.2	31	2,869	-19.8	44	306	31.9
650	31	3,482	-13.9	48	167	12.8	31	3,412	-22.2	44	305	36.3
600	31	4,091	-17.8	45	171	15.2	31	4,002	-24.7	42	302	44.1
550	31	4,733	-21.7	47	180	13.4	31	4,625	-27.8	40	301	47.2
500	31	5,434	-26.2	46	185	16.3	31	5,312	-32.3		300	50.5
450	31	6,181	-31.5	44	186	17.1	31	6,042	-37.2		296	52.7
400	31	7,012	-37.3		194	18.3	31	6,854	-42.9		292	58.1
350	31	7,922	-43.3		205	19.2	31	7,744	-48.8		290	61.8
300	31	8,946	-49.3		220	21.0	31	8,744	-54.1		291	63.0
250	31	10,125	-55.0		211	31.3	31	9,903	-57.6		291	69.8
200	31	11,536	-58.4		220	29.3	31	11,307	-58.9		285	67.6
175	31	12,376	-58.2		233	24.9	30	12,152	-58.6		284	66.8
150	31	13,348	-57.3		244	25.5	29	13,124	-58.7		282	66.3
125	31	14,500	-57.7		255	25.3	28	14,275	-59.8		281	62.0
100	31	15,903	-59.0		266	29.1	27	15,668	-61.0		281	64.9
80	31	17,297	-60.5		278	30.7	27	17,051	-62.1		280	63.0
70	31	18,123	-61.2		288	34.6	26	17,880	-62.0		278	63.5
60	30	19,083	-62.1		295	39.2	25	18,852	-62.0		277	61.6
50	29	20,208	-62.7		303	41.8	24	19,994	-61.0		274	59.1
40	27	21,583	-63.0		311	49.2	22	21,416	-57.9		273	65.7
30	24	23,337	-63.4		319	57.1	16	23,282	-52.5		271	72.7
25	21	24,432	-63.6		324	64.3	14	24,481	-49.6			
20	16	25,846	-61.7		330	68.6	13	25,924	-49.8			
15	8	27,952	-53.6				7	27,905	-43.6			
10							5	30,644	-43.2			

Standard pressure surface (mb.)	BOISE, IDAHO 923 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	BROWNSVILLE, TEXAS 1019 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	BUFFALO, N. Y. 992 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	868	- 7.0	72	151	2.5	31	7	9.9	84	318	5.8	30	218	- 8.0	76	237	4.9
1000	31	234					31	161	11.3	80	342	7.8	30	151				
950	31	640					31	590	11.4	79	66	1.2	30	547	- 9.2	76	249	13.0
900	31	1,063	- 5.8	60		.0	31	1,041	11.4	69	175	3.5	30	966	-10.2	78	254	17.7
850	31	1,512	- 5.1	57	305	4.7	30	1,518	10.8	57	209	9.5	30	1,406	-11.0	77	257	19.8
800	31	1,987	- 6.0	53	309	12.0	30	2,023	9.8	53	229	13.4	30	1,871	-11.8	70	265	24.1
750	31	2,491	- 7.3	55	307	15.7	30	2,554	7.9	44	246	17.1	30	2,364	-13.3	62	267	28.0
700	31	3,027	- 9.5	52	312	20.2	30	3,124	4.9	42	258	20.2	30	2,888	-15.3	59	266	31.3
650	31	3,598	-12.2	52	313	23.7	30	3,718	.7	49	265	24.7	30	3,440	-17.9	55	264	34.2
600	31	4,205	-15.3	47	318	27.0	30	4,363	- 3.6	46	262	28.4	30	4,040	-20.7	51	261	37.5
550	31	4,856	-19.2	43	318	31.5	30	5,038	- 7.8	39	263	33.2	30	4,678	-24.5	50	261	44.7
500	31	5,561	-23.6		321	36.1	30	5,783	-11.6		263	40.6	30	5,368	-28.9	48	261	47.6
450	31	6,321	-28.9		318	41.2	30	6,575	-17.1	39	263	45.7	30	6,111	-33.8	44	260	53.4
400	31	7,157	-35.1		319	44.5	30	7,457	-23.4	41	261	51.1	30	6,932	-39.3		262	57.9
350	31	8,075	-41.7		326	47.4	30	8,421	-30.3		263	58.7	30	7,835	-45.5		261	62.6
300	31	9,103	-49.1		330	49.0	30	9,499	-38.6		264	64.9	30	8,850	-51.2		263	67.0
250	30	10,278	-57.0		330	49.0	30	10,726	-48.1		265	73.8	30	10,023	-55.7		264	71.5
200	30	11,665	-63.6		329	48.4	30	12,163	-57.6		266	79.7	30	11,440	-56.2		264	66.5
175	30	12,483	-63.3		320	47.0	30	12,997	-61.4		262	74.8	30	12,290	-55.6		263	66.6
150	30	13,433	-62.4		314	45.7	30	13,946	-64.8		265	72.3	30	13,272	-56.1		267	62.6
125	28	14,547	-62.7		311	44.9	30	15,046	-69.4		264	66.5	29	14,436	-56.6		265	52.5
100	27	15,916	-64.0		305	48.4	28	16,365	-73.0		260	50.5	29	15,850	-57.2		265	54.2
80	27	17,280	-65.0		301	45.3	26	17,672	-72.9		264	35.4	29	17,262	-56.8		263	48.8
70	27	18,098	-65.6		299	46.0	24	18,471	-71.1		264	25.8	28	18,110	-57.2		259	47.4
60	26	19,034	-65.6		295	47.2	24	19,384	-66.9		260	14.6	28	19,082	-56.9		258	48.2
50	24	20,164	-65.5		294	47.6	23	20,495	-62.6		256	9.9	26	20,232	-55.1		258	45.5
40	22	21,511	-64.7		289	49.9	22	21,885	-58.7		255	4.5	25	21,674	-52.2		256	44.9
30	19	23,295	-62.8		278	56.9	19	23,703	-54.9		76	7.0	24	23,558	-48.9		257	44.7
25	17	24,432	-60.3		271	60.6	19	24,870	-54.0		84	13.6	24	24,757	-48.4		254	46.8
20	12	25,888	-56.4		259	67.0	18	26,298	-53.0		82	15.3	23	26,226	-47.6		254	62.4
15	9	27,733	-52.5				15	28,153	-51.9		95	20.4	20	28,143	-45.0		257	55.8
10							14	30,796	-45.8		110	21.2	12	30,763	-45.0			
7							8	33,203	-37.7									
5																		

Standard pressure surface (mb.)	BURRWOOD, LA. 1021 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	CANTON IS., PACIFIC AREA 1009 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	3	10.4	88	47	7.0	31	4	26.2	75	48	12.0
1000	28	173	11.1	78	80	7.0	31	87	25.5	76	58	13.4
950	28	600	9.1	74	110	2.3	31	534	22.0	80	83	16.1
900	28	1,049	9.3	61	238	6.2	31	1,007	18.4	81	87	17.1
850	28	1,522	8.5	56	252	11.9	31	1,496	15.9	64	89	16.5
800	28	2,022	6.8	53	254	18.3	31	2,011	15.7	31	86	14.4
750	28	2,546	4.4	54	255	21.8	31	2,555	13.4	28	85	13.2
700	28	3,110	1.8	47	252	27.8	31	3,134	9.9		87	10.7
650	28	3,698	- 1.5	45	253	33.2	31	3,742	7.2		89	11.1
600	28	4,337	- 5.2		257	36.7	31	4,402	3.2		90	10.9
550	28	5,009	- 8.9		260	38.7	31	5,097	- 1.1		91	11.9
500	28	5,747	-13.4		258	46.8	31	5,857	- 5.2		82	11.3
450	28	6,537	-18.6		259	51.9	31	6,675	-10.1		73	10.3
400	28	7,410	-24.6		259	62.0	31	7,576	-16.1		67	7.6
350	28	8,367	-31.9		260	66.3	31	8,569	-22.8		60	4.5
300	28	9,439	-39.9		262	77.1	30	9,681	-31.5		44	1.4
250	28	10,657	-49.6		262	84.3	30	10,945	-41.9		289	1.0
200	28	12,085	-58.3		265	90.0	30	12,418	-53.8		257	3.1
175	28	12,918	-61.5		265	90.2	30	13,263	-60.4		261	6.6
150	28	13,869	-63.2		265	84.1	30	14,207	-67.8		295	9.5
125	27	14,980	-67.2		269	74.2	30	15,281	-75.7		326	10.1
100	26	16,314	-70.3		264	60.8	29	16,549	-82.8		308	5.2
80	26	17,640	-69.4		262	46.4	29	17,792	-80.2		291	5.2
70	25	18,451	-67.5		255	31.9	28	18,555	-75.8		279	4.1
60	25	19,376	-64.4		255	24.5	28	19,456	-71.6		305	.6
50	25	20,501	-60.2		250	16.5	28	20,542	-68.3		94	15.0
40	23	21,904	-57.5		246	11.9	28	21,897	-63.3		90	41.8
30	22	23,732	-53.9		134	4.5	28	23,690	-58.3		90	56.5
25	22	24,906	-52.4		93	15.3	27	24,844	-55.4		92	60.0
20	21	26,348	-50.4		109	17.5	27	26,780	-51.0		91	60.6
15	20	28,225	-48.5		114	27.4	26	28,175	-44.8		97	29.9
10	17	30,899	-43.9		117	46.2	23	30,883	-43.4		93	17.1
7	12	33,247	-39.9				21	33,794	-41.5		93	19.8
5	6	35,607	-31.1				19	35,563	-40.2			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb.)	CAPE HATTERAS, N. C. 1019 MB						CARIBOU, ME. 991 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	4	4.1	82	354	5.1	31	191	-12.2	63	285	4.5
1000	31	153	4.8	76	341	7.2	31	121				
950	31	568	3.8	71	302	9.3	31	515	-10.6	73	278	7.4
900	31	1,010	3.1	65	272	13.8	31	931	-12.0	73	260	9.5
850	31	1,473	1.9	60	264	18.7	31	1,367	-13.3	75	275	12.2
800	31	1,960	- .1	58	262	22.7	31	1,828	-14.2	68	269	16.3
750	31	2,473	- 2.1	50	263	28.6	31	2,315	-15.2	56	264	21.6
700	31	3,023	- 3.7	45	260	35.9	31	2,837	-16.6	50	259	24.3
650	31	3,600	- 6.3	42	260	41.8	31	3,390	-18.9	49	252	29.7
600	31	4,228	- 9.9	37	259	47.4	31	3,985	-21.7	48	252	36.5
550	31	4,889	-14.1	37	258	50.3	31	4,618	-25.4	49	252	42.9
500	31	5,612	-18.6	37	261	58.3	31	5,308	-29.8	47	254	45.1
450	31	6,384	-24.1		261	63.5	31	6,048	-34.5	48	252	51.5
400	31	7,238	-30.2		261	72.7	31	6,866	-40.4		250	60.4
350	31	8,175	-37.0		264	79.1	31	7,764	-46.4		252	65.1
300	31	9,224	-44.7		267	85.7	31	8,773	-52.3		254	62.0
250	30	10,425	-52.8		270	93.3	31	9,939	-55.9		253	60.2
200	30	11,845	-57.8		270	90.2	30	11,355	-55.1		254	60.6
175	30	12,686	-58.3		270	82.6	30	12,209	-54.2		256	55.4
150	30	13,654	-59.2		268	77.5	30	13,198	-53.9		254	50.7
125	30	14,790	-61.5		265	65.5	30	14,367	-54.2		251	52.1
100	30	16,167	-62.8		265	59.1	29	15,799	-54.1		250	52.1
80	29	17,544	-61.8		262	39.1	28	17,231	-54.0		250	51.3
70	28	18,383	-60.1		261	35.6	28	18,097	-52.8		245	49.4
60	27	19,344	-58.4		257	25.3	28	19,088	-51.7		241	45.5
50	27	20,496	-56.3		253	19.6	28	20,273	-50.9		241	49.4
40	26	21,925	-52.8		231	14.6	28	21,730	-49.7		239	46.6
30	26	23,799	-49.1		195	9.7	28	23,617	-48.1		241	48.4
25	25	24,994	-48.2		160	13.4	28	24,824	-46.6		244	47.6
20	23	26,476	-46.0		149	19.0	26	26,301	-45.9		246	54.0
15	21	28,396	-43.8		138	29.1	25	28,249	-43.6		243	50.3
10	19	31,143	-38.8		138	30.9	21	30,879	-38.3		259	83.2
7	8	33,586	-36.9				11	33,298	-33.3			
5							6	35,602	-30.0			

Standard pressure surface (mb.)	CHARLESTON, S. C. 1019 MB						COLD BAY, ALASKA 1004 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	13	3.5	78	326	2.3	31	30	1.0	88	135	10.1
1000	31	163	6.3	67	321	2.1	31	58			134	6.0
950	31	584	6.8	57	256	6.8	31	472	- .4	75	120	17.9
900	31	1,029	5.8	55	258	11.3	31	901	- 1.8	72	125	21.8
850	31	1,496	4.5	54	260	16.5	30	1,359	- 2.5	62	125	16.3
800	31	1,989	2.7	53	262	20.2	30	1,839	- 4.3	56	137	15.2
750	31	2,511	1.0	46	263	27.2	30	2,346	- 6.3	47	161	11.3
700	31	3,064	- 1.2	42	263	32.3	30	2,884	- 9.0	43	160	15.0
650	31	3,649	- 4.6	41	263	36.9	30	3,452	-12.2	38	167	15.7
600	31	4,279	- 8.4	38	261	42.4	30	4,063	-15.6		156	26.2
550	31	4,946	-12.7	38	263	46.2	30	4,711	-19.1		172	20.6
500	31	5,671	-17.2		264	51.1	30	5,417	-24.0		190	22.9
450	31	6,449	-22.6		266	56.2	30	6,170	-29.3		197	27.6
400	31	7,309	-28.6		268	57.9	30	7,010	-35.4		196	34.0
350	31	8,253	-35.4		269	69.4	30	7,925	-42.2		193	35.9
300	31	9,309	-43.4		268	77.9	30	8,950	-49.7		190	43.1
250	31	10,512	-52.2		272	87.2	30	10,125	-55.7		200	42.7
200	31	11,932	-56.9		273	79.1	27	11,547	-57.7		196	36.5
175	31	12,766	-60.0		272	79.5	27	12,390	-56.5		206	32.8
150	31	13,725	-61.4		272	74.4	27	13,372	-55.5		210	28.8
125	29	14,844	-64.0		271	62.6	27	14,533	-55.9		212	25.6
100	28	16,210	-66.0		272	56.2	27	15,950	-56.8		226	20.8
80	28	17,565	-65.6		271	39.4	26	17,356	-58.6		259	17.9
70	28	18,293	-63.4		267	28.8	25	18,190	-59.3		258	19.0
60	28	19,335	-60.9		269	22.0	23	19,151	-59.8		283	20.8
50	28	20,474	-58.7		263	22.2	22	20,304	-60.3		289	29.9
40	28	21,887	-55.4		254	14.0	21	21,688	-60.9		308	32.6
30	27	23,741	-51.6		227	5.8	19	23,459	-61.6		325	40.0
25	26	24,930	-49.8		198	6.8	19	24,590	-61.0		326	41.2
20	26	26,399	-47.3		170	8.2	17	25,958	-61.4		315	47.2
15	24	28,326	-43.7		180	8.5	16	27,753	-60.3		315	48.6
10							15	30,315	-56.8		298	57.9
7							10	32,646	-53.8			
5							5	34,946	-46.0			

Standard pressure surface (mb.)	COLUMBIA, MO. 991 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	238	- 9.5	77	324	1.2
1000	31	169				
950	31	566	- 8.2	64	288	6.4
900	31	987	- 6.7	53	292	11.3
850	31	1,435	- 5.9	51	283	15.7
800	31	1,909	- 6.5	50	285	20.6
750	31	2,407	- 8.1	50	282	24.7
700	31	2,946	-10.4	46	278	27.6
650	31	3,511	-12.9	40	277	37.3
600	31	4,121	-16.0	38	275	39.8
550	31	4,766	-19.9	37	271	44.1
500	31	5,473	-24.4	34	271	48.4
450	31	6,226	-29.3		272	53.4
400	31	7,065	-35.6		271	61.2
350	31	7,981	-42.0		272	65.1
300	31	9,009	-49.2		272	70.7
250	31	10,186	-55.7		271	74.8
200	31	11,596	-58.1		270	75.6
175	31	12,438	-57.7		271	76.0
150	31	13,410	-58.2		273	71.7
125	31	14,555	-59.2		276	59.7
100	31	15,946	-60.9		272	56.2
80	31	17,332	-61.2		274	51.3
70	30	18,161	-60.7		275	43.3
60	29	19,123	-59.5		273	40.4
50	27	20,271	-57.4		269	37.5
40	24	21,708	-55.1		264	41.0
30	23	23,563	-52.0		261	42.9
25	22	24,743	-50.5		256	43.5
20	22	26,702	-49.3		251	42.0
15	20	28,095	-49.5			

Standard pressure surface (mb.)	DAYTON, OHIO 983 MB						DENVER, COLO. 835 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	297	- 8.6	73	243	2.3	31	1,611	-11.3	59	264	1.4
1000	31	165					31	208				
950	31	564	- 6.0	65	252	8.7	31	609				
900	31	985	- 7.8	62	265	17.3	31	1,034				
850	31	1,429	- 7.6	55	268	22.5	31	1,477				
800	31	1,900	- 8.7	51	264	27.6	31	1,948	- 4.9	41	301	7.8
750	31	2,399	-10.1	46	264	29.9	31	2,453	- 6.4	39	306	12.8
700	31	2,930	-12.2	42	267	34.8	31	2,992	- 8.9	41	304	16.7
650	31	3,493	-14.4	38	267	39.4	31	3,558	-11.7	45	302	22.5
600	31	4,098	-17.4	31	267	44.7	31	4,172	-15.6	47	300	29.0
550	31	4,743	-21.2		266	48.2	31	4,819	-19.7	47	300	30.5
500	31	5,442	-25.7		267	53.2	31	5,525	-24.4	45	297	35.2
450	31	6,195	-30.7		267	61.6	31	6,279	-29.4	41	294	40.4
400	31	7,026	-36.5		267	67.2	31	7,116	-35.1		288	46.2
350	31	7,939	-42.5		270	73.4	31	8,033	-42.0		287	49.5
300	31	8,965	-49.4		271	73.6	31	9,060	-49.4		286	56.2
250	31	10,142	-55.5		270	69.9	31	10,235	-56.2		284	57.3
200	31	11,551	-57.3		269	69.0	31	11,639	-60.0		280	60.4
175	31	12,397	-56.3		274	58.5	31	12,471	-60.1		280	66.1
150	31	13,375	-56.7		275	47.4	31	13,434	-60.1		280	62.0
125	31	14,525	-58.5		277	45.1	31	14,569	-61.0		279	59.8
100	31	15,922	-59.6		274	44.9	31	15,951	-62.1		281	56.5
80	30	17,321	-59.6		270	40.2	31	17,328	-62.8		281	54.6
70	30	18,164	-58.9		267	38.5	31	18,157	-62.6		279	48.4
60	30	19,126	-58.1		269	36.3	30	19,101	-62.7		279	45.5
50	30	20,279	-56.2		270	36.7	29	20,243	-60.7		279	45.5
40	30	21,707	-52.9		260	43.3	27	21,652	-59.2		280	47.6
30	30	23,570	-51.0		255	42.2	26	23,485	-53.8		278	52.5
25	27	24,765	-48.8		251	34.8	24	24,663	-51.7		274	50.9
20	27	26,236	-47.2		245	32.8	24	26,113	-51.2		271	50.9
15	25	28,156	-46.2		229	32.4	15	27,970	-48.4			
10	12	30,878	-41.9									

Standard pressure surface (mb.)	DODGE CITY, KANS. 926 MB						EL PASO, TEXAS 884 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	792	- 9.3	73	317	3.7	31	1,193	.1	57	292	1.4
1000	30	192					31	190				
950	30	595					31	610				
900	30	1,014	- 5.5	51	307	7.4	31	1,053				
850	30	1,453	- 4.8	43	312	7.8	31	1,510	4.0	39	285	5.2
800	30	1,942	- 3.9	36	308	10.3	31	2,002	2.4	39	280	14.6
750	30	2,452	- 4.8	36	300	15.2	31	2,523	.8	35	274	22.2
700	30	2,992	- 7.1	37	291	20.6	31	3,074	- 1.7	32	270	27.4
650	30	3,566	-10.0	37	284	25.1	31	3,660	- 4.7		270	29.0
600	30	4,180	-13.8	35	279	29.9	31	4,286	- 8.2		272	30.9
550	30	4,832	-17.8	36	276	34.2	31	4,950	-12.2		270	36.7
500	30	5,544	-22.0	35	278	39.6	31	5,678	-17.1		270	39.1
450	30	6,306	-27.3		276	43.7	31	6,457	-22.4		269	42.9
400	30	7,151	-33.5		277	49.2	31	7,316	-28.7		270	48.2
350	30	8,076	-40.4		274	53.2	31	8,258	-35.7		272	54.4
300	30	9,108	-48.1		273	61.0	31	9,311	-43.8		269	63.7
250	29	10,297	-55.3		273	69.4	31	10,513	-52.4		267	74.2
200	29	11,705	-58.9		273	73.6	31	11,933	-58.4		265	78.1
175	28	12,548	-59.5		274	73.1	31	12,769	-60.7		266	79.9
150	27	13,520	-59.9		272	73.8	31	13,726	-61.9		268	79.9
125	27	14,658	-60.3		273	68.6	31	14,849	-64.5		268	68.2
100	27	16,042	-62.4		272	58.1	31	16,200	-67.5		267	56.7
80	26	17,415	-63.7		273	52.7	30	17,540	-68.2		271	43.9
70	23	18,247	-62.9		273	49.5	30	18,348	-67.1		272	41.4
60	23	19,187	-62.4		272	48.8	30	19,281	-64.0		272	37.7
50	22	20,313	-60.0		270	48.6	29	20,405	-62.1		270	26.6
40	22	21,716	-57.2		262	46.4	28	21,793	-58.5		268	26.0
30	22	23,549	-53.1		260	49.0	27	23,630	-53.3		262	27.0
25	20	24,742	-50.6		255	52.1	26	24,808	-52.7		257	23.3
20	10	26,202	-49.6				26	26,247	-53.4		259	25.3
15							23	28,109	-52.7		241	26.0
10							12	30,772	-49.6			

Standard pressure surface (mb.)	ELY, NEV. 810 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,908	-11.7	58	196	7.0
1000	31	255				
950	31	658				
900	31	1,085				
850	31	1,531				
800	31	1,999	- 6.0	48	210	5.2
750	31	2,511	- 4.6	38	333	4.9
700	31	3,049	- 7.3	40	322	10.7
650	31	3,623	- 9.9	38	323	17.9
600	31	4,239	-12.4	32	317	24.3
550	31	4,895	-16.2	32	311	27.0
500	31	5,610	-20.7		321	30.1
450	31	6,374	-25.9		335	26.6
400	31	7,225	-32.1		334	29.3
350	31	8,153	-39.8		336	26.2
300	31	9,188	-47.9		344	25.5
250	31	10,370	-55.6		347	22.9
200	31	11,768	-61.6		321	22.3
175	31	12,595	-61.8		306	29.1
150	31	13,553	-60.4		295	33.4
125	31	14,686	-61.8		295	32.1
100	31	16,063	-63.3		298	30.1
80	30	17,437	-64.0		291	27.0
70	30	18,264	-64.1		297	26.8
60	29	19,205	-63.4		296	26.2
50	29	20,328	-62.6		293	27.0
40	28	21,715	-61.2		288	26.6
30	27	23,519	-57.5		279	32.6
25	24	24,678	-55.3		275	43.1
20	25	26,096	-54.2		268	56.7
15	20	27,985	-51.2			
10	6	30,727	-41.7			

Standard pressure surface (mb.)	FAIRBANKS, ALASKA 1007 MB						FLINT, MICH. 990 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	135	-17.4	82	5	1.0	31	234	-11.8	81	238	3.9
1000	31	186			103	2.1	31	158				
950	31	578	-11.7	67	129	4.2	31	553	-11.7	72	263	9.2
900	31	994	- 8.3	67	224	3.5	31	965	-13.4	73	273	14.0
850	31	1,438	- 7.8	64	246	4.9	31	1,401	-13.1	65	273	19.4
800	31	1,909	- 8.4	60	271	6.8	31	1,863	-13.2	56	270	24.3
750	31	2,403	-10.7	56	282	10.5	31	2,355	-14.1	51	267	28.2
700	31	2,937	-13.3	57	281	13.2	31	2,876	-16.0	50	268	31.7
650	31	3,492	-16.2	56	283	16.3	31	3,429	-18.6	48	269	34.6
600	31	4,097	-19.4	52	285	16.9	31	4,024	-21.9	45	270	38.9
550	31	4,733	-23.1	50	282	22.7	31	4,656	-25.4	41	268	43.9
500	31	5,431	-27.7	48	280	26.0	31	5,346	-29.7	38	271	51.9
450	31	6,175	-32.6		280	29.5	31	6,086	-34.7		270	57.5
400	31	6,999	-38.8		279	33.0	31	6,902	-40.3		267	63.9
350	31	7,902	-45.5		283	35.6	31	7,802	-46.5		268	71.1
300	31	8,914	-52.5		279	45.3	31	8,812	-52.3		267	76.7
250	31	10,074	-58.5		279	50.3	31	9,980	-56.0		269	76.6
200	31	11,458	-63.8		281	53.2	31	11,296	-56.2		269	78.5
175	30	12,289	-64.6		283	52.8	31	12,246	-55.7		270	73.3
150	30	13,233	-63.4		287	51.1	31	13,227	-56.1		270	69.0
125	29	14,344	-63.3		291	51.9	31	14,384	-57.0		267	64.3
100	27	15,705	-65.0		295	55.4	31	15,793	-57.5		263	58.3
80	23	17,075	-66.6		296	61.8	31	17,201	-58.2		266	51.9
70	20	17,904	-67.7		300	64.1	31	18,054	-58.8		263	53.6
60	17	18,841	-69.0		308	62.0	31	19,021	-56.8		259	50.7
50	13	19,896	-69.4		312	70.3	31	20,182	-54.8		256	49.2
40	10	21,250	-69.8				31	21,619	-52.3		254	50.1
30	5	23,036	-63.8				31	23,497	-48.8		250	47.0
25							31	24,699	-47.7		245	45.1
20							25	26,196	-45.8		217	37.3
15							8	28,143	-42.3			
10												
7												
5												

Standard pressure surface (mb.)	FORT WORTH, TEXAS 1000 MB						GLASGOW, MONT. 938 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	180	- .6	66	329	4.5	31	696	-18.1	78	301	3.3
1000	31	182			345	3.3	31	208				
950	31	597	- .2	57	282	5.4	31	599				
900	31	1,026	1.7	53	262	11.3	31	1,001	-14.4	58	305	15.7
850	31	1,488	3.0	45	265	15.5	31	1,435	-14.0	52	314	22.9
800	31	1,979	2.0	39	269	19.2	31	1,894	-15.1	49	313	26.2
750	31	2,496	.5	32	272	24.5	31	2,379	-16.5	49	311	28.2
700	31	3,049	- 1.9	31	268	28.4	31	2,898	-18.3	51	312	30.3
650	31	3,634	- 4.9		264	33.0	31	3,445	-21.0	49	311	33.2
600	31	4,260	- 8.7		262	37.3	31	4,037	-24.0	46	313	36.1
550	31	4,924	-12.9		264	42.2	31	4,660	-27.6	46	313	40.0
500	31	5,649	-17.9		264	46.4	31	5,346	-32.1	45	314	43.1
450	31	6,424	-23.2		268	51.3	31	6,075	-36.9		313	47.0
400	31	7,282	-29.3		270	55.6	31	6,888	-42.2		315	52.7
350	31	8,222	-36.1		269	63.3	31	7,780	-47.7		313	56.7
300	31	9,274	-43.9		267	70.1	31	8,784	-53.5		313	61.8
250	31	10,475	-52.2		269	76.2	31	9,942	-58.1		314	65.5
200	31	11,893	-58.8		271	83.5	31	11,339	-59.6		310	61.2
175	31	12,729	-59.9		273	80.8	31	12,173	-59.8		309	58.5
150	31	13,687	-61.5		274	74.8	31	13,135	-59.4		306	58.5
125	31	14,811	-63.9		274	68.8	30	14,275	-60.4		302	56.2
100	30	16,169	-66.1		274	57.9	28	15,679	-62.1		296	57.3
80	30	17,522	-65.9		273	47.8	23	17,083	-62.8		294	60.0
70	29	18,342	-65.3		274	35.9	23	17,905	-63.5		290	59.8
60	28	19,278	-62.8		273	31.1	22	18,834	-63.5		288	61.6
50	27	20,412	-59.4		271	27.6	22	19,955	-62.9		285	62.6
40	27	21,816	-56.4		262	29.0	21	21,347	-61.9		281	63.5
30	25	23,668	-52.5		256	28.0	20	23,171	-57.3		279	69.0
25	24	24,836	-50.7		250	23.9	17	24,356	-53.2		268	69.4
20	21	26,315	-50.2		248	20.0	13	25,803	-50.7		256	62.6
15	18	28,209	-49.3		233	25.8	8	27,756	-43.8			
10												
7												
5												

Standard pressure surface (mb.)	GRAND JUNCTION, COLO. 855 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,474	-13.9	74	87	1.0
1000	31	267				
950	31	661				
900	31	1,082				
850	31	1,520			93	1.9
800	31	1,989	- 8.3	57	170	1.7
750	31	2,492	- 8.1	52	245	4.9
700	31	3,025	- 9.5	49	279	11.3
650	31	3,594	-11.8	48	291	17.9
600	31	4,205	-15.1	48	299	23.5
550	31	4,854	-18.7	45	300	28.4
500	31	5,563	-23.2	45	300	32.3
450	31	6,319	-28.2	42	296	39.1
400	31	7,162	-34.2		294	41.6
350	31	8,083	-40.8		286	43.5
300	31	9,115	-48.4		289	46.2
250	31	10,294	-55.8		292	37.7
200	31	11,696	-59.9		285	45.3
175	31	12,530	-60.0		283	47.2
150	31	13,493	-59.6		284	48.2
125	31	14,632	-60.4		286	45.7
100	31	16,016	-62.5		285	43.3
80	29	17,386	-63.8		287	42.7
70	28	18,211	-64.2		287	39.4
60	28	19,145	-64.3		284	38.1
50	24	20,285	-62.7		283	35.9
40	24	21,670	-59.6		280	42.0
30	21	23,481	-56.2		272	51.1
25	21	24,644	-54.4		267	58.1
20	20	26,072	-53.2		263	68.0
15	18	27,932	-51.3		257	83.4
10	16	30,662	-45

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb.)	GREAT FALLS, MONT. 890 MB						GREEN BAY, WIS. 992 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,123	-11.5	66	229	9.7	31	210	-15.4	74	282	3.3
1000	31	214					31	149				
950	31	610					31	536	-15.6	63	288	10.7
900	31	1,030					31	944	-15.8	61	288	12.2
850	31	1,474	- 8.8	47	258	16.5	31	1,376	-15.0	54	284	16.3
800	31	1,942	-11.0	52	282	17.5	31	1,835	-15.1	52	282	20.4
750	31	2,432	-13.6	57	297	21.0	31	2,321	-16.5	49	284	25.1
700	30	2,957	-15.8	55	307	22.0	31	2,838	-18.3	49	282	28.4
650	30	3,510	-17.8	53	310	26.2	31	3,387	-20.4	43	280	32.8
600	30	4,109	-21.0	52	306	29.9	31	3,978	-23.8	43	278	37.1
550	30	4,741	-24.8	49	312	35.6	31	4,605	-27.8	43	277	39.8
500	30	5,436	-29.1	47	315	41.8	31	5,288	-31.8		274	43.7
450	30	6,175	-34.1		314	47.8	31	6,023	-36.4		273	50.9
400	30	6,998	-40.0		316	52.8	31	6,834	-41.7		270	57.7
350	30	7,894	-46.1		316	56.5	31	7,728	-47.5		270	64.9
300	30	8,906	-52.1		317	66.6	31	8,735	-52.9		272	67.0
250	30	10,073	-58.1		316	65.5	31	9,900	-56.5		272	70.9
200	30	11,469	-60.3		307	64.1	31	11,315	-56.0		269	70.7
175	30	12,301	-60.4		308	58.3	31	12,166	-55.9		269	70.1
150	30	13,263	-60.0		302	57.7	31	13,146	-55.1		268	71.7
125	28	14,398	-60.5		300	57.1	31	14,303	-57.1		268	67.8
100	27	15,796	-62.1		297	55.6	31	15,714	-57.8		265	67.8
80	25	17,195	-63.1		294	56.3	31	17,118	-57.9		261	69.9
70	22	18,044	-63.1		291	54.4	31	17,964	-57.6		260	65.3
60	21	18,968	-63.4		292	54.2	30	18,927	-56.7		258	66.3
50	20	20,078	-63.6		287	60.8	30	20,086	-54.8		252	69.1
40	17	21,498	-62.7		281	63.1	30	21,527	-51.2		248	61.2
30	15	23,260	-60.0		278	74.8	28	23,403	-48.7		240	61.0
25	14	24,401	-57.4		271	78.9	27	24,616	-47.3		236	63.5
20	13	25,834	-51.4		263	79.5	17	26,173	-43.3		236	50.1
15	12	27,755	-47.6		260	62.4						
10	9	30,482	-46.6									
7	8	32,888	-42.8									
5	7	35,247	-38.6									

Standard pressure surface (mb.)	GREENSBORO, N. C. 987 MB						GUAM, MARIANA IS. 998 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	273	- 1.8	80	271	2.3	31	111	23.7	90	86	4.5
1000	31	170					31	94				
950	31	583	.2	58	272	8.5	31	547	22.4	79	86	11.9
900	31	1,014	- .3	56	274	14.0	31	1,013	19.6	78	90	10.9
850	31	1,471	- .5	51	272	17.1	31	1,504	17.1	71	100	8.5
800	31	1,956	- 1.7	50	271	21.8	31	2,021	15.2	56	115	7.2
750	31	2,471	- 3.4	47	271	26.8	31	2,569	12.7	47	125	7.0
700	31	3,011	- 6.3	47	268	32.3	31	3,147	9.8	44	124	5.2
650	31	3,589	- 9.2	43	268	39.2	31	3,759	6.2	43	125	4.1
600	31	4,205	-12.0		266	46.8	31	4,406	2.5	41	152	6.0
550	31	4,864	-15.3		265	52.8	31	5,103	- 1.4	39	161	7.8
500	31	5,581	-19.8		266	59.8	31	5,859	- 5.6	30	155	8.4
450	31	6,348	-25.0		265	63.3	31	6,675	-10.6		159	7.4
400	31	7,201	-31.0		265	71.5	31	7,574	-16.3		155	7.0
350	31	8,134	-37.8		265	77.9	31	8,566	-22.0		157	7.4
300	31	9,179	-46.8		269	77.3	31	9,677	-31.4		164	4.7
250	31	10,371	-54.1		269	82.0	31	10,940	-41.8		189	6.4
200	31	11,782	-58.9		274	79.7	31	12,411	-54.2		191	9.1
175	31	12,621	-58.2		272	74.0	31	13,254	-61.1		181	11.1
150	31	13,589	-59.1		272	71.9	31	14,194	-68.5		175	15.2
125	30	14,725	-61.1		271	58.1	31	15,264	-76.1		165	16.9
100	29	16,105	-62.6		267	51.1	29	16,526	-83.1		151	15.7
80	29	17,481	-62.2		271	45.3	29	17,765	-82.2		126	8.6
70	29	18,316	-61.0		267	38.5	27	18,522	-76.4		103	6.4
60	28	19,268	-59.7		267	30.7	27	19,427	-69.8		111	9.1
50	28	20,417	-56.8		257	28.8	27	20,526	-65.0		105	15.7
40	27	21,837	-54.4		258	25.5	27	21,898	-61.4		93	25.3
30	26	23,697	-50.3		254	25.1	27	23,698	-57.3		86	32.6
25	25	24,896	-48.5		233	21.2	27	24,859	-54.2		87	35.8
20	24	26,374	-46.8		227	16.7	26	26,298	-51.7		88	35.4
15	22	28,294	-44.7		219	22.0	24	28,168	-49.4		86	22.9
10	6	30,963	-42.8				11	30,849	-45.6			

Standard pressure surface (mb.)	HILO, HAWAII 1011 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	11	18.7	84	231	4.9
1000	31	107	20.6	77	239	3.9
950	31	550	18.7	73	166	2.5
900	31	1,013	15.9	70	186	3.1
850	31	1,497	13.3	66	209	5.6
800	31	2,006	11.7	52	240	7.4
750	31	2,543	9.5	37	259	9.3
700	31	3,115	7.0	31	271	12.4
650	31	3,718	3.4	31	277	16.5
600	31	4,365	- .4	29	275	19.4
550	31	5,052	- 5.1	29	282	23.1
500	31	5,798	-10.3		278	31.1
450	31	6,595	-16.0		276	33.0
400	31	7,479	-22.6	29	287	36.1
350	31	8,444	-29.6		300	42.4
300	31	9,528	-36.9		312	57.9
250	31	10,767	-45.2		311	64.9
200	31	12,227	-54.2		310	68.6
175	30	13,071	-59.5		309	72.5
150	30	14,023	-64.9		308	62.4
125	30	15,139	-70.9		305	47.6
100	30	16,422	-75.5		301	33.8
80	29	17,712	-75.6		295	15.2
70	29	18,492	-71.1		294	8.5
60	29	19,413	-66.7		201	1.4
50	29	20,524	-63.4		121	6.2
40	28	21,904	-60.6		93	10.1
30	27	23,708	-57.4		90	15.3
25	24	24,865	-55.2		95	13.2
20	22	26,293	-53.4		98	13.0
15	19	28,165	-53.3		130	7.0
10	10	30,701	-53.0			
7	6	33,051	-47.1			

Standard pressure surface (mb.)	HUNTINGTON, W. VA. 991 MB						INTERNAT. FALLS, MINN. 973 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	246	- 5.5	69	210	2.9	31	360	-21.9	65	275	3.9
1000	31	176					31	158				
950	31	579	- 3.7	61	242	10.5	31	526	-21.4	66	268	8.4
900	31	1,004	- 5.0	59	258	17.3	31	936	-20.3	67	290	15.9
850	31	1,453	- 6.0	60	262	25.3	31	1,359	-19.8	64	298	20.0
800	31	1,926	- 7.2	58	267	26.0	31	1,809	-20.0	58	300	22.3
750	31	2,425	- 8.5	54	268	29.3	31	2,289	-20.8	55	298	24.3
700	31	2,962	-10.5	50	271	34.2	31	2,795	-22.6	49	296	27.0
650	31	3,527	-13.0	41	269	37.5	31	3,332	-25.1	45	294	27.8
600	31	4,137	-15.6		270	43.7	31	3,914	-28.2	44	292	31.7
550	31	4,785	-19.2		270	50.7	31	4,527	-31.5	43	290	33.4
500	31	5,492	-23.5		268	57.5	31	5,204	-35.4		286	36.9
450	31	6,243	-28.4		267	65.3	31	5,923	-39.9		281	39.1
400	31	7,089	-34.4		270	66.8	31	6,727	-45.1		284	45.5
350	31	8,010	-40.8		270	73.8	31	7,609	-50.1		283	49.5
300	31	9,044	-47.8		272	73.6	31	8,606	-54.7		283	53.8
250	31	10,226	-55.3		273	65.7	31	9,765	-57.2		283	52.5
200	31	11,635	-58.3		276	66.3	31	11,178	-56.9		282	55.6
175	31	12,477	-57.0		284	48.4	31	12,024	-56.8		282	53.0
150	31	13,452	-57.7		281	42.9	31	13,000	-57.6		282	51.3
125	31	14,597	-59.6		280	41.8	30	14,136	-58.5		277	53.0
100	31	15,986	-61.1		277	37.7	30	15,535	-59.9		276	56.7
80	30	17,377	-61.0		279	36.3	28	16,941	-59.6		275	60.2
70	30	18,205	-60.2		276	32.1	27	17,797	-59.3		272	62.6
60	30	19,173	-58.6		274	30.1	24	18,772	-59.3		271	59.5
50	29	20,324	-56.4		274	31.5	21	19,877	-56.6		265	65.1
40	28	21,756	-53.0		273	33.6	19	21,292	-52.4		260	73.1
30	28	23,624	-50.3		270	38.5	15	23,168	-46.1		256	69.8
25	27	24,821	-48.8		262	37.7	13	24,368	-46.3		255	71.1
20	27	26,292	-47.3		259	40.6	13	25,860	-44.9		253	73.1
15	26	28,203	-45.4		258	41.6	12	27,856	-40.8		249	59.1
10	14	30,882	-44.1				10	30,750	-36.3			
7												

Standard pressure surface (mb.)	JACKSON, MISS. 1010 MB						JACKSONVILLE, FLA. 1020 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	94	2.1	84	77	1.2	31	5	7.2	86	316	3.3
1000	31	171	2.2	69	71	1.7	31	170	5.2	74	326	2.9
950	31	587	3.5	58	230	4.5	31	598	9.3	66	246	6.2
900	31	1,026	3.8	56	262	9.7	31	1,045	8.4	63	257	10.7
850	31	1,491	3.6	50	274	15.3	31	1,517	6.9	57	262	16.5
800	31	1,982	2.5	48	274	22.0	31	2,014	5.2	53	264	22.5
750	31	2,500	.3	48	272	25.5	31	2,539	3.3	49	262	26.4
700	31	3,053	- 2.4	46	267	31.1	31	3,098	.9	42	262	28.4
650	31	3,635	- 5.1	37	268	35.9	31	3,684	- 2.7	40	262	32.6
600	31	4,264	- 8.4	36	267	37.9	31	4,321	- 6.7	38	261	39.2
550	31	4,929	-12.4	36	266	41.6	31	4,985	-10.9	38	266	41.4
500	31	5,656	-17.2		266	45.9	31	5,722	-15.2	35	268	48.2
450	31	6,431	-22.5		263	54.4	31	6,502	-20.7	33	267	54.4
400	31	7,293	-28.3		265	58.1	31	7,373	-26.6		269	59.1
350	31	8,237	-35.0		268	67.2	31	8,323	-33.5		269	69.9
300	31	9,295	-43.0		270	69.6	31	9,387	-41.5		272	76.6
250	31	10,501	-51.9		275	71.5	31	10,599	-50.5		275	85.5
200	30	11,922	-59.1				31	12,024	-58.8		275	87.4
175	30	12,756	-60.5				31	12,857	-60.5		274	86.1
150	25	13,718	-61.6				31	13,814	-62.2		274	80.6
125	29	14,842	-64.5				31	14,929	-66.0		275	68.4
100	29	16,199	-66.5				31	16,272	-69.0		273	56.0
80	25	17,548	-65.9				30	17,609	-68.5		275	42.4
70	24	18,373	-64.3				30	18,416	-66.4		275	30.9
60	24	19,309	-62.6				29	19,352	-62.8		279	20.2
50	24	20,442	-59.1				29	20,483	-59.7		282	11.7
40	24	21,851	-56.2				27	21,887	-56.0		276	7.6
30	23	23,691	-53.1				27	23,731	-52.4		107	5.6
25	22	24,874	-51.5				25	24,910	-50.5		85	9.3
20	22	26,329	-49.7		263	11.7	21	26,386	-48.3		107	9.5
15	21	28,203	-48.7				16	28,302	-45.9		104	29.3
10	15	30,924	-44.2				13	31,004	-41.4			
7							5	33,289	-41.8			

Standard pressure surface (mb.)	JOHNSTON IS., PACIFIC AREA 1013 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	9	23.9	76	79	2.5
1000	31	113	22.9	76	91	2.9
950	31	558	19.1	78	68	2.7
900	31	1,021	15.6	75	63	1.7
850	31	1,505	14.9	46	46	.8
800	31	2,017	13.4	31	327	2.5
750	31	2,559	11.5		324	5.6
700	31	3,132	8.4		320	8.5
650	31	3,735	5.2		318	10.9
600	31	4,390	1.8		306	15.7
550	31	5,078	- 2.7		306	19.0
500	31	5,833	- 7.8		304	21.8
450	31	6,641	-12.9		306	23.1
400	31	7,534	-19.0		317	32.4
350	31	8,517	-25.5		314	39.4
300	31	9,619	-33.0		316	42.0
250	31	10,877	-42.4		319	42.6
200	30	12,347	-54.0		322	46.3
175	30	13,191	-60.5		321	42.2
150	29	14,138	-67.6		319	39.2
125	29	15,218	-74.8		318	35.9
100	28	16,495	-81.1		317	28.6
80	23	17,733	-80.5		325	18.1
70	21	18,488	-76.0		333	12.4
60	18	19,396	-69.2		13	6.4
50	16	20,498	-64.7		89	8.2
40	14	21,863	-61.5		102	15.7
30	14	23,663	-58.1		83	21.6
25	12	24,815	-55.8		87	23.7
20	11	26,281	-53.3			
15	7	28,137	-51.2			
10						
7						

Standard pressure surface (mb.)	KING SALMON, ALASKA 1013 MB						KOTZEBUE, ALASKA 1021 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	15	- 4.6	72	82	6.6	31	5	-12.2	82	95	11.1
1000	31	118	- 1.0	66	94	9.7	31	166	- 9.2	75	102	12.2
950	31	530	- .9	60	121	9.5	31	565	- 7.5	70	118	9.1
900	31	959	- 1.8	61	140	9.5	31	986	- 7.2	69	135	5.6
850	31	1,413	- 3.1	60	156	11.1	31	1,431	- 8.1	66	178	3.3
800	31	1,893	- 4.4	55	169	12.4	31	1,901	- 9.6	61	193	5.1
750	31	2,398	- 6.9	50	177	12.8	31	2,395	-11.6	57	200	7.2
700	31	2,935	- 9.9	48	178	14.0	31	2,924	-14.0	53	212	8.5
650	31	3,504	-13.1	46	178	15.9	31	3,473	-16.9	50	224	7.6
600	31	4,110	-16.2	41	192	15.9	31	4,081	-20.2	44	240	8.2
550	31	4,757	-19.8		195	19.4	31	4,718	-24.1	42	238	10.9
500	31	5,461	-24.4		197	22.0	31	5,409	-28.6	41	235	12.8
450	31	6,219	-29.5		204	23.3	31	6,155	-34.0		245	12.8
400	31	7,052	-35.3		209	27.6	31	6,971	-40.0		235	18.8
350	31	7,970	-41.5		211	29.9	31	7,870	-46.4		248	20.8
300	31	9,001	-48.2		216	32.8	31	8,878	-53.0		245	25.8
250	31	10,186	-55.1		216	36.5	30	10,034	-59.3		247	32.4
200	31	11,590	-60.2		222	30.9	28	11,438	-62.6		257	34.6
175	31	12,422	-60.0		227	26.2	27	12,260	-62.2		259	34.2
150	30	13,382	-58.2		238	24.7	27	13,216	-60.8		268	36.7
125	28	14,538	-58.5		247	23.3	27	14,349	-61.3		269	39.2
100	28	15,935	-60.2		259	23.5	27	15,728	-62.9		281	43.1
80	28	17,321	-61.7		273	25.8	26	17,115	-63.9		285	48.8
70	26	18,147	-62.5		284	27.6	26	17,937	-64.3		288	52.5
60	26	19,097	-63.3		294	30.1	26	18,874	-64.9		293	57.7
50	26	20,215	-64.3		299	35.0	26	19,984	-65.5		298	61.8
40	23	21,577	-64.7		313	40.0	22	21,349	-64.8		308	69.0
30	19	23,353	-63.9		331	49.5	16	23,225	-62.2		315	78.3
25	14	24,546	-61.1		352	57.3	14	24,420	-59.4		322	77.1
20	11	26,010	-57.6		5	63.0	10	26,009	-53.9			
15	9	27,913	-52.1				8	27,951	-49.0			
10	5	30,745	-39.9				8	30,838	-44.9			
7							5	33,484	-28.6			

Standard pressure surface (mb.)	LAKE CHARLES, LA. 1020 MB						LANDER, WYO. 827 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	5	5.5	87	46	3.9	31	1,696	-16.0	75	287	1.4
1000	31	170	6.9	73	67	4.3	31	245				
950	31	595	7.4	66	215	3.7	31	634				
900	31	1,038	7.3	59	244	7.2	31	1,049				
850	31	1,509	6.8	56	253	11.9	31	1,490				
800	31	2,006	5.8	48	256	18.1	31	1,952	-10.1	54	317	2.1
750	31	2,533	3.6	44	260	24.3	31	2,449	-10.5	50	321	5.8
700	31	3,090	.6	37	261	28.6	31	2,979	-11.9	49	309	14.8
650	31	3,681	- 2.5		259	33.4	31	3,540	-14.5	50	303	22.5
600	31	4,314	- 5.9		261	39.6	31	4,147	-17.9	49	306	31.3
550	31	4,984	-10.1		260	43.1	31	4,785	-21.5	47	305	36.7
500	31	5,719	-15.0		260	48.8	31	5,490	-25.8	42	303	40.8
450	31	6,504	-20.2		265	56.0	31	6,237	-31.0	38	305	43.9
400	31	7,372	-26.2		263	65.5	31	7,072	-37.0		302	49.5
350	31	8,324	-33.3		262	74.8	31	7,983	-43.4		300	52.1
300	31	9,388	-41.4		263	80.6	31	9,006	-50.1		308	52.3
250	31	10,602	-50.3		267	89.2	31	10,180	-56.2		301	59.3
200	31	12,028	-58.9		272	96.4	31	11,580	-60.7		295	57.9
175	31	12,862	-60.8		274	96.4	31	12,412	-60.6		290	59.3
150	31	13,816	-63.2		271	83.9	31	13,374	-59.2		293	59.7
125	31	14,929	-66.2		269	75.4	31	14,516	-59.8		292	61.4
100	31	16,271	-68.6		269	57.5	31	15,906	-61.3		291	54.6
80	31	17,604	-69.0		270	42.4	27	17,295	-62.6		289	51.7
70	31	18,414	-67.2		268	33.8	26	18,133	-62.4		287	50.1
60	31	19,341	-64.3		266	23.5	23	19,098	-62.2		286	50.1
50	30	20,465	-61.0		260	17.5	21	20,241	-61.3		284	52.1
40	29	21,867	-56.7		253	19.6	20	21,633	-60.7		280	52.7
30	29	23,703	-53.9		230	7.8	15	23,446	-58.1		272	59.8
25	28	24,882	-52.8		196	7.0	14	24,614	-50.7		267	63.7
20	26	26,338	-51.0		152	7.8	12	26,058	-49.4			
15	25	28,212	-49.5		126	12.8						
10	19	30,884	-45.6		184	22.9						
7	6	33,211	-46.5									

Standard pressure surface (mb.)	LAS VEGAS, NEV. 944 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	660	.9	46	273	2.9
1000	31	190				
950	31	606				
900	31	1,045	4.8	29	12	4.5
850	31	1,510	2.9	29	356	8.4
800	31	1,998	.8	32	349	9.3
750	31	2,516	- 1.1	31	332	7.4
700	31	3,063	- 3.5	30	320	8.7
650	31	3,642	- 6.3		314	11.5
600	31	4,268	- 9.8		313	15.3
550	31	4,927	-14.3		310	19.4
500	31	5,651	-19.2		305	22.7
450	31	6,417	-25.0		301	25.1
400	31	7,273	-31.4		297	26.8
350	31	8,205	-38.8		293	30.3
300	31	9,245	-46.9		293	33.0
250	31	10,433	-54.4		285	38.7
200	31	11,839	-60.0		278	44.3
175	31	12,672	-60.5		275	46.8
150	30	13,641	-60.3		274	50.3
125	30	14,772	-62.1		275	46.0
100	30	16,143	-64.6		278	41.4
80	28	17,504	-65.7		279	35.0
70	26	18,325	-65.0		284	33.4
60	25	19,264	-63.6		285	30.5
50	25	20,387	-62.3		283	31.1
40	22	21,773	-59.3		275	36.3

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb.)	LIHUE, HAWAII 1008 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	LITTLE ROCK, ARK. 1013 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	MCGRATH, ALASKA 1009 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	MAJURO, MARSHALL IS. 1009 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	MEDFORD, OREG. 977 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	36	14.5	81	240	6.4	31	79	- 2.9	81	348	2.5	31	103	-17.5	79		.0	31	3	26.6	81	75	9.7	31	401	- 4.3	92		.0
1000	31	103	20.8	75	234	5.2	31	177	- 2.5	68	330	2.5	31	173			93	1.4	31	84	26.0	81	73	11.7	31	214				
950	31	548	18.3	74	232	7.4	31	588	- 1.1	57	279	5.1	31	573	- 7.9	69	94	5.1	31	530	23.0	82	67	17.5	31	622	- .1	68	298	1.4
900	31	1,008	15.0	75	250	9.3	31	1,019	- .4	54	267	9.9	31	990	- 5.4	68	146	5.2	31	1,006	19.9	81	80	16.7	31	1,058	2.8	55	122	1.6
850	31	1,491	12.4	67	250	14.0	31	1,477	.6	46	261	15.0	31	1,439	- 5.5	62	185	7.6	31	1,499	17.4	76	89	15.9	31	1,520	2.4	46	153	2.5
800	31	1,998	10.0	48	259	18.1	31	1,984	- .5	40	265	19.0	31	1,914	- 6.6	59	195	8.2	31	2,016	15.6	63	87	17.5	31	2,009	.9	39	328	2.1
750	31	2,531	6.7	41	263	19.6	31	2,473	- 2.4	40	268	22.9	31	2,415	- 8.7	54	195	7.4	31	2,559	12.8	57	85	20.0	31	2,525	- .9	39	335	8.5
700	31	3,102	3.6	38	269	21.6	31	3,024	- 4.9	40	270	28.8	31	2,949	-11.1	48	213	7.2	31	3,140	9.5	57	89	19.4	31	3,074	- 3.6	37	334	13.4
650	31	3,700	1.9	37	274	27.4	31	3,597	- 7.9	39	272	34.6	31	3,511	-14.2	47	229	9.5	31	3,748	6.3	46	91	23.3	31	3,652	- 6.7	35	333	18.1
600	31	4,346	- 1.8	32	274	32.1	31	4,223	-11.0	36	271	38.9	31	4,118	-17.8	43	230	11.5	31	4,405	2.9	43	88	22.3	31	4,278	-10.1	33	330	21.8
550	31	5,024	- 6.0		275	34.8	31	4,879	-15.6	45	275	42.5	31	4,757	-21.8	42	224	13.8	31	5,100	- 1.2	41	89	24.1	31	4,941	-14.3	31	327	23.5
500	31	5,774	-10.7	34	279	37.3	31	5,602	-19.7	34	271	46.2	31	5,459	-26.4	46	223	13.8	31	5,860	- 5.3		87	23.1	31	5,661	-19.2		322	24.9
450	31	6,568	-16.3		283	40.6	31	6,367	-25.1		275	51.7	31	6,200	-31.9		218	15.7	31	6,680	- 9.7		82	26.2	31	6,431	-24.9		319	27.4
400	30	7,455	-22.5		295	46.2	31	7,223	-31.6		272	54.2	31	7,034	-38.9		228	20.0	31	7,584	-15.7		77	27.0	31	7,282	-31.5		319	27.8
350	30	8,421	-29.6		302	53.8	31	8,156	-37.9		271	62.2	31	7,941	-44.1		229	24.3	31	8,578	-22.5		80	23.5	31	8,214	-38.6		316	30.9
300	30	9,504	-36.7		302	65.3	31	9,201	-45.2		274	68.2	30	8,958	-50.5		230	28.2	30	9,687	-31.1		83	20.4	31	9,254	-46.9		313	30.3
250	30	10,745	-44.9		305	76.7	31	10,396	-53.0		273	75.4	30	10,129	-56.6		232	35.4	30	10,952	-41.3		91	16.3	31	10,447	-56.3		326	29.5
200	30	12,200	-54.6		308	82.4	31	11,811	-58.9		274	74.2	30	11,529	-61.9		243	34.0	27	12,426	-53.8		91	16.0	31	11,824	-54.6		320	31.5
175	29	13,059	-59.5		305	73.6	31	12,649	-58.0		274	67.4	30	12,357	-61.0		255	32.6	27	13,270	-60.7		88	15.5	31	12,639	-64.3		326	30.1
150	29	14,011	-66.4		302	66.8	31	13,614	-60.2		274	67.0	30	13,316	-60.1		266	33.6	27	14,212	-68.4		78	17.7	31	13,587	-62.2		317	33.4
125	29	15,105	-70.8		302	59.4	31	14,746	-62.1		271	65.3	30	14,453	-60.4		274	35.0	27	15,284	-76.2		74	21.4	31	14,713	-62.5		320	31.9
100	29	16,412	-74.9		293	40.6	31	16,117	-64.1				30	15,838	-62.0		279	38.3	27	16,547	-83.4		76	20.8	31	16,084	-64.2		308	34.8
80	28	17,707	-74.7		292	22.0	26	17,493	-64.1				29	17,220	-63.5		289	44.1	27	17,792	-80.7		87	7.8	31	17,447	-64.9		307	35.9
70	25	18,491	-75.6		275	10.3	25	18,314	-63.1				28	18,053	-64.2		294	46.4	27	18,554	-75.6		245	5.4	31	18,258	-64.9		304	36.5
60	25	19,415	-66.8		244	2.1	25	19,262	-61.9				28	18,992	-65.0		299	50.3	27	19,454	-71.3		94	2.9	31	19,251	-65.0		300	37.3
50	24	20,525	-62.4		187	4.9	22	20,398	-59.1				26	20,120	-65.5		307	54.4	27	20,542	-67.7		89	19.6	31	20,313	-64.7		298	38.7
40	23	21,911	-60.1		118	1.9	21	21,805	-55.6				21	21,489	-65.1		317	58.7	27	21,900	-62.9		88	40.8	30	21,681	-64.3		292	41.0
30	23	23,717	-58.0		90	6.9	18	23,654	-52.4				18	23,316	-63.3		338	65.7	25	23,697	-57.6		86	50.1	28	23,446	-62.9		287	50.7
25	22	24,872	-56.4		78	6.8	18	24,842	-50.1				14	24,525	-59.5		343	72.5	25	24,857	-54.3		90	56.5	26	24,577	-61.3		281	56.0
20	22	26,296	-54.8		91	2.1	17	26,301	-50.3				10	25,951	-56.0				25	26,304	-49.2		93	46.8	26	25,970	-58.6		276	64.1
15	21	28,151	-53.4		252	4.7	12	28,188	-48.1										11	28,199	-46.3				24	27,776	-55.9		272	77.9
10	21	30,773	-51.4		246	13.0	6	30,846	-45.7																22	30,424	-49.9		269	92.6
7	16	33,095	-45.6		266	21.8																			17	32,760	-43.7		261	88.0
5	11	35,270	-43.1																						13	35,059	-39.3			

Standard pressure surface (mb.)	MERIDA, MEXICO 1017 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	MIAMI, FLA. 1019 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	MIDLAND, TEXAS 918 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	MONTGOMERY, ALA. 1014 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	NANTUCKET, MASS. 1015 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	11	17.7	93	78	4.7	31	4	16.3	88	11	1.4	31	874	- 3.7	60	335	1.9	31	61	1.8	70	15	2.5	31	14	- 1.3	81	318	6.2
1000	31	159	20.7	85	94	7.6	31	163	17.7	81	60	2.3	31	195					31	176	3.0	65	48	1.9	31	132	- .8	73	296	7.2
950	31	601	18.5	79	116	10.1	31	606	15.9	77	140	2.2	31	602					31	595	4.3	63	292	2.5	31	537	- 2.2	72	287	11.1
900	31	1,065	16.6	68	126	6.6	31	1,061	13.3	74	218	4.3	31	1,031	.8	42	284	2.5	31	1,034	4.8	52	282	8.9	31	969	- 3.8	66	275	15.7
850	31	1,550	14.2	65	152	2.5	31	1,540	10.7	64	253	5.8	31	1,492	2.9	34	276	11.7	31	1,500	4.0	48	277	15.3	31	1,430	- 5.1	61	268	20.2
800	31	2,061	11.8	56	220	3.1	31	2,044	8.6	53	255	9.9	31	1,984	3.1	33	282	15.0	31	1,992	2.6	53	271	21.0	31	1,896	- 6.5	54	265	24.9
750	31	2,592	9.7	46	219	4.1	31	2,573	7.1	34	268	12.0	31	2,508	2.1	33	277	26.6	31	2,513	.8	49	267	27.4	31	2,398	- 8.1	50	260	29.0
700	31	3,170	7.1		254	4.7	31	3,142	4.1	32	266	16.5	31	3,061	- .8	28	274	26.8	31	3,065	- 1.7	44	266	31.7	31	2,932	-10.3	46	260	34.8
650	31	3,767	4.1		255	7.2	31	3,739	.8		262	20.2	31	3,647	- 4.3		271	30.7	31	3,648	- 4.2		265	36.5	31	3,495	-13.1	45	259	39.8
600	31	4,424	.9		255	9.1	31	4,381	- 2.5		263	24.7	31	4,276	- 7.9		270	32.1	31	4,280	- 7.7		264	41.6	31	4,106	-16.4	42	256	43.5
550	31	5,103	- 3.5		259	12.4	31	5,061	- 6.5		264	30.5	31	4,944	-12.4		269	37.1	31	4,947	-11.7		262	46.4	31	4,752	-20.3	45	254	47.2
500	31	5,866	- 8.0		255	15.2	31	5,806	-11.2		266	35.8	31	5,668	-16.8		267	43.1	31	5,677	-16.4		262	51.5	31	5,455	-24.4	43	255	55.6
450	31	6,666	-13.7		265	19.6	31	6,602	-16.9		265	40.2	31	6,446	-22.1		266	46.8	31	6,458	-21.6		263	56.5	31	6,208	-29.5	41	253	60.4
400	31	7,564	-20.4		259	22.2	31	7,481	-23.7		263	43.1	31	7,307	-28.6		269	52.7	31	7,320	-27.8		264	63.7	31	7,046	-35.7	42	254	62.0
350	31	8,537	-28.2		263	25.6	31	8,442	-31.1		265	47.8	31	8,249	-35.6		268	59.8	31	8,266	-34.9		265	69.6	31	7,961	-42.4		256	63.3
300	31	9,624	-36.8		261	31.7	31	9,516	-39.8		269	54.2	31	9,304	-43.5		268	69.4	31	9,325	-43.0		266	82.6	31	8,989	-48.8		261	69.0
250	30	10,859	-46.5		266	34.8	31	10,738	-48.6		272	54.8	31	10,508	-51.8		267	78.7	31	10,531	-51.8		266	91.9	31	10,169	-55.2		264	69.9
200	30	12,309	-56.1		265	40.6	31	12,176	-57.6		271	63.9	31	11,929	-58.4		267	85.1	30	11,952	-59.1		268	93.3	30	11,586	-57.7		266	68.0
175	30	13,148	-61.0		264	44.9	30	13,018	-60.6		275	67.2	31	12,766	-60.3		266	84.9	30	12,786	-60.7		268	91.7	30	12,432	-56.2		263	66.5
150	30	14,094	-65.8		263	45.7	30	13,970	-64.9		271	64.1	31	13,723	-61.7		268	78.1	29	13,740	-61.7		269	86.7	30	13,412	-56.0		264	60.8
125	30	15,187	-71.1		252	35.2	30	15,075	-68.6		268	56.2	31	14,844	-64.9		269	71.5	29	14,862	-64.4		269	74.0	30	14,571	-56.7		265	57.3
100	30	16,490	-76.0		258	29.1	30	16,395	-73.5		268	47.2	31	16,196	-67.3		271	59.1	28	16,218	-66.2		265	63.0	29	15,982	-57.6		262	52.3
80	30	17,771	-77.0		262	15.6	30	17,699	-73.4		267	27.8	30	17,542	-66.6		269	48.8	28	17,570	-66.1		270	43.1	29	17,390	-57.1		258	45.1
70	30	18,551	-73.7		256	8.7	30	18,495	-70.3		259	17.3	30	18,360	-65.9		268	41.0	27	18,389	-64.2		269	35.2	29	18,240	-56.5		253	40.6
60	30	19,454	-68.5		101	1.4	30	19,412	-66.4		259	8.0	30	19,289	-64.9		268	33.2	26	19,330	-62.0		265	28.6	29	19,217	-55.7		250	39.1
50	29	20,562	-63.2		99	4.9	30	20,530	-61.7		266	2.3	30	20,409	-61.5		265	27.8	26	20,467	-58.9		261	25.3	28	20,382	-54.0		252	37.7
40	28	21,952	-58.8		82	10.5	30	21,930	-56.9		73	6.0	28	21,808	-57.4		260	26.4	26	21,879	-55.1		263	20.2	27	21,819	-51.6		249	31.9
30	27	23,772	-55.1		82	20.0	30	23,765	-54.0		89	14.8	25	23,644	-52.6		259	23.1	24	23,727	-52.5		259	12.6	27	23,697	-48.4		246	31.3
25	26	24,940	-53.1		81	23.3	28	24,938	-52.3		93	21.2	25	24,823	-52.4		257	18.7	24	24,909	-50.7		234	5.1	26	24,896	-47.3		247	33.8
20	21	26,396	-50.8		88	30.1	28	26,392	-49.5		98	24.3	23	26,267	-53.1		251	18.1	24	26,369	-49.1		216	3.3	25	26,372	-46.0		251	36.3
15	12	28,254	-48.7				25	28,287	-46.7		100	30.5	23	28,126	-51.7		244	18.5	20	28,239	-47.7		187	10.3	25	28,298	-43.1		249	35.8
10							18	30,987	-42.6		115	33.0	22	30,773	-48.9		220	22.9	6	30,863	-45.3				22	31,058	-39.4		247	25.5
7													14	33,117	-46.0		228	26.4							19	33,548	-34.7		256	24.3
5													10	35,290	-43.0										12	35,805	-33.2			

Standard pressure surface (mb.)	NASHVILLE, TENN. 1000 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	N. Y. INT. AP., IDLEWILD 1019 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	NOME, ALASKA 1018 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	NORFOLK, VA. 1019 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	NORTH PLATTE, NEBR. 919 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	177	- 4.2	82	254	.6	31	5	- 2.9	65	311	6.4	31	7	- 7.2	79	76	10.1	31	9	.8	74	322	3.9	31	848	-14.5	80	333	5.4
1000	31	177			228	.6	31	150	- 3.7	61	307	8.7	31	145	- 5.2	67	92	12.2	31	161	1.4	64	304	5.8	31	196					
950	31	585	- 2.3	63	286	7.8	31	557	- 4.0	59	302	9.5	31	549	- 5.5	68	129	13.4	31	572	.4	60	277	9.3	31	591				
900	31	1,014	- 2.6	61	289	9.3	31	982	- 4.8	60	288	13.6	30	970	- 5.7	68	144	11.1	31	1,006	- .4	56	272	13.0	31	1,002	-11.8	69	328	8.2
850	31	1,468	- 2.7	57	273	16.9	31	1,431	- 6.1	58	279	19.8	30	1,418	- 6.5	66	152	10.1	31	1,464	- 1.2	54	269	18.1	31	1,443	- 9.1	54	318	14.0
800	31	1,948	- 3.5	50	272	22.5	31	1,905	- 6.4	50	268	23.9	30	1,890	- 8.0	63	156	9.5	31	1,946	- 2.7	53	269	21.6	31	1,912	- 8.9	53	313	16.9
750	31	2,459	- 5.2	45	274	29.3	31	2,412	- 8.6	51	264	28.8	30	2,388	-10.0	60	170	8.0	31	2,454	- 4.4	48	262	28.8	31	2,411	-10.1	55	303	21.4
700	31	2,997	- 7.2	40	274	32.3	31	2,940	-11.0	48	262	32.1	29	2,917	-12.7	55	169	6.2	31	2,998	- 6.7	48	260	34.2	31	2,942	-12.0	52	296	25.6
650	31	3,569	- 9.5	34	273	38.3	31	3,507	-13.9	46	259	37.1	29	3,477	-16.0	53	187	6.4	31	3,569	- 9.5	43	260	38.5	31	3,505	-14.7	55	292	29.7
600	31	4,187	-12.5	32	270	45.1	31	4,111	-17.4	47	259	41.2	29	4,078	-19.4	51	192	7.2	31	4,189	-12.7	38	262	44.7	31	4,108	-18.0	54	294	33.6
550	31	4,844	-16.4		270	48.2	31	4,756	-21.0	43	260	48.4	29	4,713	-23.4	48	216	7.4	31	4,841	-16.4		260	53.6	31	4,748	-21.9	53	293	36.9
500	31	5,557	-20.9		269	52.7	31	5,456	-25.3		262	56.3	29	5,411	-28.1	47	223	9.1	31	5,559	-20.9		260	58.7	31	5,449	-26.5	51	290	42.2
450	31	6,326	-26.1		268	56.2	31	6,215	-30.1		264	60.4	29	6,151	-33.2		232	10.3	31	6,321	-26.3		259	65.3	31	6,198	-31.6	47	289	48.2
400	31	7,170	-32.1		266	60.6	31	7,043	-35.5		265	64.5	29	6,977	-39.3		245	13.0	31	7,172	-32.1		262	71.1	31	7,027	-37.4	43	287	49.4
350	31	8,100	-38.9		263	67.8	30	7,968	-42.4		265	68.8	29	7,878	-45.8		248	14.6	31	8,102	-38.8		263	74.4	31	7,936	-43.7		284	50.7
300	31	9,141	-46.4		268	75.0	30	8,994	-48.9		265	77.1	29	8,889	-52.5		243	18.8	31	9,142	-46.8		268	72.7	31	8,957	-50.6		284	56.2
250	31	10,330	-54.4		272	74.4	30	10,174	-55.4		268	71.7	29	10,052	-57.6		238	23.9	31	10,329	-54.5		271	79.9	31	10,126	-57.2		278	54.6
200	31	11,738	-59.5		283	63.0	30	11,587	-56.8		271	68.2	29	11,452	-59.8		243	26.8	31	11,741	-57.9		274	78.1	31	11,528	-59.3		280	56.2
175	31	12,575	-58.7		285	61.8	29	12,436	-55.8		273	63.3	28	12,289	-58.5		244	27.8	31	12,584	-57.5		275	74.0	31	12,365	-59.1		285	53.8
150	31	13,542	-59.4		282	59.1	28	13,421	-55.9		273	57.1	27	13,249	-57.9		260	32.1	30	13,561	-58.5		272	67.6	31	13,331	-58.9		286	51.9
125	31	14,678	-61.4		281	51.5	27	14,575	-57.1		268	47.4	26	14,391	-58.7		268	35.4	30	14,702	-60.5		267	60.2	31	14,472	-60.1		286	52.5
100	30	16,058	-63.2		276	44.3	26	15,979	-58.1		271	50.3	26	15,788	-60.2		274	38.9	30	16,087	-61.3		265	53.0	30	15,854	-61.2		287	47.6
80	28	17,430	-63.2		281	43.7	26	17,385	-57.7		268	46.2	24	17,155	-61.2		279	43.3	30	17,474	-60.5		264	41.4	29	17,237	-62.0		279	48.8
70	28	18,262	-62.1		281	36.7	26	18,236	-56.9		266	38.1	23	17,984	-61.8		284	47.8	28	18,317	-59.9		261	36.1	29	18,068	-62.1		280	48.0
60	28	19,209	-60.6		276	30.7	25	19,204	-56.3		264	36.9	23	18,932	-62.7		287	52.7	28	19,276	-57.6		260	35.2	28	19,029	-61.0		279	47.6
50	27	20,353	-58.0		270	29.3	25	20,367	-54.5		264	32.1	23	20,053	-63.4		291	59.3	27	20,436	-55.1		258	29.0	28	20,163	-60.4		277	46.0
40	26	21,767	-55.2		266	29.7	25	21,805	-51.8		256	29.3	23	21,420	-64.1		297	61.6	25	21,870	-52.5		256	22.7	27	21,571	-57.6		276	45.7
30	26	23,620	-51.1		258	27.0	25	23,680	-49.4		254	28.8	18	23,207	-63.9		307	72.3	24	23,746	-49.1		252	18.1	27	23,407	-52.7		272	52.7
25	26	24,809	-49.7		257	27.8	23	24,888	-47.5		248	28.0	16	24,352	-63.1		315	67.4	22	24,948	-47.6		240	17.1	27	24,586	-52.5			
20	24	26,266	-48.8		256	26.6	22	26,367	-45.4		247	21.4	10	25,908	-58.6		342	62.4	19	26,424	-45.9		253	18.1	27	26,031	-51.8			
15	24	28,166	-46.7		240	22.5	17	28,307	-43.3				10	27,722	-56.4				14	28,354	-42.5		269	34.8	27	27,905	-49.5			
10	24	30,865	-44.1		214	30.1	5	31,109	-39.2																23	30,592	-45.3			
7	23	33,269	-41.6		204	32.4																			20	33,026	-44.5			
5	22	35,568	-38.4																						17	35,268	-42.7			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb.)	OAKLAND, CALIF. 1020 MB						OKLAHOMA CITY, OKLA. 974 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	6	5.5	76	113	3.5	30	392	-6.1	75		
1000	31	170	7.7	66	55	5.1	30	178				
950	31	595	7.3	55	59	5.7	30	586	-3.2	55	275	4.7
900	31	1,049	7.7	40	28	2.9	30	1,012	-3.1	45	255	8.5
850	31	1,509	6.9	33	341	5.3	30	1,458	-1.8	35	261	10.9
800	31	2,006	4.8	29	330	6.6	30	1,952	-.5	34	260	14.6
750	31	2,530	2.3		337	7.8	30	2,466	-2.4	32	263	20.2
700	31	3,084	-.9	30	342	8.9	30	3,012	-4.7	32	271	25.3
650	31	3,668	-4.6		338	8.7	30	3,588	-7.9	29	270	29.1
600	31	4,298	-8.4		343	8.7	30	4,210	-11.4		271	34.4
550	31	4,956	-12.9		339	10.7	30	4,866	-15.5		268	36.5
500	31	5,689	-18.1		328	11.3	30	5,585	-20.5		268	43.1
450	31	6,460	-24.0		325	12.2	30	6,250	-25.9		273	48.6
400	31	7,216	-30.8		334	14.2	30	7,200	-31.8		270	55.4
350	31	8,249	-38.1		338	15.3	30	8,130	-38.7		269	62.4
300	31	9,292	-46.5		347	17.5	30	9,171	-46.9		269	69.8
250	31	10,481	-54.7		351	21.8	30	10,350	-54.4		269	75.9
200	31	11,883	-61.5		328	26.4	31	11,770	-58.8		265	84.3
175	30	12,706	-61.2		307	26.8	30	12,697	-59.5		268	85.5
150	30	13,665	-60.4		297	31.3	30	13,572	-60.5		265	82.6
125	29	14,796	-61.5		294	35.0	30	14,765	-62.1		269	73.1
100	29	16,174	-63.5		296	33.6	28	16,082	-64.4		271	63.0
80	28	17,543	-64.2		295	30.3	23	17,439	-64.0		271	52.3
70	27	18,372	-63.5		294	28.6	19	18,252	-63.1		271	47.4
60	27	19,533	-63.1		292	30.3	22	19,219	-61.9		269	43.1
50	27	20,936	-62.5		291	29.5	21	20,355	-59.1		266	36.9
40	26	21,810	-61.7		287	34.2	18	21,777	-56.3		265	34.0
30	24	23,603	-55.6		277	42.8	24	23,640	-51.7		261	37.9
25	24	24,747	-51.7		273	51.3	11	24,841	-50.1		268	28.8
20	24	26,161	-55.8		269	60.6	8	26,434	-47.4			
15	24	28,000	-54.0		262	54.7	6	28,252	-47.4			
10	22	30,646	-49.7		256	65.5						
7	22	32,974	-45.9		253	71.2						
5	16	35,215	-40.5									

Standard pressure surface (mb.)	OLYMPIA, WASH. 1019 MB						OMAHA, NEBR. 972 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	58	-.4	82	188	1.2	30	403	-15.2	78	341	4.3
1000	31	208	.9	70	115	1.4	30	183				
950	31	621	-.1	45	33	2.1	30	576	-12.4	70	526	5.5
900	31	1,055	-.8	59	355	2.5	30	986	-9.3	82	322	2.2
850	31	1,509	-.6	63	315	3.6	30	1,428	-6.9	85	325	4.4
800	31	1,989	-3.1	49	322	10.5	30	1,896	-9.8	54	295	7.7
750	31	2,498	-4.6	41	323	15.7	30	2,394	-11.0	50	287	21.8
700	31	3,040	-7.2	36	321	21.0	30	2,921	-13.1	47	288	27.0
650	31	3,606	-10.3	35	321	24.1	30	3,482	-15.6	45	287	31.9
600	31	4,227	-13.7	34	322	29.0	30	4,084	-18.6	44	285	40.6
550	31	4,875	-17.7	34	321	33.8	30	4,723	-22.6	46	283	41.8
500	31	5,591	-22.1	33	323	36.7	30	5,420	-27.2	45	283	45.5
450	31	6,349	-27.3	34	322	42.9	30	6,166	-32.1	41	280	53.8
400	31	7,196	-33.6		321	46.6	30	6,996	-37.6		275	56.9
350	31	8,119	-40.0		320	50.5	30	7,904	-44.1		278	62.6
300	31	9,150	-46.9		323	53.0	30	8,922	-51.0		278	69.2
250	31	10,324	-54.5		321	53.2	30	10,091	-57.0		276	71.5
200	31	11,719	-63.9		324	53.4	30	11,497	-58.0		276	73.6
175	31	12,524	-64.5		321	56.6	30	12,438	-57.8		275	73.6
150	31	13,568	-64.6		317	61.1	30	13,326	-58.3		276	68.6
125	31	14,697	-63.8		312	64.7	30	14,456	-59.1		274	66.8
100	31	15,954	-64.7		311	65.7	30	15,852	-60.0		273	63.9
80	31	17,317	-66.7		306	64.9	30	17,240	-60.8		272	61.0
70	31	18,180	-68.0		305	65.7	30	18,077	-60.6		273	56.5
60	30	19,091	-68.9		304	63.7	30	19,033	-59.8		269	54.4
50	30	20,154	-66.6		304	65.3	29	20,180	-58.1		264	55.0
40	25	21,619	-67.8		309	49.7	28	21,591	-55.4		259	55.2
30	18	23,312	-65.9		298	53.0	26	23,448	-50.5		253	57.3
25	17	24,444	-62.7		292	52.8	14	24,617	-50.6			
20	15	25,807	-60.3		286	52.7	6	26,179	-50.4			
15	8	27,672	-65.3									

Standard pressure surface (mb.)	PEORIA, ILL. 996 MB						PITTSBURGH, PA. 976 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	200	-12.7	74	291	2.1	30	353	-7.3	82	261	3.7
1000	30	170			323	2.3	30	152				
950	30	564	-11.4	68	295	8.5	30	557	-6.3	72	250	9.1
900	30	981	-9.2	62	285	14.0	30	987	-7.7	70	255	18.3
850	30	1,429	-8.7	61	292	19.6	30	1,432	-8.3	68	261	24.9
800	30	1,892	-9.2	54	280	23.5	30	1,902	-9.8	64	261	26.4
750	30	2,390	-10.6	50	287	21.8	30	2,401	-10.9	63	262	30.3
700	30	2,921	-13.1	47	288	27.0	30	2,928	-13.0	59	263	35.8
650	30	3,482	-15.6	45	287	31.9	30	3,489	-15.4	51	263	39.6
600	30	4,084	-18.6	44	285	40.6	30	4,093	-18.4	45	262	48.6
550	30	4,723	-22.6	46	283	41.8	30	4,734	-22.1	47	265	52.7
500	30	5,420	-27.2	45	283	45.5	30	5,423	-26.5	45	265	56.7
450	30	6,168	-32.1	41	280	53.8	30	6,179	-31.5		264	67.4
400	30	6,996	-37.6		275	56.9	30	7,011	-37.1		265	70.3
350	30	7,904	-44.1		278	62.6	30	7,929	-43.1		266	78.1
300	29	8,924	-50.7		278	69.2	30	8,949	-49.5		266	84.7
250	30	10,097	-56.1		276	71.5	30	10,126	-55.5		276	73.3
200	29	11,505	-58.8		276	73.6	30	11,541	-56.4		275	69.0
175	29	12,350	-57.8		275	73.6	30	12,389	-56.7		275	61.8
150	29	13,425	-57.5		276	68.6	30	13,266	-57.0		274	55.8
125	29	14,473	-58.9		274	66.8	30	14,317	-57.3		272	51.3
100	28	15,875	-59.8		272	63.9	30	15,366	-57.8		271	44.9
80	28	17,271	-59.6		272	61.0	30	16,477	-58.1		271	38.7
70	28	18,111	-59.6		273	56.5	30	17,588	-58.5		270	36.5
60	28	19,079	-59.1		269	54.4	30	18,811	-58.9		269	34.0
50	28	20,216	-57.2		264	55.0	30	20,037	-57.2		265	31.3
40	27	21,637	-54.4		259	55.2	30	21,491	-54.4		262	29.3
30	27	23,497	-51.2		253	57.3	30	23,197	-51.2		253	28.8
25	27	24,688	-49.7				30	24,688	-49.7		253	31.9
20	27	26,153	-48.4				30	26,153	-48.4		252	30.9
15	26	28,058	-46.7				30	28,058	-46.7		236	34.0
10	23	30,777	-42.0				30	30,777	-42.0		220	32.5
7	19	33,248	-38.7				30	33,248	-38.7		213	35.8
5	17	35,564	-34.6				30	35,564	-34.6			

Standard pressure surface (mb.)	PONAPE, CAROLINE IS. 1004 MB						PORTLAND, ME. 1004 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	39	25.1	88	76	4.1	31	20	-7.0	78	309	4.5
1000	31	77	25.1	86	76	5.8	31	190	-5.8	65	300	5.1
950	31	512	23.1	81	78	13.8	31	593	-6.5	64	294	8.4
900	31	954	20.8	82	84	16.0	31	957	-8.4	63	285	5.9
850	31	1,457	18.1	80	91	15.9	31	1,394	-10.0	68	290	11.1
800	31	2,006	16.1	68	94	19.0	31	1,867	-10.1	54	274	16.5
750	31	2,549	13.2	66	95	24.0	31	2,357	-11.4	51	264	21.8
700	31	3,132	9.5	66	95	15.2	31	2,836	-13.4	49	258	26.6
650	31	3,742	6.4	62	95	16.7	31	3,443	-16.4	51	256	33.6
600	31	4,397	2.8	58	89	22.7	31	4,045	-19.5	47	255	40.0
550	31	5,095	-1.0	58	94	23.1	31	4,684	-23.7	40	252	44.1
500	31	5,853	-5.3	56	95	24.7	31	5,375	-27.8	47	256	47.0
450	31	6,674	-9.8	44	89	24.1	31	6,125	-32.7	43	256	51.7
400	31	7,575	-15.6	32	89	25.5	31	6,950	-38.2		253	60.2
350	31	8,569	-22.5	35	89	24.8	31	7,858	-44.1		252	66.3
300	31	9,684	-31.0		89	23.5	31	8,877	-50.4		253	69.2
250	31	10,951	-41.2		98	22.5	31	10,053	-55.4		255	72.7
200	31	12,427	-53.8		100	22.2	31	11,431	-57.7		255	70.9
175	31	13,272	-60.6		102	23.5	31	12,324	-56.6		255	63.6
150	31	14,214	-68.2		100	24.1	31	13,311	-56.8		254	66.8
125	31	15,287	-76.0		93	26.6	30	14,477	-55.8		255	58.4
100	31	16,551	-82.8		96	25.8	28	15,899	-55.4		259	53.2
80	30	17,800	-80.3		136	11.5	28	17,323	-54.9		249	47.8
70	30	18,561	-76.7		189	1.7	28	18,181	-54.8		249	42.0
60	30	19,455	-72.6		83	1.5	27	19,166	-53.8		244	44.5
50	28	20,344	-67.7		94	15.7	27	20,340	-52.5		242	42.7
40	27	21,898	-62.7		87	36.3	25	21,794	-51.0		243	39.4
30	23	23,689	-56.2		89	49.4	23	23,668	-48.4		238	38.7
25	22	24,845	-55.0		83	49.7	22	24,884	-47.2		236	42.4
20	17	26,292	-50.7		91	47.8	18	26,378	-44.6		241	62.9
15	14	28,293	-46.4		95	26.0	8	28,354	-43.4			
10	10	30,683	-43.5									

Standard pressure surface (mb.)	RAPID CITY, S. DAK. 905 MB						ST. CLOUD, MINN. 987 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	956	-12.7	63	341	6.7	31	316	-18.3	78	285	4.7
1000	31	199					31	172				
950	31	594					31	558	-17.5	71	306	9.3
900	31	1,021			331	8.9	33	967	-16.4	67	309	14.8
850	31	1,450	-11.0	50	317	15.2	33	1,392	-15.7	53	307	19.0
800	31	1,914	-12.8	52	318	22.5	33	1,849	-15.2	45	302	22.5
750	31	2,404	-13.9	55	316	25.0	32	2,335	-17.5	41	298	24.9
700	31	2,926	-16.0	56	313	30.5	32	2,848	-19.5	41	294	28.4
650	31	3,481	-18.1	54	309	31.7	32	3,394	-22.5	44	293	31.5
600	31	4,079	-21.2	53	298	34.4	31	3,982	-24.8	43	290	37.7
550	31	4,711	-25.5	53	296	38.5	31	4,635	-28.5	42	287	42.9
500	31	5,400	-30.0	50	294	42.2	31	5,287	-32.0	44	286	47.6
450	31	6,139	-35.1	44	292	45.7	31	6,022	-37.6		284	52.5
400	31	6,953	-40.4		293	51.3	31	6,824	-43.1		284	56.7
350	31	7,853	-46.2		293	56.7	31	7,714	-48.4		284	62.0
300	31	8,855	-52.2		292	62.8	31	8,717	-53.4		284	71.3
250	31	10,079	-57.7		290	59.5	31	9,880	-57.1		282	70.7
200	31	11,433	-59.4		284	60.0	31	11,288	-57.7		281	67.6
175	31	12,268	-59.5		284	61.2	31	12,131	-57.7		277	68.6
150	31	13,235	-58.3		284	61.8	31	13,105	-57.4		275	65.7
125	31	14,479	-60.0		282	57.6	31	14,254	-58.9		275	67.6
100	31	15,752	-61.5		284	56.7	31	15,651	-59.8		274	67.2
80	31	17,139	-60.7		283	57.8	31	17,045	-58.8		271	63.6
70	31	17,979	-62.7		283	56.1	31	17,888	-59.5		271	63.9
60	30	18,923	-62.7		280	60.0	31	18,844	-59.5		266	65.1
50	25	20,093	-61.3		277	57.1	31	19,990	-57.5		265	65.7
40	24	21,452	-59.1		272	59.3	28	21,395	-55.2		260	72.1
30	20	23,255	-56.3		266	68.2	26	23,256	-50.8		251	67.8
25	19	24,426	-51.4		259	78.9	25	24,449	-50.6		248	73.1
20	12	25,857	-48.0				24	25,929	-47.0		248	69.8
15	8	27,842	-43.2				22	27,828	-45.2		238	67.2
10							20	30,559	-39.8		239	83.5
7							15	33,100	-34.8		234	86.5
5							7	35,503	-33.8			

Standard pressure surface (mb.)	ST. PAUL IS., ALASKA 1005 MB						SALEM, OREG. 1018 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	10	-.8	87	97	11.3	31	61	-.6	81	297	1.0
1000	31	45			73	11.5	31	203	.7	65	342	2.1
950	31	455	-2.7	79	114	17.3	31	620	1.7	59	354	2.3
900	31	884	-2.5	73	133	18.7	31	1,055	1.3	54	303	2.1
850	31	1,336	-3.8	62	140	20.0	31	1,515	.5	51	321	4.9
800	31	1,814	-5.2	54	138	20.2	31	2,020	-.9	44	323	9.9
750	31	2,318	-7.5	47	155	16.3	31	2,513	-2.7	38	324	15.7
700	31	2,853	-10.2	44	147	18.7	31	3,059	-5.3	35	322	18.3
650	31	3,421	-13.6	42	148	19.4	31	3,634	-8.5	36	320	22.0
600	31	4,026	-17.2	35	152	18.5	31	4,254	-11.9	36	320	27.0
550	31	4,673	-21.1	36	150	18.8	31	4,906	-15.8	36	320	30.9
500	31	5,371	-25.9		153	19.2	31	5,627	-20.5	36	319	35.4
450	31	6,123	-31.1	41	157	18.7	31	6,390	-26.0	34	314	36.3
400	31	6,952	-37.3		158	24.3	31	7,241	-32.3		318	39.4
350	31	7,852	-43.8		166	24.9	31	8,169	-39.7		317	38.1
300	31	8,881	-51.0		171	26.2	31	9,204	-48.0		316	41.0
250	31	10,052	-55.9		184	30.3	31	10,382	-56.9		313	41.4
200	31	11,471	-55.3		183	25.5	31	11,769	-64.3		312	42.0
175	29	12,320	-53.6		191	21.6	31	12,585	-65.0		311	42.0
150	29	13,311	-53.7		199	19.4	31	13,531	-63.3		311	43.9
125	25	14,477	-54.2		206	16.8	31	14,654	-63.1		306	41.6
100	23	15,912	-55.0		228	15.7	31	16,022	-64.4		303	44.5
80	20	17,333	-55.8		248	15.7	31	17,383	-65.0		300	44.5
70	19	18,175	-56.4		261	16.1	31	18,200	-65.1		297	42.3
60	15	19,137	-57.1		277	18.7	31	19,136	-65.6		296	46.2
50	13	20,260	-57.8		284	29.7	32	20,241	-66.6		293	49.5
40	11	21,669	-58.1		293	29.7	30	21,607	-65.5		290	51.5
30	11	23,481	-57.8		302	37.1	30	23,358	-65.0		285	56.5
25	11	24,631	-57.7				28	24,478	-64.4		280	61.0
20	11	26,039	-57.4				25	25,859	-61.2		273	71.9
15	8	27,938	-55.1				18	27,750	-52.0		268	76.9
10							5	30,489	-41.1			

Standard pressure surface (mb.)	SALT LAKE CITY, UTAH 876 MB						SAN ANTONIO, TEXAS 992 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,268	-5.7	79	260	1.7	31	243	3.8	65	352	4.5
1000	31	251					31	193				
950	31	652					31	564	5.4	56	330	5.9
900	31	1,079					31	1,036	6.7	47	234	5.1
850	31	1,522	-5.2	64	192	2.7	31	1,505	6.7	41	238	11.3
800	31	1,998	-5.5	54	240	4.7	31	2,002	6.2	38	251	15.7
750	31	2,506	-7.9	52	265	9.5	31	2,528	4.4	30	252	22.3
700	31	3,037	-10.1	53	287	17.1	31	3,089	-.7		265	28.2
650	31	3,605	-12.4	51	299	20.6	31	3,681	-4.8		261	32.1
600	31	4,214	-15.3	49	306	24.9	31	4,315	-5.9		257	36.5
550	31	4,865	-19.5	46	305	29.5	31	4,988	-10.2		258	41.0
500	31	5,568	-24.0	43	306	33.8	31	5,719	-15.0		259	45.0
450	31	6,327	-29.1	42	338	39.1	31	6,502	-20.3		259	52.5
400	31	7,162	-34.5		314	42.0	31	7,371	-26.3		262	61.8
350	31	8,083	-41.1		316	40.4	31	8,323	-33.0		262	70.3
300	31	9,113	-48.7		324	37.3	31	9,388	-41.2		264	79.9
250	31	10,280	-56.1		325	38.1	31	10,602	-50.3		264	92.9
200	31	11,690	-60.9		311	38.7	30	12,033	-58.0		262	2.6
175	31	12,519	-60.9		303	38.5	29	12,873	-60.9		263	1.4
150	31	13,478	-60.2		300	38.3	29	13,825	-63.2		264	8.2
125	31	14,612	-61.4		298	41.0	28	14,937	-66.9		265	7.6
100	31	15,991	-62.7		298	40.6	28	16,273	-69.5		267	12.6
80	29	17,375	-63.9		294	39.2	27	17,605	-69.3		271	39.8
70	29	18,200	-63.9		295	39.1	26	18,413	-68.0		271	32.3
60	28	19,146	-63.2		295	36.1	26	19,337	-65.8		271	23.5
50	28	20,270	-62.8		295	36.9	26	20,456	-62.0		252	14.8
40	27	21,662	-60.6		291	39.8	26	21,854	-57.2		256	11.9
30	25	23,452	-60.2		286	50.9	25	23,692	-53.7		246	5.2
25	21	24,622	-57.0		282	55.6	25	24,870	-52.2		119	4.5
20	20	26,050	-54.3		279	67.2	23	26,313	-51.6		116	3.7
15	17	27,872	-52.7		275	81.6	14	28,172	-50.0		207	5.6
10	8	30,463	-49.5									

Standard pressure surface (mb.)	SAN DIEGO, CALIF. 1004 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	124	8.0	77	58	2.5
1000	31	163	5.8	70	61	2.5
950	31	587	5.6	56	121	.6
900	31	1,036	8.0	49	188	.8
850	31	1,505	6.4	43	240	1.4
800	31	2,002	4.7	40	260	4.3
750	31	2,523	2.3	37	290	7.6
700	31	3,080	-.7	36	288	9.5
650	31	3,663	-3.9		269	10.7
600	31	4,297	-7.7		282	12.4
550	31	4,959	-12.1		280	14.2
500	31	5,692	-17.2		279	18.1
450	31	6,464	-22.6		280	20.0
400	31	7,329	-29.3		279	21.6
350	31	8,270	-36.6		280	24.5
300	31	9,320	-44.5		273	33.2
250	31	10,520	-52.5		269	42.0
200	31	11,939	-58.5		266	52.3
175	31	12,777	-58.6		267	54.6
150	31	13,743	-55.5		268	50.9
125	31	14,874	-62.5		275	47.8
100	31	16,241	-65.6		272	39.1
80	31	17,594	-66.6		278	32.4
70	31	18,414	-65.3		279	29.3
60	31	19,347	-63.9		280	26.0
50	31	20,467	-62.4		281	22.7
40	31	21,854	-59.1		274	25.5
30	29	23,676	-54.6		272	31.7
25	26	24,852	-53.5		264	33.8
20	26	26,286	-53.6		256	36.3
15	14	28,141	-53.0		248	36.1

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb.)	SAN JUAN, P. R. 1016 MB						SANTA MONICA, CALIF. 1015 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	6	22.1	85	91	2.5	31	38	10.1	62	24	4.7
1000	31	145	24.0	76	87	11.1	31	160	12.0	55	46	4.1
950	31	587	19.9	76	85	14.4	31	588	10.0	54	95	3.7
900	31	1,055	16.6	77	84	14.0	31	1,036	7.9	50	124	3.1
850	31	1,540	13.6	76	91	11.5	31	1,506	6.1	44		.0
800	31	2,050	11.6	61	90	11.1	31	2,001	4.5	35	322	3.1
750	31	2,585	9.6	49	90	10.3	31	2,522	2.1	35	307	5.8
700	31	3,158	7.1		98	6.0	31	3,079	- .9	34	298	8.9
650	31	3,757	4.1		73	5.4	31	3,663	- 4.2		288	9.7
600	31	4,411	.9		57	5.4	31	4,294	- 8.3		285	9.9
550	31	5,094	- 3.5		27	5.4	31	4,957	-12.5		282	10.1
500	31	5,851	- 8.2		354	6.0	31	5,686	-17.3		291	12.8
450	31	6,650	-13.9		339	8.7	31	6,460	-23.1		282	16.7
400	31	7,544	-20.6		324	10.7	31	7,319	-29.9		279	20.0
350	31	8,517	-27.9		313	15.2	31	8,256	-37.2		279	21.8
300	31	9,606	-36.2		305	20.0	31	9,303	-45.4		280	27.0
250	31	10,845	-45.5		284	27.8	31	10,497	-53.3		275	34.4
200	30	12,298	-55.6		282	34.8	29	11,916	-58.9		266	40.0
175	29	13,137	-60.6		284	36.7	28	12,752	-59.4		266	44.9
150	29	14,085	-65.6		288	35.8	28	13,715	-60.4		269	46.8
125	29	15,178	-71.3		297	30.5	28	14,845	-62.6		272	41.4
100	29	16,478	-76.7		295	19.8	28	16,210	-65.3		278	36.5
80	29	17,754	-78.2		307	5.1	27	17,567	-65.5		281	32.3
70	29	18,530	-75.4		52	5.2	27	18,384	-65.0		282	31.1
60	29	19,428	-69.3		69	10.5	26	19,324	-64.0		284	27.8
50	29	20,532	-64.0		89	10.5	26	20,444	-62.7		288	24.7
40	28	21,914	-59.4		78	13.6	26	21,827	-60.4		280	25.3
30	27	23,723	-56.3		79	23.9	25	23,632	-56.5		275	36.7
25	26	24,883	-53.9		83	29.0	24	24,801	-54.8		271	42.2
20	25	26,316	-51.9		93	29.7	24	26,232	-52.7		265	49.4
15	24	28,198	-48.9		93	29.1	22	28,087	-53.2		255	52.8
10	21	30,889	-44.1		97	35.8	17	30,704	-50.6		243	55.4
7	11	33,284	-42.1									
5	6	35,642	-36.8									

Standard pressure surface (mb.)	SAULT STE. MARIE, MICH. 988 MB						SHEMYA, ALASKA 989 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	221	-16.0	73	149	1.2	31	38	1.6	88	68	9.5
1000	31	130					31	- 53			61	18.3
950	31	516	-14.2	70	255	7.6	31	356	- .8	82	77	13.8
900	31	928	-15.3	71	267	11.9	31	788	- 3.8	83	90	14.6
850	31	1,358	-17.1	65	272	15.3	31	1,238	- 6.2	78	93	14.0
800	31	1,812	-18.1	62	275	19.8	31	1,711	- 8.4	70	93	13.4
750	31	2,297	-18.6	58	274	21.6	31	2,209	-10.7	62	94	13.8
700	31	2,806	-20.6	53	274	24.5	31	2,738	-13.4	56	95	16.1
650	31	3,354	-23.2	50	273	27.4	31	3,295	-16.5	52	102	17.9
600	31	3,935	-26.2	48	271	33.0	31	3,897	-20.1	46	102	17.7
550	31	4,560	-29.5	44	274	37.5	31	4,527	-24.2	44	103	20.6
500	31	5,234	-33.5		271	41.0	31	5,225	-29.2	41	103	23.1
450	31	5,966	-38.4		271	45.5	31	5,961	-34.7		103	25.5
400	31	6,767	-43.8		270	50.1	31	6,783	-40.2		106	28.6
350	31	7,653	-49.4		270	54.0	31	7,682	-46.5		102	29.9
300	31	8,653	-54.5		269	61.4	31	8,692	-51.7		109	28.6
250	31	9,811	-57.6		271	57.9	31	9,872	-51.9		119	22.5
200	31	11,224	-55.9		273	59.5	31	11,327	-49.0		125	17.1
175	31	12,075	-55.7		271	55.8	31	12,206	-47.9		145	13.8
150	31	13,057	-55.8		270	57.3	31	13,224	-47.6		147	11.9
125	29	14,228	-56.6		270	56.7	31	14,427	-48.2		164	8.7
100	29	15,642	-57.0		267	56.0	30	15,894	-48.6		201	6.4
80	29	17,052	-57.6		265	56.9	28	17,356	-49.9		217	4.7
70	29	17,901	-57.2		262	58.1	26	18,224	-50.8		249	5.6
60	29	18,873	-56.4		257	56.9	25	19,217	-51.4		272	7.2
50	29	20,035	-54.6		256	56.3	25	20,400	-51.7		285	8.2
40	29	21,473	-51.8		252	57.5	23	21,834	-52.0		299	10.9
30	29	23,348	-49.9		251	58.5	20	23,673	-52.6		311	16.9
25	29	24,544	-48.3		249	57.1	20	24,852	-52.1		323	18.5
20	27	26,026	-47.0		248	60.6	19	26,309	-51.6		334	21.4
15	26	27,956	-43.5		249	64.5	18	28,158	-50.7		349	23.3
10	23	30,728	-39.0		237	67.2	9	30,833	-49.8			
7	22	33,182	-37.4		236	46.2						
5	18	35,591	-33.7									

Standard pressure surface (mb.)	SHREVEPORT, LA. 1013 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	79	1.0	82	321	1.2
1000	31	179	.8	69	332	1.0
950	31	599	2.1	58	244	5.8
900	31	1,030	3.1	57	253	11.1
850	31	1,494	2.9	46	257	17.3
800	31	1,984	1.8	41	260	19.8
750	31	2,505	- .2	39	258	24.9
700	31	3,052	- 2.8	40	259	28.8
650	31	3,633	- 5.7	34	258	35.4
600	31	4,260	- 8.9		261	40.4
550	31	4,925	-12.9		260	45.7
500	31	5,649	-18.1		261	50.3
450	31	6,421	-23.3		262	56.2
400	31	7,280	-29.2		261	63.7
350	31	8,221	-36.0		262	73.4
300	31	9,275	-43.8		261	80.2
250	31	10,475	-52.4		264	91.7
200	31	11,893	-59.1		267	94.6
175	30	12,729	-60.6		269	95.0
150	30	13,686	-61.9		268	85.7
125	30	14,809	-64.3		270	75.0
100	30	16,167	-66.6		268	65.9
80	29	17,517	-67.0		266	49.7
70	28	18,338	-65.9		266	46.0
60	28	19,263	-63.5		265	39.1
50	25	20,393	-60.2		262	32.3
40	25	21,791	-56.9		251	26.0
30	24	23,635	-53.4		250	19.8
25	24	24,812	-52.0		244	16.7
20	23	26,258	-51.4		233	14.2
15	22	28,128	-50.8		204	13.8
10	20	30,763	-48.3		197	31.7
7	17	33,081	-45.3		209	35.0
5	16	35,348	-41.5			

Standard pressure surface (mb.)	SPOKANE, WASH. 939 MB						SWAN ISLAND, W. I. 1014 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	722	- 8.0	70	141	1.7	31	10	24.4	77	59	8.4
1000	31	223					31	135	23.7	75	63	11.5
950	31	627					31	583	20.4	76	75	14.0
900	31	1,048	- 7.5	67	213	2.5	31	1,048	17.0	76	82	11.9
850	31	1,494	- 7.4	62	280	7.4	31	1,534	14.4	65	80	8.5
800	31	1,967	- 7.0	58	302	13.2	31	2,044	11.9	55	88	6.4
750	31	2,469	- 8.6	56	307	18.1	31	2,585	10.0	41	98	7.2
700	31	3,002	-11.0	54	310	22.0	31	3,155	8.1		97	7.2
650	31	3,567	-14.0	51	310	27.0	31	3,764	5.8		101	5.1
600	31	4,173	-17.1	46	315	29.7	31	4,415	2.2		93	3.7
550	31	4,817	-20.8	45	312	37.9	31	5,107	- 2.3		133	3.1
500	31	5,519	-25.2	42	317	40.6	31	5,862	- 7.4		168	2.1
450	31	6,268	-30.0		317	45.5	31	6,668	-12.9		264	2.9
400	31	7,106	-35.8		316	50.9	31	7,562	-19.4		283	7.6
350	31	8,021	-42.3		318	53.8	31	8,540	-26.8		280	13.6
300	31	9,047	-49.7		320	59.7	31	9,633	-35.5		279	20.8
250	31	10,219	-57.3		320	62.8	31	10,877	-45.2		268	29.0
200	31	11,609	-62.4		318	66.6	31	12,332	-55.8		266	38.3
175	31	12,435	-61.9		313	61.2	31	13,172	-61.0		262	45.3
150	31	13,390	-61.3		313	53.0	31	14,118	-66.6		268	37.5
125	31	14,522	-61.4		309	53.6	29	15,202	-73.0		266	30.7
100	30	15,900	-63.3		308	56.5	27	16,486	-78.8		270	20.2
80	30	17,265	-65.0		303	52.5	26	17,752	-78.9		267	4.5
70	29	18,092	-65.5		298	53.4	25	18,530	-75.7		164	1.9
60	28	19,033	-65.4		296	50.5	24	19,422	-70.2		86	7.6
50	26	20,127	-65.5		293	55.0	24	20,525	-63.7		84	12.6
40	23	21,496	-64.2		286	55.4	23	21,901	-60.4		87	26.0
30	21	23,275	-61.2		277	65.9	22	23,713	-56.6		88	35.0
25	18	24,422	-57.1		271	71.9	22	24,876	-53.6		88	37.7
20	17	25,841	-51.5		265	72.1	21	26,322	-51.2		87	42.6
15	8	27,694	-38.8				19	28,191	-50.7		93	38.3
10							6	30,885	-44.8			

Standard pressure surface (mb.)	TAMPA, FLA. 1020 MB						TATOOSH IS., WASH 1022 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	8	10.7	86	39	3.1	31	31	4.3	74	71	11.1
1000	31	171	12.7	76	81	3.5	31	204	3.5	71	86	10.3
950	31	600	12.6	58	236	2.7	31	616	1.2	70	73	4.7
900	31	1,056	11.1	61	262	8.4	31	1,052	- .9	67	348	2.7
850	31	1,531	9.3	52	263	12.8	31	1,508	- 1.3	59	318	7.2
800	31	2,012	7.4	50	259	15.7	31	1,990	- 2.2	45	319	12.2
750	31	2,559	5.3	44	256	18.8	31	2,496	- 4.2	38	323	17.5
700	31	3,124	2.3	43	259	22.5	31	3,042	- 6.6	38	325	20.2
650	31	3,713	- .9	39	258	27.4	31	3,612	- 9.8	34	328	23.1
600	31	4,354	- 4.6	40	263	32.3	31	4,231	-13.5	35	326	29.3
550	31	5,026	- 8.8	34	264	37.7	31	4,881	-17.3	36	325	34.4
500	31	5,766	-13.3		263	46.4	31	5,596	-21.8	37	322	33.8
450	31	6,555	-18.9		261	47.2	31	6,353	-27.2	38	322	37.3
400	31	7,428	-25.0		263	49.5	31	7,202	-33.5	40	318	38.1
350	31	8,285	-32.0		265	59.1	31	8,125	-40.6		320	43.3
300	31	9,455	-39.9		268	66.6	31	9,157	-49.0		315	48.4
250	31	10,674	-49.4		268	71.5	31	10,331	-57.6		314	49.0
200	31	12,105	-58.1		266	78.7	30	11,730	-63.9		310	47.4
175	30	12,940	-60.9		266	79.9	30	12,545	-65.1		309	46.2
150	29	13,898	-62.9		266	77.3	30	13,488	-63.5		307	46.4
125	29	15,008	-67.3		265	67.2	29	14,617	-63.2		311	43.9
100	27	16,338	-71.1		262	53.0	26	15,998	-64.0		308	44.7
80	27	17,657	-70.8		262	35.4	25	17,247	-65.8		305	45.1
70	26	18,463	-68.3		257	26.6	24	18,176	-66.0		303	47.8
60	25	19,385	-64.4		255	15.3	24	19,101	-66.2		302	47.0
50	24	20,516	-60.5		252	7.6	24	20,204	-67.0		300	48.2
40	23	21,917	-56.8		49	3.5	24	21,547	-67.8		300	48.2
30	21	23,760	-53.0		91	12.0	22	23,274	-67.6		291	56.7
25	20	24,947	-50.8		94	17.5	19	24,389	-66.2		285	65.1
20	17	26,413	-48.8		105	25.3	17	25,758	-63.2			
15	5	28,267	-48.2				15	27,542	-58.2			
10							13	30,173	-50.8			

Standard pressure surface (mb.)	TOPEKA, KANS. 989 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	269	- 8.9	78	337	2.5
1000	31	181				
950	31	578	- 9.1	64	300	3.9
900	31	998	- 6.6	54	298	9.9
850	31	1,445	- 6.2	45	295	12.6
800	31	1,919	- 7.1	43	291	15.2
750	31	2,421	- 7.9	44	288	20.4
700	31	2,955	-10.0	40	285	25.1
650	31	3,521	-13.0	38	283	28.0
600	31	4,130	-16.4	37	280	34.0
550	31	4,778	-20.3	39	277	40.2
500	31	5,478	-24.9	41	274	45.7
450	31	6,228	-30.1	40	275	49.4
400	31	7,066	-35.9	36	274	54.8
350	31	7,982	-42.4		275	61.0
300	31	9,008	-49.7		274	69.2
250	31	10,193	-56.3		274	71.3
200	31	11,591	-59.0		271	73.8
175	31	12,430	-58.6		269	74.2
150	31	13,399	-58.7		274	64.3
125	30	14,544	-60.0		277	59.3
100	30	15,933	-61.8		277	52.3
80	30	17,311	-62.4		275	49.9
70	30	18,142	-61.3		273	47.8
60	30	19,094	-60.6		273	43.7
50	30	20,234	-59.1		271	44.3
40	28	21,642	-56.4		263	44.7
30	26	23,494	-51.2		263	44.9
25	25	24,685	-50.2		261	45.1
20	20	26,142	-50.1		257	45.5
15	10	27,853	-48.4			
10						

Standard pressure surface (mb.)	TRUK, CAROLINE IS. 1009 MB						TUCSON, ARIZ. 927 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	2	26.5	84	55	4.5	31	789	3.8	65	156	4.7
1000	31	78	26.3	82	68	7.6	31	166				
950	31	523	23.7	81	87	13.4	31	587				
900	31	1,003	20.8	80	88	14.4	31	1,031	8.6	46	144	5.1
850	31	1,497	18.1	75	97	13.4	31	1,502	6.7	42	196	4.1
800	31	2,015	15.6	68	100	13.4	31	1,998	4.2	41	236	7.6
750	31	2,563	12.9	64	101	15.2	31	2,517	1.6	39	262	10.7
700	31	3,139	10.0	61	97	16.1	31	3,074	- 1.0	32	267	15.0
650	31	3,752	6.4	63	98	18.8	31	3,660	- 4.0		267	18.1
600	31	4,406	2.8	56	101	19.8	31	4,289	- 7.9		266	21.6
550	31	5,103	- 1.1	56	97	21.4	31	4,955	-12.0		269	26.2
500	31	5,863	- 5.1	54	103	23.5	31	5,685	-16.8		268	29.5
450	31	6,681	-10.0	49	103	23.3	31	6,459	-22.7		268	33.2
400	31	7,585	-15.5	41	100	22.3	31	7,322	-28.8		267	39.4
350	30	8,580	-22.2		99	22.0	31	8,264	-36.0		265	47.0
300	30	9,695	-30.7		103	21.2	31	9,316	-44.0		264	55.4
250	28	10,957	-41.3		106	21.6	31	10,516	-52.6		266	62.6
200	28	12,433	-53.5		110	23.9	31	11,936	-57.9		265	69.9
175	28	13,278	-60.4		111	23.3	31	12,776	-59.0		265	69.8
150	28	14,222	-68.0		111	24.5	31	13,739	-61.1		265	67.2
125	28	15,296	-76.0		110	25.6	31	14,865	-63.4		265	62.4
100	24	16,561	-82.4		113	29.9	31	16,225	-66.4		267	50.9
80	21	17,811	-80.6		102	15.7	31	17,577	-66.2		271	39.4
70	20	18,579	-76.5		91	5.6	31	18,393	-65.3		275	34.2
60	20	19,474	-71.5		218	1.6	31	19,329	-64.2		275	28.8
50	20	20,560	-68.3		92	14.0	31	20,452	-61.5		275	25.6
40	19	21,912	-64.5		95	37.9	31	21,845	-58.2		272	25.3
30	19	23,692	-59.0		103	52.1	29	23,668	-53.9		266	26.6
25	18	24,841	-56.2		96	59.5	28	24,842	-53.1		266	31.3
20	17	26,269	-52.7		95	64.3	27	26,282	-53.3		258	28.0
15	16	28,154	-47.6		103	34.2	23	28,131	-52.5		246	28.4
10	11	30,870	-43.3				21	30,776	-45.6		228	31.9
7							16	33,181	-41.0		215	38.5
5							5	35,546	-34.2			

Standard pressure surface (mb.)	WAKE IS., PACIFIC AREA 1013 MB						WASHINGTON, D. C. 1009 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	5	24.6	76	62	.8	31	84	- 5.9	73	303	3.1
1000	30	114	23.9	75	71	.8	31	158			302	5.6
950	30	556	20.6	76		.0	31	565	- 2.9	54	295	11.3
900	30	1,027	17.6	73	306	2.5	31	992	- 4.1	56	286	15.0
850	30	1,515	15.6	61	287	4.1	31	1,442	- 4.9	56	280	20.6
800	30	2,028	14.0	43	280	6.0	31	1,918	- 5.8	52	271	24.1
750	30	2,567	12.8		270	9.1	31	2,423	- 7.4	53	263	27.0
700	30	3,148	10.0		269	11.9	31	2,959	- 9.8	49	261	32.1
650	30	3,756	6.3		268	13.6	31	3,528	-12.4	42	264	37.5
600	30	4,411	2.6		270	15.5	31	4,136	-15.5	39	263	41.4
550	30	5,104	- 1.6		275	19.2	31	4,787	-19.5	36	263	45.7
500	30	5,862	- 6.1		278	23.3	31	5,491	-24.0		262	51.5
450	30	6,674	-10.6		277	26.4	31	6,247	-29.0		262	58.5
400	30	7,578	-15.9		275	25.3	31	7,086	-34.7		262	65.9
350	30	8,571	-22.8		277	26.0	31	8,006	-40.8		262	76.2
300	30	9,682	-31.6		286	26.0	31	9,039	-47.9		262	83.9
250	29	10,943	-41.9		290	28.4	31	10,221	-55.3		268	86.9
200	29	12,416	-53.4		289	26.6	31	11,633	-57.3		270	81.0
175	29	13,262	-60.1		286	24.5	31	12,478	-56.7		271	75.2
150	29	14,207	-67.3		281	24.7	31	13,455	-57.0		270	71.5
125	29	15,286	-74.7		280	20.6	31	14,605	-58.5		267	65.7
100	29	16,557	-81.5		277	15.2	31	16,000	-60.0		263	56.3
80	28	17,804	-81.7		261	7.2	31	17,393	-60.0		264	50.9
70	27	18,560	-77.4		227	1.7	31	18,237	-58.8		261	45.1
60	27	19,451	-69.8		92	4.1	31	19,198	-57.7		259	40.2
50	27	20,565	-63.7		86	7.2	31	20,355	-55.5		254	38.7
40	27	21,945	-60.3		93	9.3	29	21,780	-53.4		247	29.9
30	26	23,751	-57.2		90	14.6	29	23,646	-50.0		241	25.3
25	25	24,908	-55.3		89	15.2	29	24,842	-48.4		234	25.3
20	24	26,234	-53.4		80	12.2	29	26,316	-46.9		233	26.2
15	24	28,195	-50.9		69	16.5	25	28,219	-45.5		238	35.6
10	23	30,856	-46.6		88	14.8	19	30,934	-42.5		223	44.7
7	22	33,245	-42.8		107	9.9	14	33,356	-39.7		221	58.5
5	21	35,530	-35.5		33	1.9	10	35,681	-37.3			

Standard pressure surface (mb.)	WINNEMUCCA, NEV. 874 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,310	-11.7	72	117	1.4
1000	31	258				
950	31	656				
900	31	1,080				
850	31	1,524	- 3.1	46	158	1.0
800	31	2,005	- 2.6	41	255	3.7
750	31	2,514	- 4.4	40	296	9.3
700	31	3,057	- 6.4	37	308	13.4
650	31	3,630	- 9.0	35	313	18.1
600	31	4,250	-12.1	33	313	21.6
550	31	4,908	-15.6		316	26.6
500	31	5,625	-20.0		323	31.1
450	31	6,391	-25.6		330	31.1
400	31	7,242	-32.2		332	34.0
350

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb.)	WINSLOW, ARIZ. 854 MB						YAKUTAT, ALASKA 1019 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind		Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed					Direction	Speed
SURFACE	31	1,492	- 7.1	78	170	1.4	31	12	- 1.2	91	96	2.7
1000	31	241					31	162			106	5.1
950	31	648					31	575	.1	75	177	5.2
900	31	1,078					31	1,005	- 1.7	75	216	5.2
850	31	1,528			162	2.5	31	1,459	- 3.3	72	243	6.6
800	31	2,008	- 2.1	49	259	7.0	31	1,938	- 4.7	68	265	11.3
750	31	2,524	- 2.4	43	274	12.2	31	2,443	- 6.8	57	271	15.5
700	31	3,068	- 3.9	38	278	14.0	31	2,981	- 9.2	52	271	16.9
650	31	3,646	- 6.8	36	281	15.5	31	3,546	-12.3	50	274	19.4
600	31	4,269	-10.2		282	21.4	31	4,159	-16.2	46	276	21.6
550	31	4,931	-14.3		279	25.6	31	4,805	-20.0	46	279	24.5
500	31	5,651	-19.5		283	30.9	31	5,511	-24.7	43	285	29.7
450	31	6,418	-24.8		283	33.4	31	6,263	-30.0	42	285	34.2
400	31	7,271	-31.1		284	36.7	31	7,101	-35.7	42	286	42.2
350	31	8,204	-38.1		280	42.2	31	8,017	-42.0		287	49.2
300	31	9,247	-46.1		278	46.2	31	9,044	-49.2		290	51.1
250	31	10,437	-54.4		275	51.1	31	10,219	-56.6		297	56.2
200	30	11,846	-59.2		273	59.7	31	11,611	-63.2		299	57.1
175	30	12,680	-60.4		272	60.4	31	12,428	-64.6		301	56.5
150	30	13,640	-60.5		272	63.9	31	13,370	-64.0		301	48.6
125	29	14,779	-62.7		273	56.2	31	14,488	-63.5		299	51.1
100	28	16,143	-64.8		275	48.0	30	15,852	-64.7		303	52.7
80	26	17,499	-65.2		276	43.9	28	17,198	-66.4		307	52.3
70	26	18,318	-64.6		278	41.0	28	18,005	-67.1		307	55.2
60	26	19,257	-63.7		279	39.2	28	18,933	-68.0		305	57.5
50	25	20,379	-61.8		276	35.4	26	20,023	-69.2		306	59.7
40	23	21,766	-58.9		271	34.2	20	21,341	-68.7		314	56.2
30	21	23,591	-54.8		270	43.5	13	23,070	-67.0		317	59.8
25	20	24,758	-52.9		267	47.6	12	24,182	-63.6		324	61.0
20	18	26,222	-52.9		263	47.2	9	25,598	-53.6			
15	12	28,066	-52.4				8	27,512	-47.5			
10												

Standard pressure surface (mb.)	YUCCA FLAT, NEV. 884 MB						YUMA, ARIZ. 1003 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind		Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed					Direction	Speed
SURFACE	30	1,196	- 5.7	43	334	2.5	30	131	5.4	36	19	2.1
1000	30	217					30	154			21	2.9
950	30	626					30	578	11.2	31	334	6.8
900	30	1,055					30	1,029	8.9	31	342	6.0
850	30	1,512	2.0	31	357	7.0	30	1,500	6.5	31	332	5.4
800	30	1,999	.5	30	9	5.8	30	1,995	4.4	29	311	6.4
750	30	2,512	- 1.2	29	342	7.0	30	2,516	2.0	31	296	7.6
700	30	3,064	- 3.2		326	10.1	30	3,073	- .3	26	284	10.7
650	30	3,640	- 6.4		314	10.5	30	3,657	- 3.6	22	278	12.2
600	30	4,269	- 9.8		312	16.5	29	4,286	- 7.3	19	268	14.6
550	30	4,927	-14.2		311	19.4	29	4,953	-11.9	23	267	17.9
500	30	5,651	-19.2		312	20.8	29	5,683	-17.2	26	267	21.2
450	30	6,416	-24.8		307	23.1	29	6,455	-23.1	24	269	24.7
400	30	7,272	-31.5		310	23.3	29	7,316	-29.4	25	264	28.8
350	29	8,201	-38.8		303	26.4	29	8,255	-36.6	26	264	35.4
300	29	9,240	-47.3		309	28.2	28	9,302	-44.5		259	42.7
250	29	10,424	-55.3		304	31.5	28	10,498	-53.3		256	52.8
200	29	11,829	-60.9		291	35.2	28	11,911	-59.4		250	64.1
175	29	12,659	-60.6		283	41.6	28	12,745	-59.9		251	66.1
150	29	13,620	-60.4		277	45.3	27	13,704	-60.8		252	61.6
125	29	14,753	-61.9		281	42.0	26	14,832	-62.8		256	49.5
100	28	16,126	-64.6		284	38.9	22	16,196	-64.5		266	43.5
80	25	17,500	-65.2		282	34.2	19	17,546	-65.1		268	37.3
70	25	18,316	-64.6		286	29.3	17	18,366	-64.4		269	33.6
60	25	19,256	-64.0		287	32.1	16	19,210	-63.5		272	31.3
50	24	20,364	-63.7		284	33.0	13	20,431	-61.9		263	29.9
40	24	21,741	-60.6		278	36.7	13	21,819	-59.2		258	28.8
30	23	23,540	-57.7		273	45.5	11	23,632	-54.9			
25	22	24,693	-55.1		269	51.3	10	24,813	-54.1			
20	20	26,147	-53.5		263	54.6	10	26,246	-53.7			
15	16	27,998	-52.5		257	54.4	8	28,082	-53.3			
10	6	30,782	-48.0									

Note: All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Relative humidity averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Relative humidity data are not published for standard pressure surfaces for which less than 16 observations are available.

Relative humidity data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from lithium chloride hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes: dynamic height (geopotential) in units of 98 dynamic meter; temperature in degrees Celsius; relative humidity in percent, and resultant winds in degrees and knots.

SOLAR RADIATION DATA

Solar radiation intensities, tabulated in langleys per minute on a surface normal to the direction of the sun.

ALBUQUERQUE, N. MEX.

Date	Sun's zenith distance: A. M. 78.7°	75.7°	70.7°	60.0°	*	P. M. 60.0°	70.7°	75.7°	78.7°
	Air mass: 4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Jan.									
4	----	----	1.23	----	----	----	----	----	----
5	----	----	----	----	----	1.40	1.21	1.12	1.02
6	(1.01)	(1.19)	----	(1.49)	----	(1.49)	(1.31)	(1.41)	1.30
7	1.11	1.24	1.35	1.44	1.54	1.52	1.36	1.27	1.14
9	1.09	1.19	1.30	1.41	1.42	1.36	1.21	1.11	.99
12	1.14	1.23	1.31	1.44	1.45	1.41	1.28	1.12	1.01
13	1.07	1.17	1.28	1.42	1.44	1.44	1.33	1.23	1.16
14	1.04	1.13	1.23	1.40	1.44	1.41	1.26	1.15	1.06
15	1.09	1.16	1.25	1.41	1.45	1.37	1.26	1.17	1.06
16	1.08	1.18	1.25	1.35	1.43	1.36	1.21	1.13	1.02
17	1.06	1.15	1.23	1.41	1.44	1.38	1.27	1.16	1.05
18	1.05	1.15	1.24	1.36	----	----	----	----	----
20	1.03	1.13	1.24	1.38	1.37	1.25	1.23	1.14	1.01
21	1.05	1.15	1.23	1.39	1.41	1.37	1.22	1.11	.99
22	1.03	1.17	1.27	1.38	1.43	1.37	1.24	1.14	1.05
23	1.08	1.16	1.28	1.41	1.39	1.34	1.19	1.07	.99
24	.96	1.06	1.21	1.37	1.41	1.37	1.23	1.14	1.03
25	.99	1.09	1.22	1.37	1.37	1.37	1.23	1.13	1.03
26	.94	1.05	1.18	1.36	1.42	1.39	1.25	1.11	1.04
27	1.01	1.11	1.23	1.38	1.43	1.36	1.16	1.00	.87
29	1.01	1.12	1.23	1.36	----	----	----	----	----
30	1.11	----	----	----	----	----	----	----	----
Averages	1.05	1.15	1.25	1.39	1.43	1.36	1.24	1.13	1.05

BLUE HILL OBS., MASS.

	Air mass: 4.89	3.92	2.94	1.96	*	1.96	2.94	3.92	4.89
Jan.									
2	----	----	----	----	1.28	----	1.18	1.04	----
10	0.77	0.90	1.04	----	1.06	----	.93	.78	.70
Averages	0.77	0.90	1.04	----	1.17	----	1.06	0.91	0.70
				Inoperative from 14th					

OMAHA, NEBR.

	Air mass: 4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Jan.									
6	HM 0.94	HM 1.05	HM 1.19	----	----	----	----	----	----
7	----	----	----	----	HS 1.29	----	----	----	----
8	----	----	HS 1.22	----	----	----	----	----	----
9	----	----	----	----	----	----	HS 1.17	HS 0.99	HS 0.92
16	----	HM .98	HM 1.14	----	----	----	----	----	----
19	----	----	----	----	----	----	HS 1.11	HS .96	----
23	----	HS .97	HS 1.04	----	----	----	HS 1.14	HS .95	HS .92
24	HS .95	HS .98	HS 1.11	----	HS 1.24	----	----	----	----
27	HS .99	HS 1.07	HS 1.19	----	----	----	----	----	----
28	----	----	----	----	----	HS 1.23	----	HS .86	HS .70
Averages	0.96	1.01	1.15	----	1.27	1.23	1.14	0.94	0.85

GUAM, M. I.

	Air mass: 4.92	3.93	2.95	1.97	*	1.97	2.95	3.93	4.92
Jan.									
14	S 0.80	S 0.90	S 1.01						

MADISON, WIS.

Date	Sun's zenith distance: A. M. 78.7°	75.7°	70.7°	60.0°	*	P. M. 60.0°	70.7°	75.7°	78.7°
	Air mass: 4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Jan.									
14	1.00	1.10	1.24	----	----	----	----	----	----
15	----	----	----	----	S 1.36	----	S 1.26	S 1.13	S 1.03
16	----	----	----	----	----	----	M 1.13	----	----
23	S .87	S 1.00	1.16	----	1.29	----	1.12	----	----
24	.85	.94	1.10	----	1.29	----	S 1.17	S 1.02	S .91
27	.90	.99	1.11	----	S 1.29	----	1.12	1.04	S .96
Averages	0.91	1.01	1.15	----	1.31	----	1.16	1.06	0.97

TUCSON, ARIZ.

	Air mass: 4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Jan.									
7	0.90	1.10	1.20	----	----	1.40	----	----	----
9	.90	----	----	----	----	----	----	----	----
10	1.00	----	----	----	----	----	----	----	----
15	----	----	----	----	----	----	----	----	1.00
18	.90	1.00	----	----	----	----	----	----	----
20	1.00	1.10	----	----	----	----	----	----	----
22	1.00	1.10	1.20	----	----	----	----	----	----
25	1.00	----	----	----	----	----	----	----	----
27	1.00	1.10	1.20	----	----	----	----	----	----
Averages	0.96	1.08	1.20	----	----	1.40	----	----	1.00

MAUNA LOA OBS., HAWAII

	Air mass: 3.36	2.69	2.01	1.34	*	1.34	2.01	2.69	3.36
Jan.									
2	----	----	----	----	----	----	1.40	1.31	1.24
3	1.30	1.38	1.48	1.57	1.59	----	1.36	1.30	1.24
4	1.29	1.37	1.46	1.57	1.61	1.52	1.41	1.33	1.25
5	1.31	1.38	1.48	1.58	1.61	1.51	1.40	1.33	1.25
6	1.30	1.38	1.46	1.57	1.62	----	----	----	----
7	----	1.31	1.41	1.51	----	----	----	----	----
8	----	----	----	1.51	----	----	----	----	----
9	1.23	1.32	1.41	----	----	----	----	----	----
10	1.25	1.33	1.42	1.53	1.59	----	----	----	----
11	----	1.31	1.40	1.51	1.58	1.48	1.35	1.26	1.18
12	1.21	1.28	1.37	1.49	1.57	1.48	1.35	1.25	1.17
13	1.24	1.32	1.44	1.57	1.63	1.53	1.42	1.32	1.23
14	1.19	----	1.37	1.49	----	----	----	----	----
15	----	----	1.36	1.49	1.58	1.48	----	----	----
16	1.24	1.32	1.41	1.52	----	----	----	----	----
17	----	----	----	----	----	----	----	1.28	1.20
18	1.19	1.26	1.36	1.48	1.57	1.47	1.36	1.26	1.19
19	1.18	1.26	1.36	1.47	1.57	1.46	----	1.25	1.17
22	1.19	1.27	1.37	1.49	1.59	----	----	----	----
23	1.26	1.34	1.42	1.54	1.63	----	1.42	1.34	1.26
24	1.23	1.31	1.40	1.52	1.60	1.50	1.38	1.27	----
25	1.22	1.30	1.40	1.51	1.60	----	----	1.28	1.22
26	1.27	1.35	1.44	1.56	1.64	1.52	1.39	1.31	1.22
27	1.15	1.24	1.34	1.48	1.61	1.50	1.38	1.28	1.19
28	----	1.26	1.36	1.48	1.58	1.48	1.36	1.26	1.18
30	----	----	----	----	1.61	1.51	1.39	1.30	1.22
31	----	----	----	----	1.63	----	----	----	----
Averages	1.24	1.31	1.41	1.52	1.60	1.50	1.38	1.29	1.21

( ) Clouds present
S Slight haze - indeterminable
M Moderate haze - indeterminable
HS Slight haze
HM Moderate haze
* Values corresponding to true solar noon.

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys. JANAURY 1963

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	---	290	73	180	260	304	334	332	---	122	143	363	365	351	353	351	352	338	140	398	368	373	367	371	372	379	381	---	310	314	326	307
AMES IOWA	40	48	68	42	32	92	152	200	113	56	69	207	228	258	325	260	164	218	188	182	100	107	258	289	167	216	312	283	218	183	118	167
ANNETTE ALASKA	13	18	14	5	16	5	57	61	86	128	32	25	17	24	42	41	77	54	38	21	76	26	18	51	60	68	98	103	145	155	150	55
APALACHICOLA FLORIDA	337	239	355	363	169	59	184	385	347	117	311	198	164	240	234	130	181	317	220	222	407	374	132	458	399	85	305	433	366	297	179	265
ASTORIA OREGON	8	16	132	116	165	180	166	42	39	189	196	185	19	55	66	114	85	194	186	182	58	195	208	34	178	140	156	50	192	20	11	115
ATLANTA GEORGIA	317	248	311	219	166	107	229	---	299	130	55	166	131	94	299	337	102	77	36	63	377	366	90	393	331	246	384	396	164	69	370	219
BETHEL ALASKA	29	17	53	55	63	48	62	47	9	17	19	20	15	3	9	37	13	35	16	26	3	5	3	26	34	6	34	48	108	23	15	29
BISMARCK N.DAK.	181	142	39	120	125	148	133	110	78	120	83	204	212	228	211	183	135	230	171	155	143	192	224	237	242	208	252	208	256	254	141	173
BLUE HILL MASS.	162	171	55	49	98	111	136	59	178	201	161	11	14	201	221	166	186	41	219	100	253	249	227	262	253	177	69	286	286	81	181	157
BOISE IDAHO	181	74	52	201	181	70	47	59	218	229	239	240	79	62	59	194	140	---	254	226	242	249	258	180	193	268	187	63	101	133	81	159
BOSTON MASSACHUSETTS	165	167	60	51	89	115	107	56	183	203	147	13	16	243	220	167	176	30	215	108	266	251	229	280	263	151	69	299	294	85	179	158
BROWNSVILLE TEXAS	341	350	301	251	166	329	227	394	375	391	366	73	141	132	84	154	206	184	259	314	412	346	204	168	396	339	73	53	315	261	370	257
CANTON ISLAND P.I.	507*	680*	724*	684*	705*	653*	717*	697*	689	699	715	733	711	691	698	682	690	715*	715	716	582	599	671	669	692	719	739	663	746	713	715	296
CAPE HATTERAS N.C.	314	299	261	260	275	191	49	154*	292	298	278	251	87	50	82	218	263	81	143	95	167	370	336	375	367	70	218	386	371	91	196	212
CARIBOU MAINE	75	123	145	60	83	96	105	56	159	91	184	51	36	---	118	---	196	77	154	48	160	119	69	170	223	161	37	172	237	170	273	126
CHARLESTON S.C.	350	343	346	312	225	90	343	250	362	350	298	107	160	118	203	188	260	65	33	59	359	401	295	440	395	71	352	449	234	99	292	253
CLEVELAND OHIO	133	153	71	32	66	354	351	645	139	108	4	19	138	159	181	186	153	114	90	104	210	69	72	227	219	155	161	255	205	94	261	165
COLUMBIA MISSOURI	130	52	31	35	42	32	148	263	259	29	32	206	304	190	281	277	227	206	70	314	209	115	337	335	158	150	357	340	81	155	113	177
CORVALLIS OREGON	41	39	148	---	---	---	---	9	127	208	220	215	91	83	99	54	101	162	232	221	216	194	242	166	224	201	252	27	274	88	---	151
DAVIS CALIFORNIA	152	95	167	257	270	201	178	263	212	124	306	303	286	268	278	254	268	204	306	264	283	273	226	222	82	178	75	44	52	31	30	198
DODGE CITY KANSAS	241	263	131	51	253	297	277	278	279	75	194	319	316	204	301	289	300	114	265	246	302	117	344	324	289	291	306	---	---	---	250	247
E. LANSING MICHIGAN	216	60	53	47	102	41	49	58	100	16	36	84	231	235	251	233	143	84	44	174	256	145	189	264	200	176	211	260	180	229	274	150
EL PASO TEXAS	193	247	224	353	349	258	380	360	385	377	318	165	405	403	394	399	384	281	323	426	410	424	418	433	434	436	391	381	432	433	382	361
ELY NEVADA	277	221	102	274	281	284	292	299	264	88	321	325	288	297	308	256	306	167	333	322	312	326	325	331	323*	351	281	152	86	81	65	235
FAIRBANKS ALASKA	6	2	---	17	19	14	10	10	6	3	4	3	5	10	3	5	35	4	3	10	8	12	14	8	12	18	46	37	45	11	7	13
FLAMING GORGE UTAH	267	240	135	99	240*	---	---	---	192	100	---	286*	126	186	167	163	107	148	328	265	222	241	316	314	---	331	297*	295	194	259	---	155
FORT WORTH TEXAS	225	295	156	32	45	343	339	336	324	324	263	297	367	364	357	331	225	350	87	263	371	355	395	389	140	140	350	251	69	141	165	261
FRESNO CALIFORNIA	179	65	148	203	248	245	272	266	258	172	235	293	273	263	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GAINESVILLE FLORIDA	---	302	389	359	268	8	279	279	297	264	299	100	57	74	200	75	170	228	228	185	320	326	37	387	300	55	130	257	297	310	202	223
GLASGOW MONTANA	---	---	---	---	---	---	---	---	45	100	165	190	107	116	135	101	81	198	62	91	87	183	200	167	193	232	184	216	247	253	194	154
GRAND JUNCTION COLO.	325	328	149	305	302	159	289	284	196	134	339	350	329	336	346	264	209	108	315	374	380	332	366	370	227	388	337	330	175	124	185	279
GREAT FALLS MONTANA	35	117	152	130	144	150	112	68	86	138	---	119	82	109	71	179*	89	174	45	74	62	133	140	115	146	215	116	195	158	216	168	113
GREENSBORO N.C.	321	312	297	302	178	171	141	134	310	260	218	240	124	168	311	342	257	178	38	159	357	346	141	396	374	52	380	425	388	68	310	248
GRIFFIN EXP.STA.GA.	385	315	372	282	139	90	231	256	360	170	86	268	166	83	323	427	74	66	51	73	446	438	153	470	411	291	460	455	137	74	294	253
INDIANAPOLIS INDIANA	72	133	214	---	---	---	---	95	264	114	207	72	211	263	247	278	245	232	68	202	307	167	230	347	188	133	363	368	181	178	308	211
INYOKERN CALIFORNIA	318	81	268	347	349	358	363	360	364	356	358	393	389	383	385	385	389	378	404	400	401	406	406	381	412	412	383	332	344	127	206	350
LAKE CHARLES LA.	---	196	296	66	---	159	312	336	262	165	187	49	228	209	334	354	75	78	---	65	394	88	196	395	72	116	368	273	86	86	66	197
LANDER WYOMING	221	203	130	99	188	214	246	214	181	185	237	271	251	250	264	262	218	169	262	226	279	182	315	248	296	315	310	281	231	259	261	234
LARAMIE WYOMING	221	213	150	71	251	169	226	237	198	144	207	274	198	235	236	176	210	126	289	219	250	145	287	118	176	301	256	283	175	171	159	205
LAS VEGAS NEVADA	280	81	110	228	296	307	311	314	310	294	333	326	334	329	328	327	335	333	353	344	339	340	347	293	355	366	255	320	282	124	83	289
LEMONT ILLINOIS	51	27	25	70	101	34	85	118	81	22	19	186	248	247	161	219	149	206	62	213	262	90	285	306	121	178	317	305	177	233	269	157
LITTLE ROCK ARKANSAS	259	208	---	58	33	43	239	258	189	238	64	105	312	308	283	300	224	261	25	253	319	192	288	337	106	29	322	348	30	80	178	196
LOS ANGELES CALIF.WB	165	54	268	289	294	---	308	244	183	237	253	299	334	306	322	307	292	156	322	342	336	299	240	265	52	294	106	164	141	179	55	237
LOS ANGELES CALIF.CO	171	46	256	263	287	297	304	276	110	259	219	293	322	304	314	293	287	119	302	337	335	295	271	214	28	294	184	138	159	185	54	233
MANHATTAN KANSAS	15	121	74	7	12	284	244	255	257	2	64	260	303	173	295	212	171	172	212	270	280	68	303	282	231	165	335	316	103	212	215	191
MATANUSKA ALASKA	---	10	15	43	7	7	18	54	16	13	4	13	6	11	11	55	24	3	21	21	4	19	24	33	39	81	27	89	90	68	88	30
MAUNA LOA OB.HAWAII	---	---	555	560	560	523	433	440	531	564	559	551	576	557	555	556	---	564	516	542	448	588	598	592	600	605	597	595	555	561	603	553
MEDFORD OREGON	49	44	73	80	84	92	132	86	100	234	239	240	224	222	185	186	52	180	250	233	227	217	231	223	221	226	261	105	91	45	39	157
MIAMI FLORIDA	378	393	398	380	233	183	398	280	425	389	---	---	---	---	---	---	---	419	324	427	162	305	426	218	166	396	431	238	288	355	417	334
MIDLAND TEXAS	244	334	279	365	351	351	377	374	377	354	356	161	397	393	386	398	387	285	281	418	404	403	388	432	414	414	278	389	404	418	369	361
NASHVILLE TENNESSEE	---	---	258	160	54	38	41	270	286	46	74	36	181	306	286	310	209	117	16	40	300	306	113	354	254	35	339	354	209	29	230	181
NEWPORT RHODE ISLAND	201	200	75	60	116	122	127	97	180	202	132	28	30	245	226	176	224	52	188	89	259	257	235	278	244	182	71	280	286	75	147	164
NEW YORK N.Y.CO	235	96	138	148	97	132	81	126	138	160	43	11	20	250	235	175	236	29	25	46	288	234	121	299	287	132	144	319	272	32	310	157
NORTH OMAHA NEBRASKA	44	105	129	44	44	223	217	225	173	60	95	219	277	287	277	234	172	161	260	254	138	145	319	312	265	213	342	324	280	276	177	203
OAK RIDGE TENNESSEE	257	255	253	233	78	69	40	124	264	42	116	180	135	252	268	273	247	81	47	60	313	300	22	318	298	48	314	332	260	41	244	186

Note. --Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

JANUARY 1963

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
OKLAHOMA CITY OKLA.	180	254	159	35	48	311	303	298	300	169	176	286	338	280	332	316	310	170	161	320	333	319	367	341	343	324	360	328	122	319	170	260
PAGE ARIZONA	253	134	117	171	177	62	88	74	91	129	316	301	296	297	295	312	304	223	309	302	299	299	299	271	305	289	294	268	192	78	100	224
PHOENIX ARIZONA	162	111	90	300	300	289	336	283	323	89	318	359	371	350	353	345	352	355	375	369	365	361	366	369	367	364	374	349	346	301	343	314
PORTLAND MAINE	88	164	109	131	97	159	95	87	178	173	86	34	65	295	192	225	140	55	155	64	234	174	138	258	250	171	71	228	227	127	251	152
RAPID CITY S.DAK.	182	---	175	100	184	179	180	130	32	100	138	220	141	190	155	230	177	150	248	147	218	134	210	219	271	266	285	229	180	272	225	185
RIVERSIDE CALIFORNIA	146	82	297	301	331	336	340	329	93	181	207	368	323	317	355	347	338	261	381	357	370	342	335	261	83	314	105	247	274	252	82	270
SAINT CLOUD MINN.	40	42	50	46	181	73	166	75	81	165	55	137	196	222	225*	232	112	236	245	211	105	218	140	252	245	137	277	198	241	272	227	150
SALT LAKE CITY UTAH	236	217	95	235	225	218	228	246	225	162	197	295	138	150	165	74	189	137	306	291	225	296	303	280	69	318	290	162	65	64	30	198
SAN ANTONIO TEXAS	321	365	274	60	359	342	311	382	368	370	374	160	382	387	---	170	64	363	101	405	415	384	418	434	234	310	249	84	137	276	237	291
SANTA MARIA CALIF.	227	104	---	271	291	294	293	---	189	106	313	298	329	320	319	325	317	318	302	339	344	336	325	288	265	275	201	---	108	133	63	260
SAULT STE MARIE MICH	111	118	29	76	47	74	62	36	69	179	122	104	254	179	247	224	232	178	101	130	238	---	284	200	274	287	197	269	139	315	302	169
SAYVILLE NEW YORK	160	126	98	103	177	120	139	114	130	170	73	12	15	189	198	174	196	37	56	46	209	200	172	232	231	116	93	235	227	49	248	140
SEATTLE TACOMA WASH.	25	46	102	52	45	37	48	22	61	205	221	192	54	45	14	69	40	220	186	175	---	---	---	---	---	---	---	---	---	---	---	---
SHREVEPORT LOUISIANA	199	153	179	64	143	66	299	329	233	322	233	115	327	344	344	360	197	69	58	119	378	316	224	388	67	69	285	348	29	---	56	210
SPOKANE WASHINGTON	24	66	138	45	60	44	45	34	88	190	181	161	87	61	43	87	---	210	116	141	167	173	134	116	230	107	79	193	238	97	61	114
STATE COLLEGE PENN.	260	152	115	153	117	167	66	61	208	191	27	43	147	261	232	223	244	184	142	65	256	192	39	274	299	174	173	320	263	114	305	176
STERLING VIRGINA	282	262	160	262	258	205	178	61	239	261	108	111	54	301	295	282	304	72	52	157	318	281	33	332	283	105	255	358	331	64	336	213
STILLWATER OKLAHOMA	238	159	186	33	51	285	278	279	285	101	117	297	312	228	308	294	272	256	135	301	308	263	340	325	317	307	345	318	120	285	213	244
SWAN ISLAND W.I.	465	279	330	311	431*	512	494	396	430	472	509	496	496	408	481	470	199	453	369	507	473	495	513	538	483	523	544	396	430	464	383	416
TAMPA FLORIDA	362	314	367	368	319	175	291	266	373	362	377	272	206	236	217	107	275	352	338	371	349	433	62	406	323	63	201	400	371	391	384	301
TUCSON ARIZONA	107	74	297	295	251	295	342	269	336	---	89	322	372	366	369	364	345	370	374	390	380	377	380	380	383	388	396	381	396	374	351	327

Note.--Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

NET RADIATION

Net radiation in langleys per day (midnight to midnight) at Huntley, Mont., during the month JANUARY 1963

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	-10	-10	7	29	-17	-16	-47	-70	-37	-42	-102	-75	-10	3	23	26	-5	-61	-13	-29	-41	-32	-57	4	-26	-11	-9	-16	*0	2	66	-19

The measurement is made with a Beckman and Whitley net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

* less than +0.5

These data are of an experimental nature and are published as received from the Huntley Exp. Station. The instrument with which they were measured has not been checked by the Weather Bureau.

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code λsΩΩΩ defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units: Milli-atmo-cms.

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O_3
Bismarck, N. Dak.	00350	20335	37348	33379	34339	00344	20307	34317	36414	33395	36400	20396	20374	00393	00363	33379	34364	00392	00366	34350	36338	38429	00441	02456	00429	36461	00417	00424	00485	00424	33372	386
Caribou, Maine	03441	03388	00397	36389	36371	34361	33353	37373	00367	34369	02398	34361	-----	03419	33418	00371	00425	35428	00430	-----	-----	03424	-----	-----	33491	34467	-----	38509	00468	34416	00438	411
Green Bay, Wis.	-----	35390	35419	-----	34380	-----	37344	37331	33352	33359	35343	-----	34451	32429	00422	00420	34413	00409	-----	02529	02394	00390	-----	08473	00434	00438	00493	34430	35378	00444	00370	409
Mauna Loa, Hawaii	-----	00265	00264	00258	00261	00265	00271	00288	00281	00273	00265	00263	00275	00267	00246	00250	00250	00241	00240	-----	-----	00248	00245	00250	00252	00251	00250	00239	00241	00231	00235	256
Midland, Texas	04287	03299	-----	00300	00287	00290	00303	00279	00298	00304	00292	-----	-----	00307	00304	00290	00296	05298	-----	00354	00300	00306	-----	00293	00283	03276	04279	04255	04255	00254	03256	290
Nashville, Tenn.	03377	00385	00339	00329	04364	-----	03373	03336	00317	05349	05338	05327	-----	00312	00340	00314	00329	-----	-----	-----	-----	00330	-----	-----	-----	-----	-----	-----	-----	-----	-----	341
Sterling, Va.	-----	00352	05377	00388	-----	-----	37328	06377	03340	00331	07342	-----	-----	00336	00341	00330	00314	05319	-----	-----	00388	00356	05357	00382	03359	-----	-----	00385	03320	06333	00366	351

The spectrophotometer measures the total amount of ozone in the atmosphere, i.e., the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded ΩΩΩ) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e.g., 350 milli-atmo-cm ozone implies an ozone layer 0.350 centimeter thick. The code λs designates the type of measurement made.

DESCRIPTION of CHARTS

CHART I., A. AVERAGE TEMPERATURE (°F.) AT SURFACE. B. DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL. -The average monthly temperature presented in Chart I-A is computed from the average daily maximum and the average daily minimum which in turn are computed from the daily maximum and minimum temperatures reported by some 870 Weather Bureau and cooperative stations. The departures from normal are presented in Chart I-B. They are based on the 30-year normals (1931-60) for the first-order Weather Bureau stations. More detailed charts, based upon data for many more stations, are included in the issues of Climatological Data for the several states and groups of states.

CHART II. TOTAL PRECIPITATION. - Chart II is based on daily precipitation records at about 870 Weather Bureau and cooperative stations. More detailed charts, based upon data for many more stations, are included in the issues of Climatological Data for the several states and groups of states.

CHART III. PERCENTAGE OF NORMAL PRECIPITATION. -In this chart the anomaly in the month's precipitation is shown as a percentage of the normal total. This anomaly shows the deviation from the 30-year normal (1931-60) for about 270 first-order Weather Bureau stations.

CHART IV. TOTAL SNOWFALL. CHART V. A. PERCENTAGE OF MEAN MONTHLY SNOWFALL. B. DEPTH OF SNOW ON GROUND. -Chart IV gives the total depth in inches of unmelted snowfall as reported during the month by Weather Bureau and cooperative stations. This is converted in Chart V-A into a percentage of the mean monthly total amount computed for each Weather Bureau station having at least 10 years of record. The depth of snow on ground is that reported by both Weather Bureau and cooperative stations as of 7:00 a. m. Eastern Standard Time on the Monday nearest the end of the month. This is reported only for the months December through March. The snowfall charts are presented each month November through April.

Isolines for Charts I, II, III, IV, and V, are drawn through points of approximately equal value. Caution should be used in interpolating on these charts, particularly in mountainous areas.

CHART VI. A. PERCENTAGE OF POSSIBLE SUNSHINE. B. PERCENTAGE OF MEAN MONTHLY SUNSHINE. -CHART VI-A shows the amount of sunshine received in terms of percentage of the total hours of sunshine possible during the month. In Chart VI-B this is shown as a percentage of the mean number of hours of sunshine received. Means are computed for Weather Bureau stations having at least 10 years of record.

CHART VII. A. AVERAGE DAILY VALUES OF SOLAR RADIATION, LANGLEYS. B. PERCENTAGE OF MEAN DAILY SOLAR RADIATION. -Shown on Chart VII-A are the monthly averages of daily total solar radiation, both direct and diffuse, in langleys (gm. cal. cm.$^{-2}$) for all Weather Bureau stations which record this element. Supplementary data for which limits of accuracy are wider than for those data shown are drawn upon in making the analysis. Chart VII-B shows the percentages of the mean based on at least 5 years of record during the period 1950-1960.

CHART VIII. -TRACKS OF CENTERS OF ANTICYCLONES AT SEA LEVEL.

CHART IX. TRACKS OF CENTERS OF CYCLONES AT SEA LEVEL. -Centers which can be identified for 24 hours or more are tracked in these charts. Semi-permanent features such as the Great Basin and Pacific Highs and Colorado and Mexico Lows are not shown. The 7:00 a. m. EST positions are shown by open circles, with the intermediate positions at 6-hour intervals shown by solid dots. The date is given above the circle and the central pressure to whole millibars below. A dashed track indicates a regeneration rather than actual movement to the next position. Solid squares indicate position of stationary center for period shown beside it.

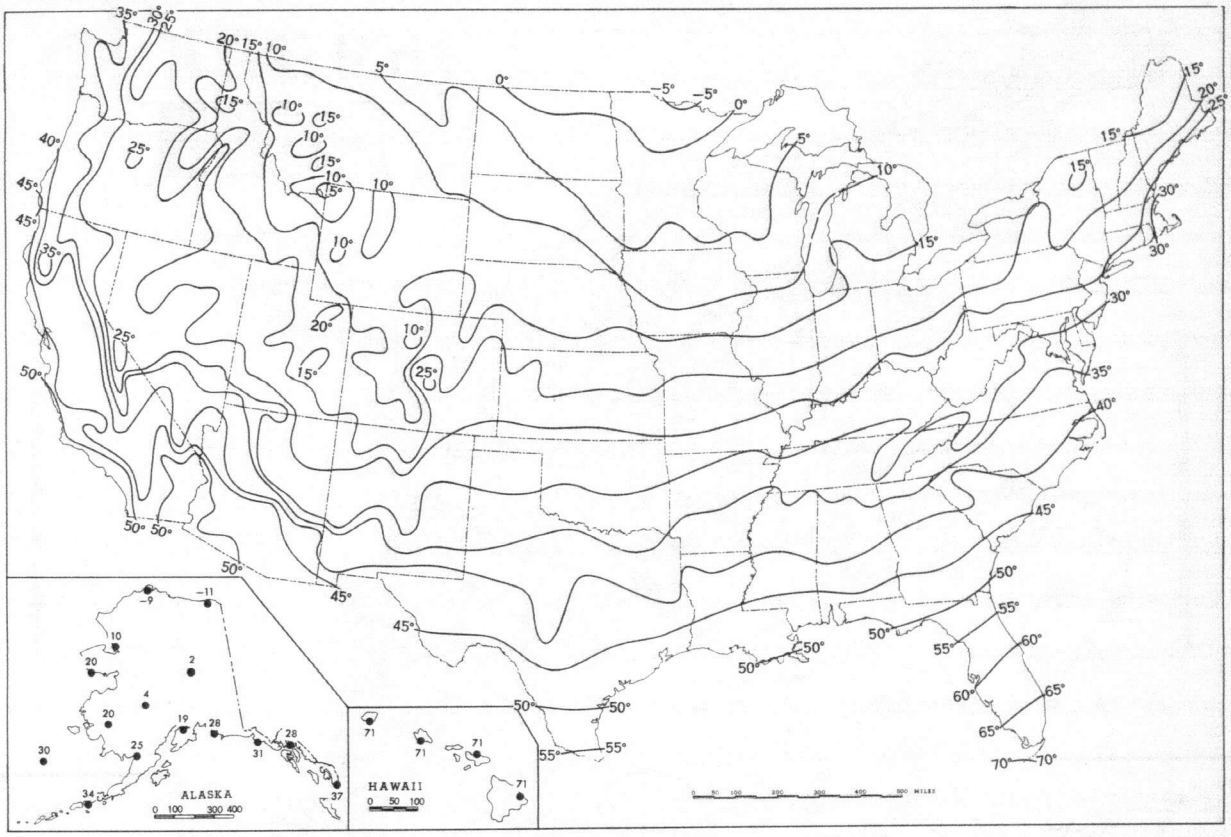
CHART X. AVERAGE SEA LEVEL PRESSURE (mb.) AND SURFACE WINDROSES. -The average monthly sea level pressure is obtained from the averages of the 7:00 a. m. and 7:00 p. m. EST pressures reported at Weather Bureau stations. Windroses are based on the hourly wind directions (to 16 points of the compass) reported by Weather Bureau stations, each circle or arc indicating 5 percent of the time. The inset shows the departure of the average pressure based on 30-year normals for first-order Weather Bureau Stations, other stations having at least 10 years of record, and, for each 10° intersection in a diamond grid over the oceans, from interpolated values read from the Historical Weather Maps for the 20 years of best coverage prior to 1940.

CHARTS XI-XVI. AVERAGE HEIGHT, TEMPERATURE, AND RESULTANT WINDS, 850, 700, 500, 300, 200, and 100 mb. -Height is given in geopotential meters and temperature in degrees Celsius. These are the averages of the 1200 GMT radiosonde reports. Wind speeds are given in knots; flag represents 50 knots, full feather 10 knots, and half feather 5 knots. Directions are shown to 360° of the compass. Winds are based on rawins at the indicated pressure surface and at 1200 GMT.

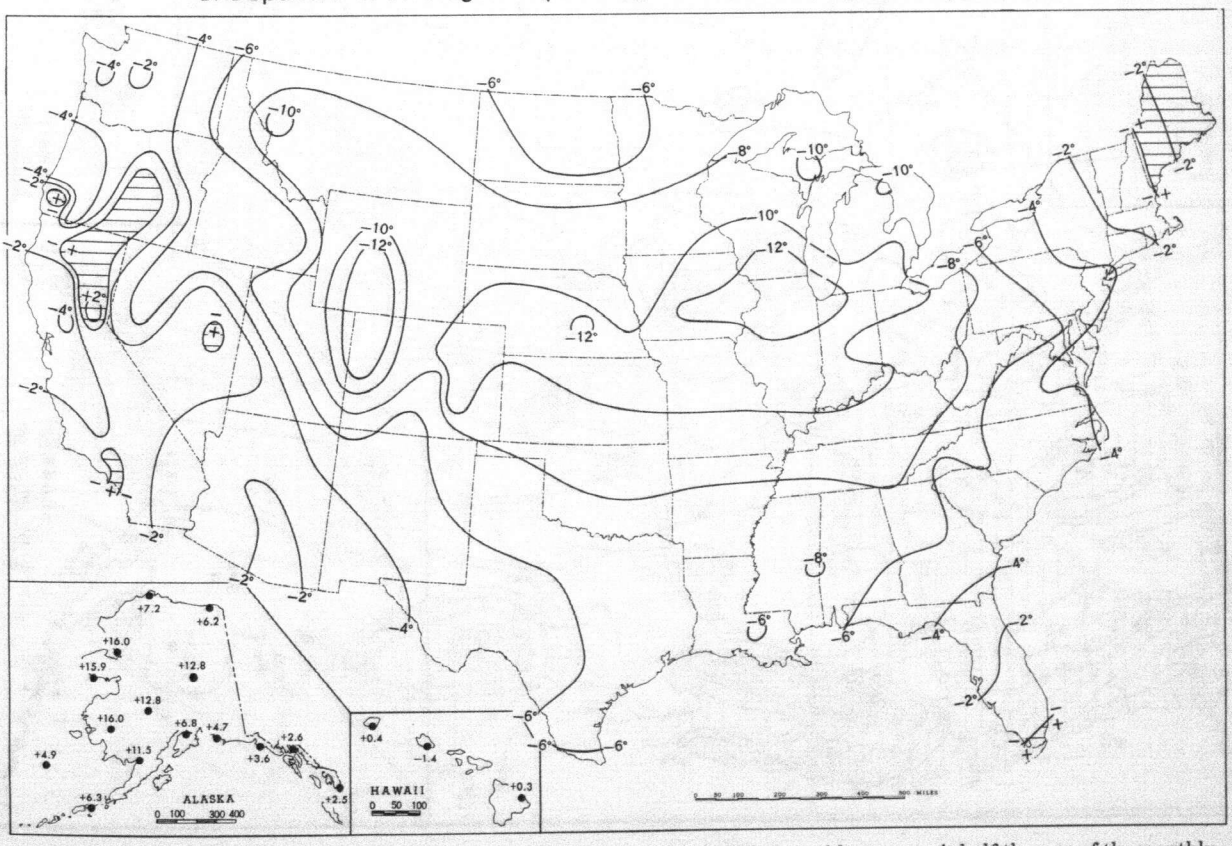
CHART XVII. A. 50-MB. RESULTANT WINDS. B. 30-MB. RESULTANT WINDS. -Wind speed (isotachs) in knots. Arrows show resultant wind direction. Winds are based on rawins at the indicated pressure surface and at 1200 GMT.

Exact values of most of these charted elements for Weather Bureau stations are printed each month in tabular form in CLIMATOLOGICAL DATA, NATIONAL SUMMARY. Extreme values of temperature and precipitation for each state are included in the tables, Condensed Climatological Summary. Annual averages are presented in the CDNS Annual Issue each year.

Chart I. A. Average Temperature (°F.) at Surface, January 1963.



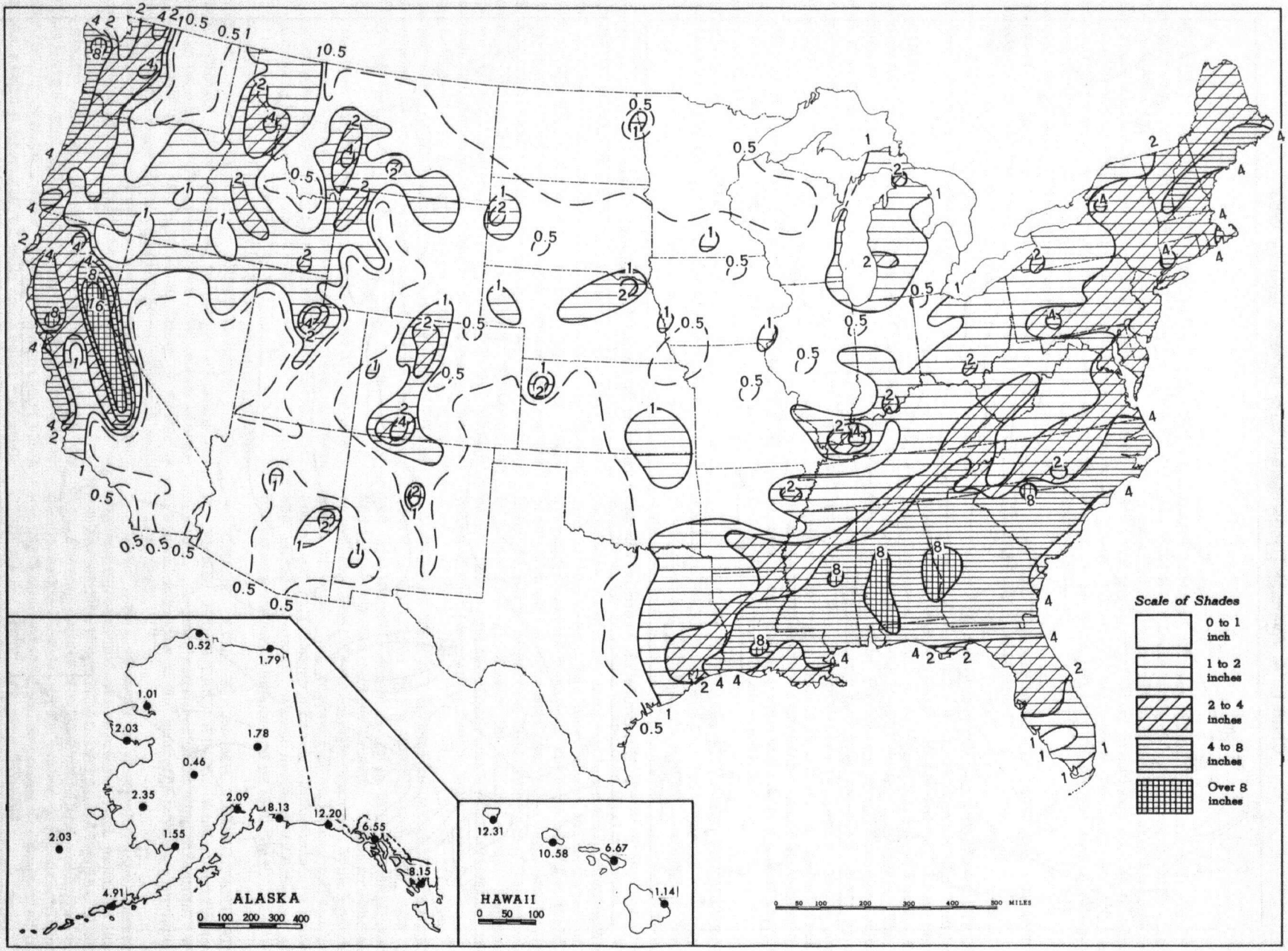
B. Departure of Average Temperature from Normal (°F.), January 1963.



A. Based on reports from over 870 Weather Bureau and cooperative stations. The monthly average is half the sum of the monthly average maximum and monthly average minimum, which are the average of the daily maxima and daily minima, respectively.

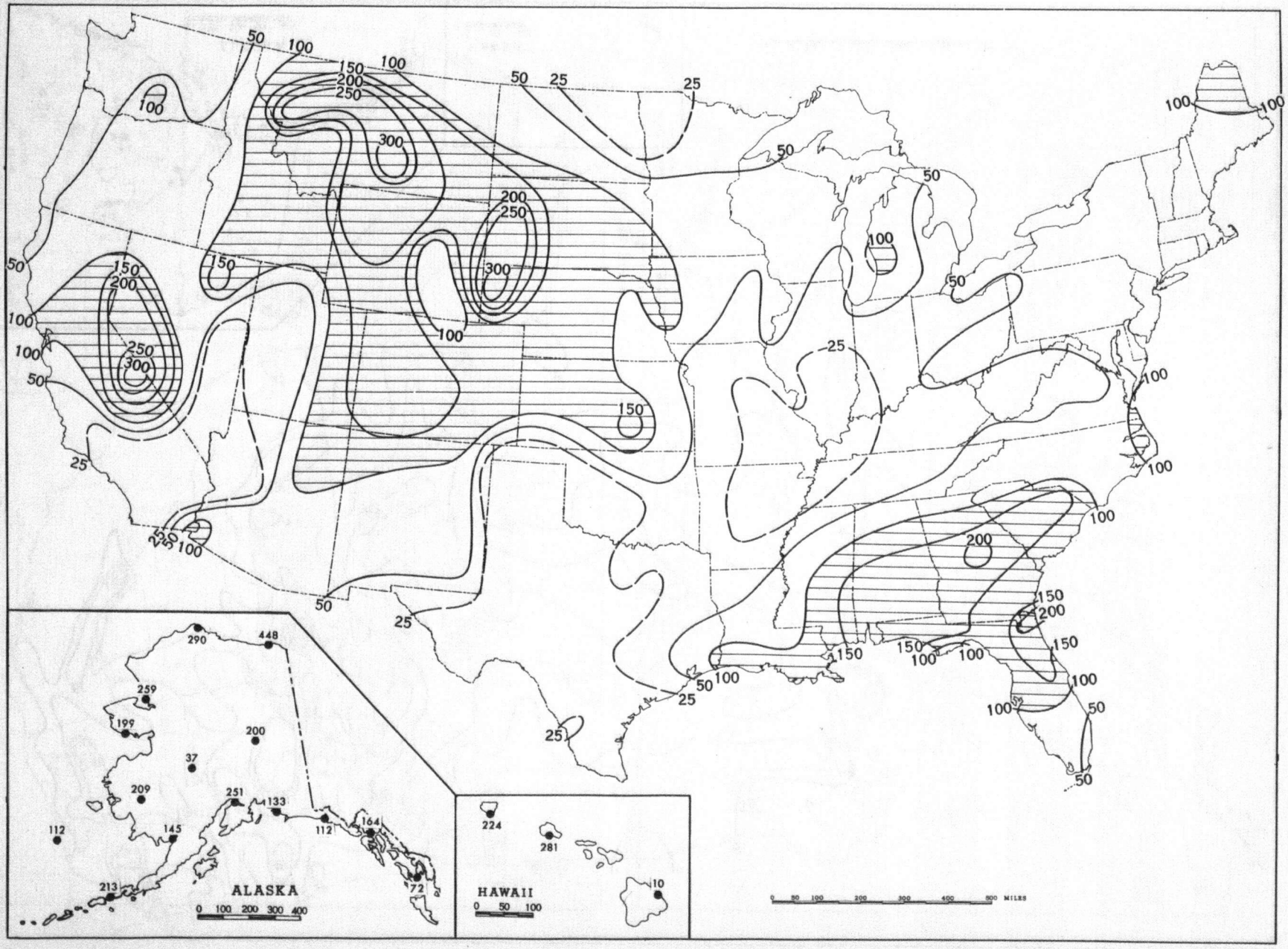
B. Departures from normal are based on the 30-yr. normals (1931-60) for first-order Weather Bureau stations.

Chart II. Total Precipitation (Inches), January 1963.



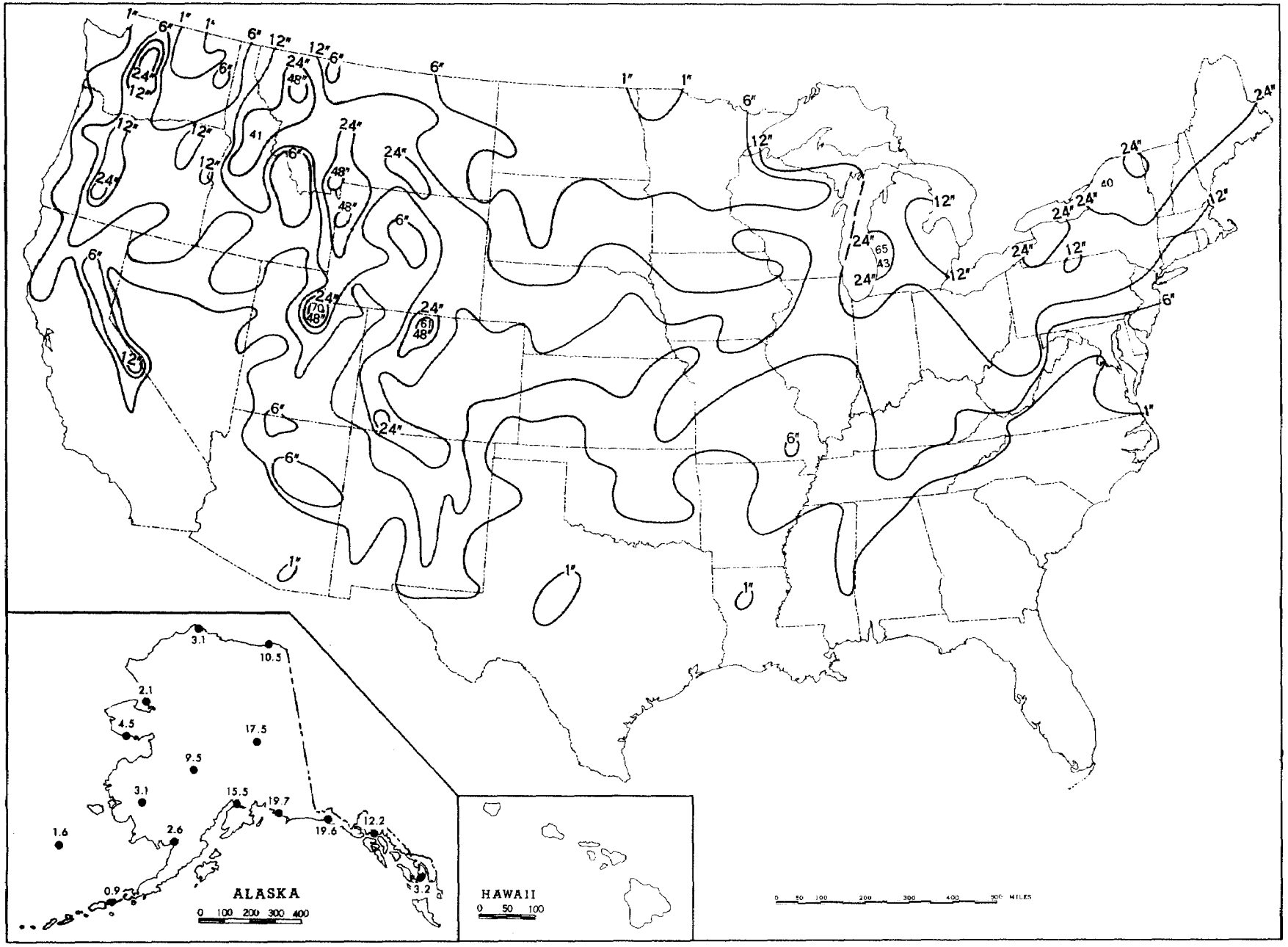
Based on daily precipitation records at about 870 Weather Bureau and cooperative stations.

Chart III. Percentage of Normal Precipitation, January 1963.



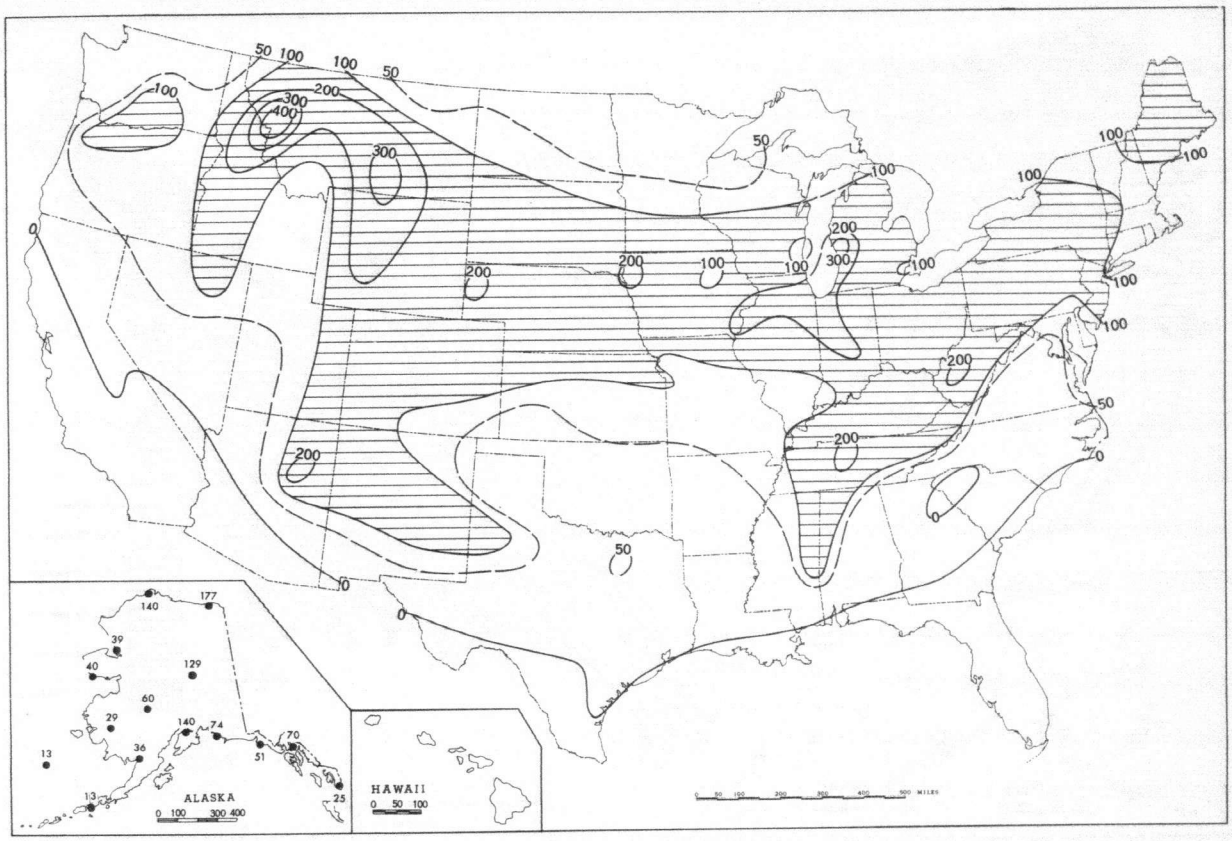
Normal monthly precipitation amounts are computed from 30-yr. normals (1931-60) for first-order Weather Bureau stations.

Chart IV. Total Snowfall (Inches), January 1963.

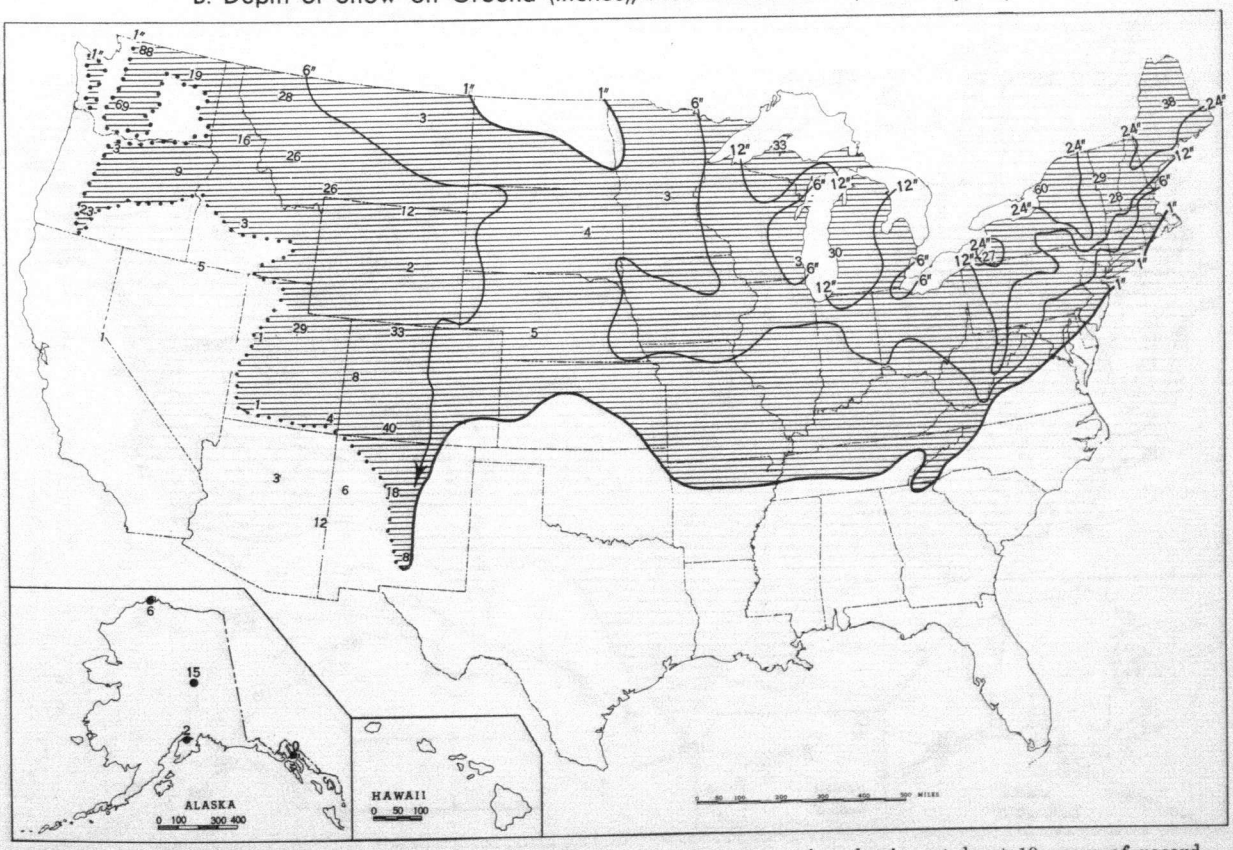


This is the total of unmelted snowfall recorded during the month at Weather Bureau and cooperative stations. This chart and Chart V are published only for the months of November through April although of course there is some snow at higher elevations, particularly in the far West, earlier and later in the year.

Chart V. A. Percentage of Mean Monthly Snowfall, January 1963.

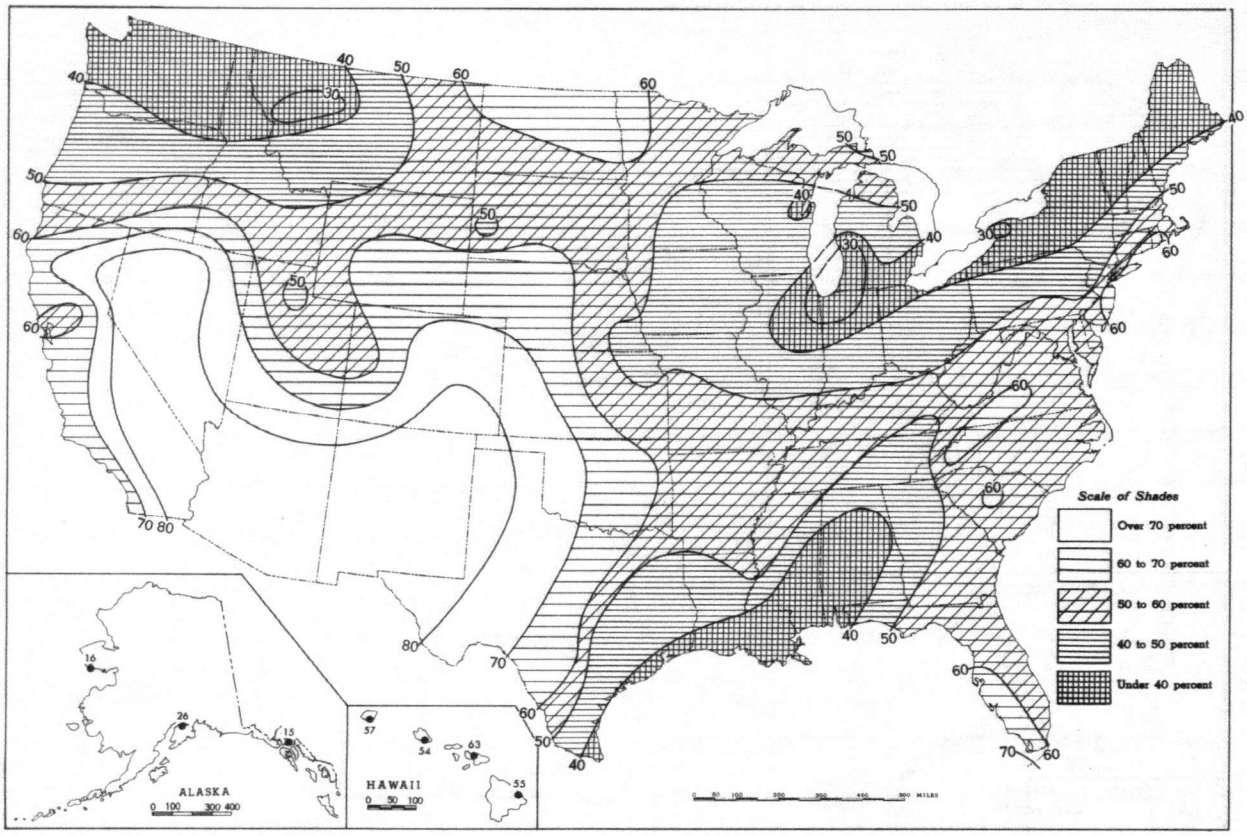


B. Depth of Snow on Ground (Inches), 7:00 a. m. E. S. T., January 28, 1963.

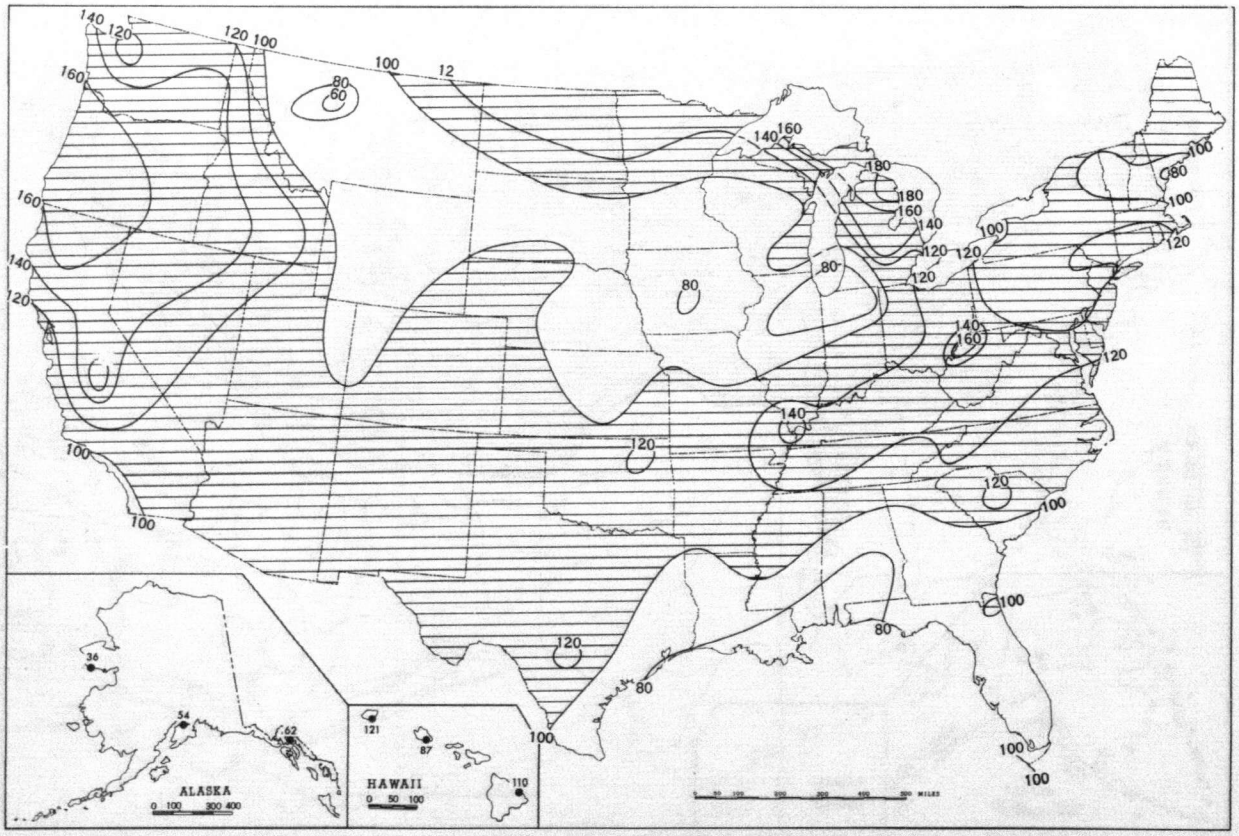


A. Amount of mean monthly snowfall is computed for Weather Bureau stations having at least 10 years of record.
B. Shows depth currently on ground at 7:00 a.m. E.S.T., of the Monday nearest the end of the month.
It is based on reports from Weather Bureau and cooperative stations.

Chart VI. A. Percentage of Possible Sunshine, January 1963.

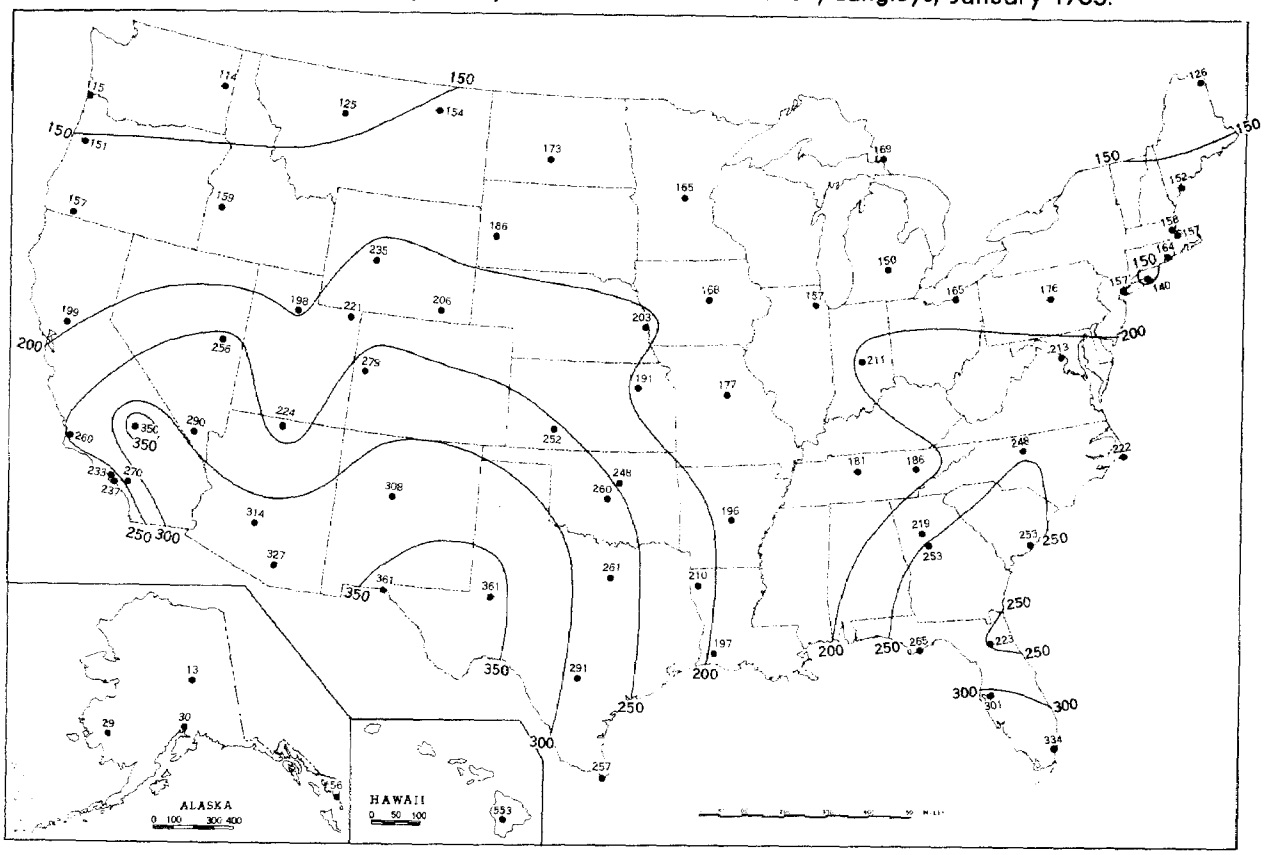


B. Percentage of Mean Monthly Sunshine, January 1963.

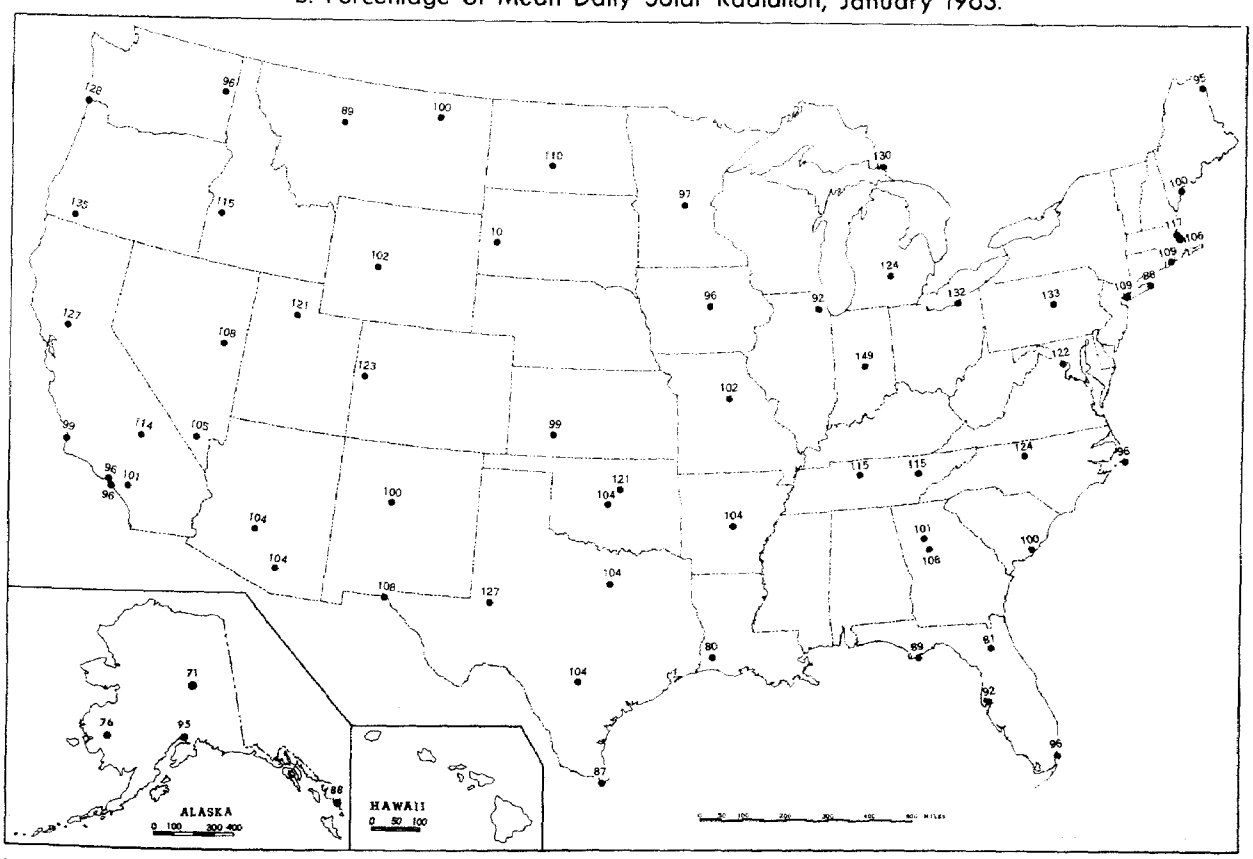


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, January 1963.

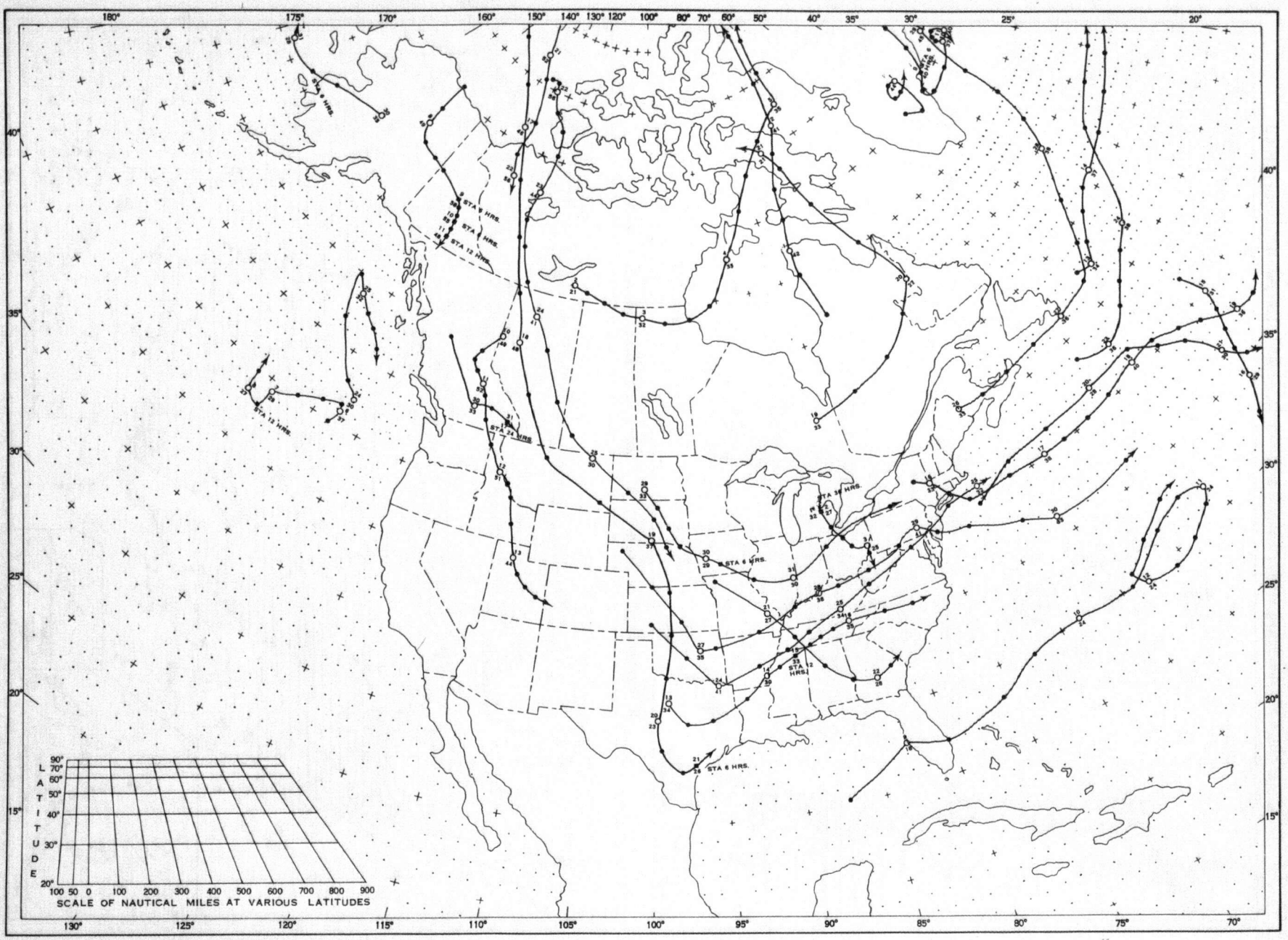


B. Percentage of Mean Daily Solar Radiation, January 1963.



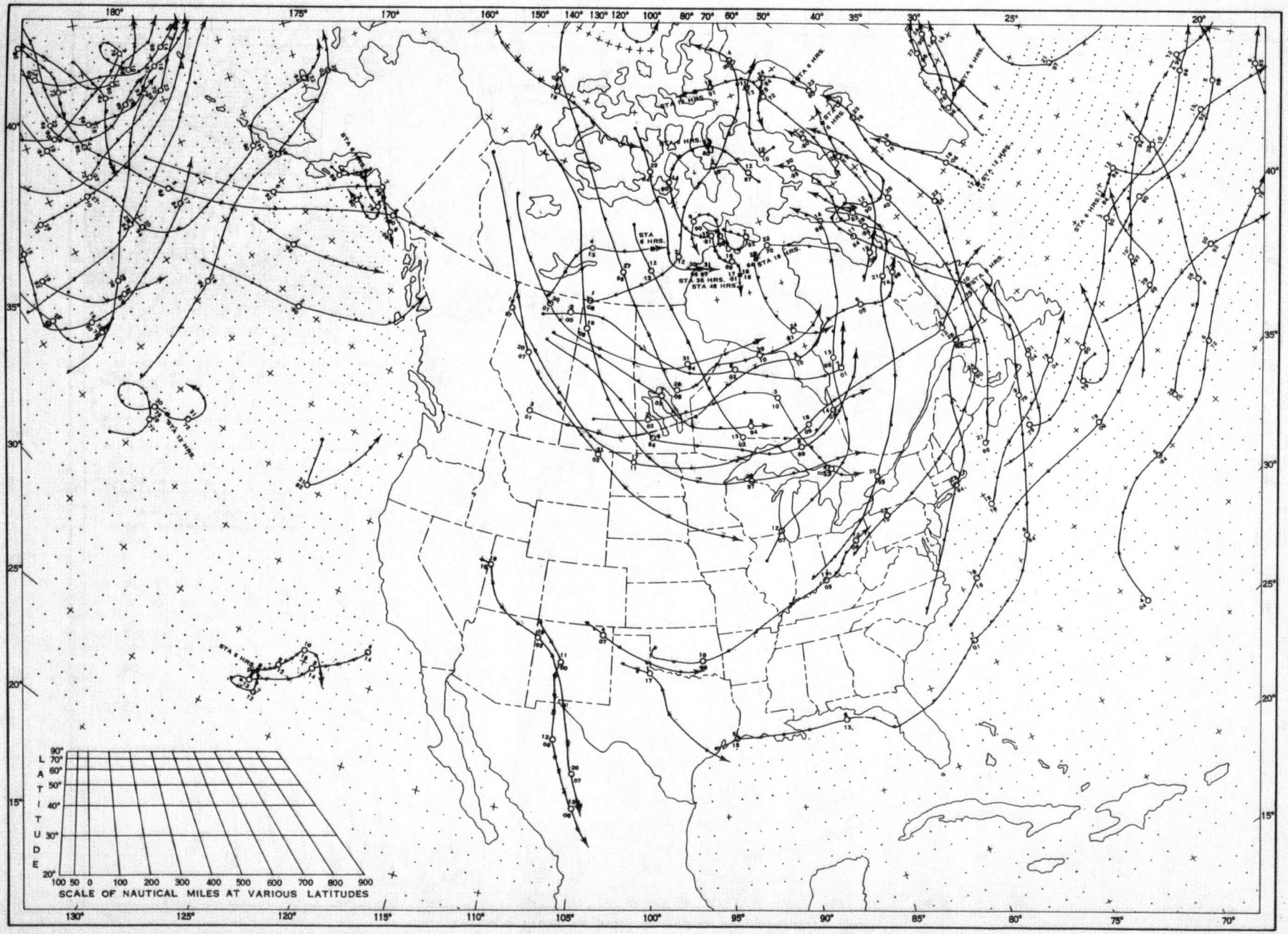
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm.$^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-1960, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII. Tracks of Centers of Anticyclones at Sea Level, January 1963.



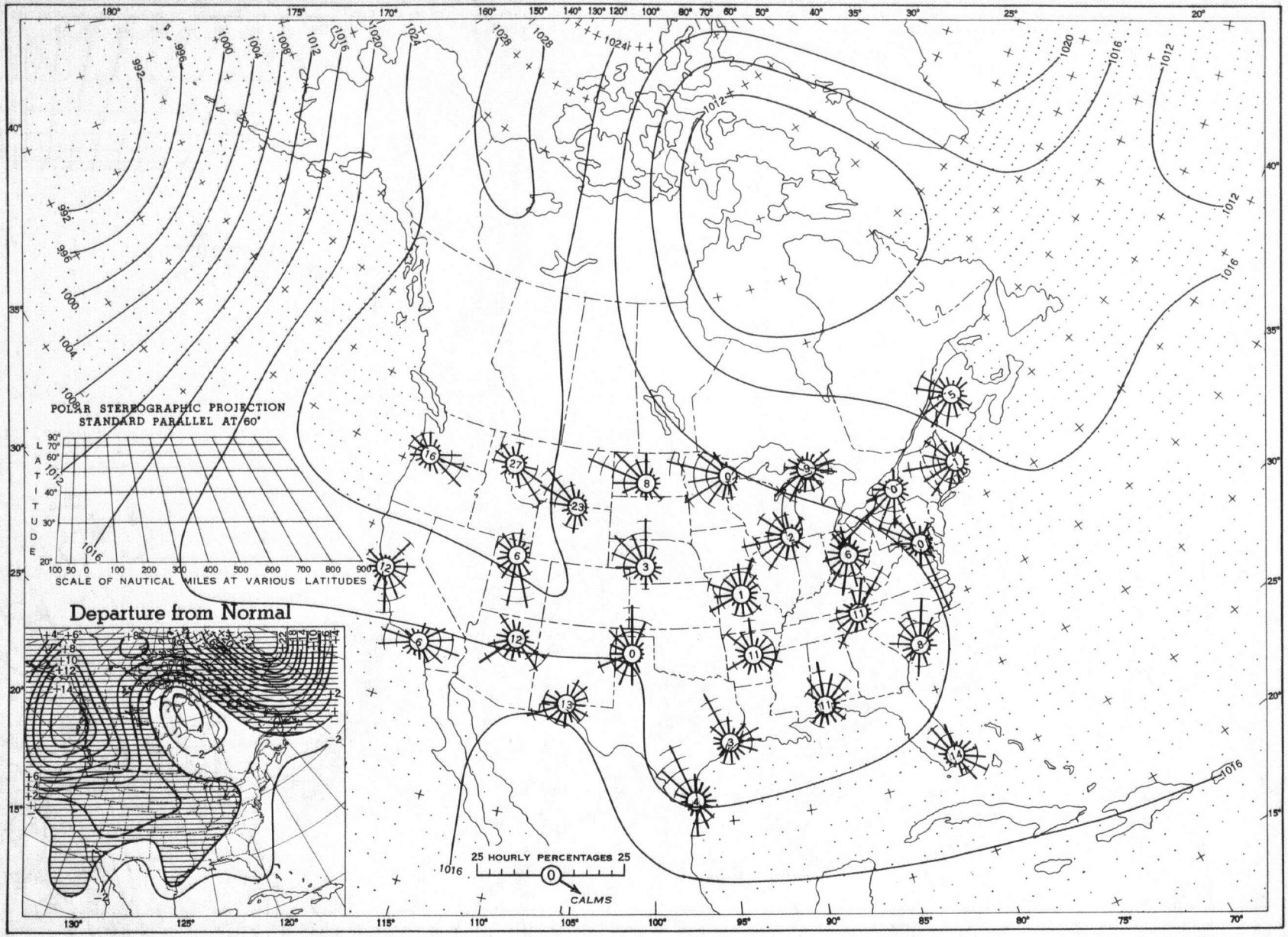
Circle indicates position of center at 7:00 a. m. E. S. T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX. Tracks of Centers of Cyclones at Sea Level, January 1963.



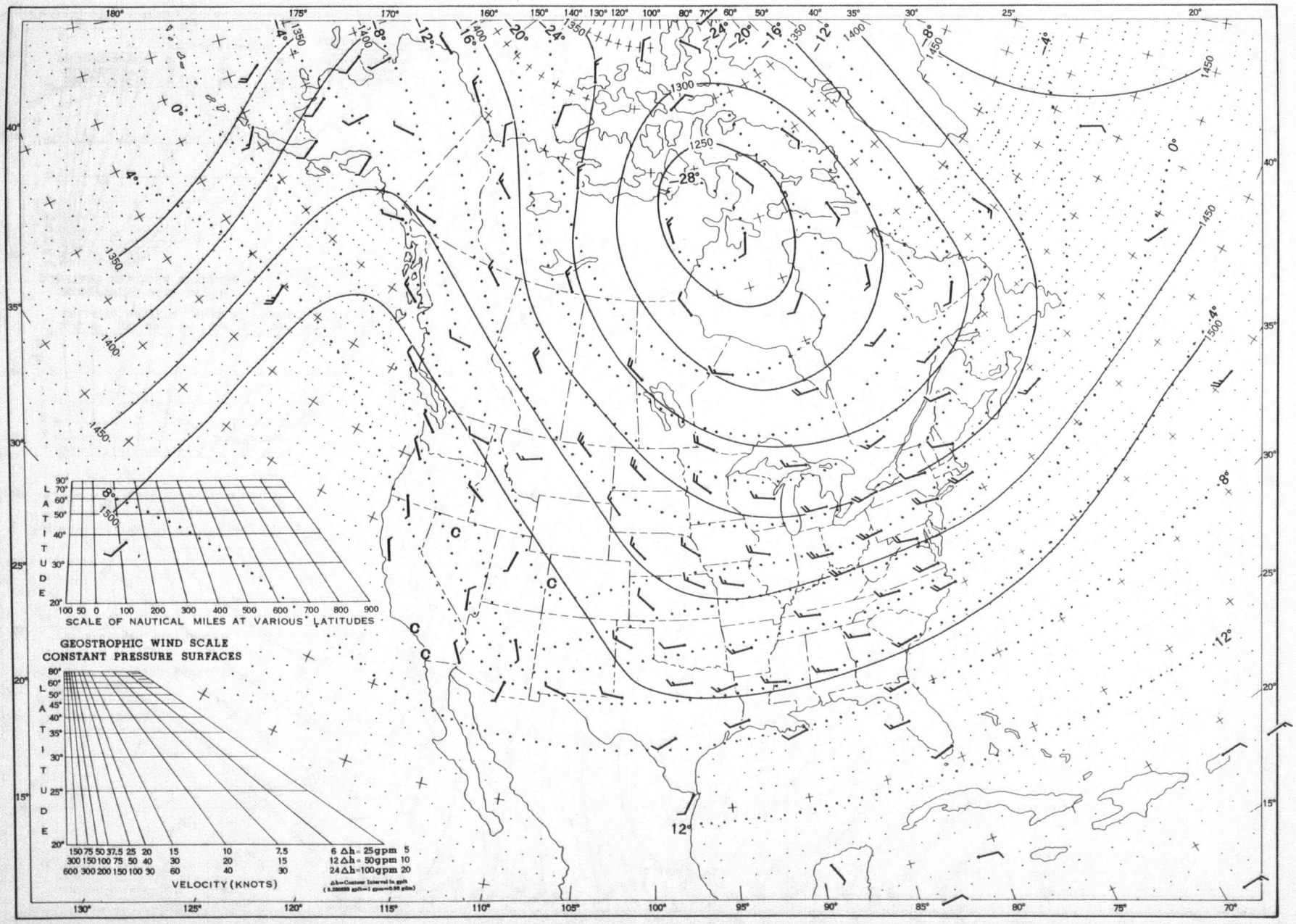
Circle indicates position of center at 7:00 a. m. E. S. T. See Chart VIII for explanation of symbols.

Chart X. Average Sea Level Pressure (mb.) and Surface Windroses, January 1963. Inset: Departure of Average Pressure (mb.) from Normal, January 1963.



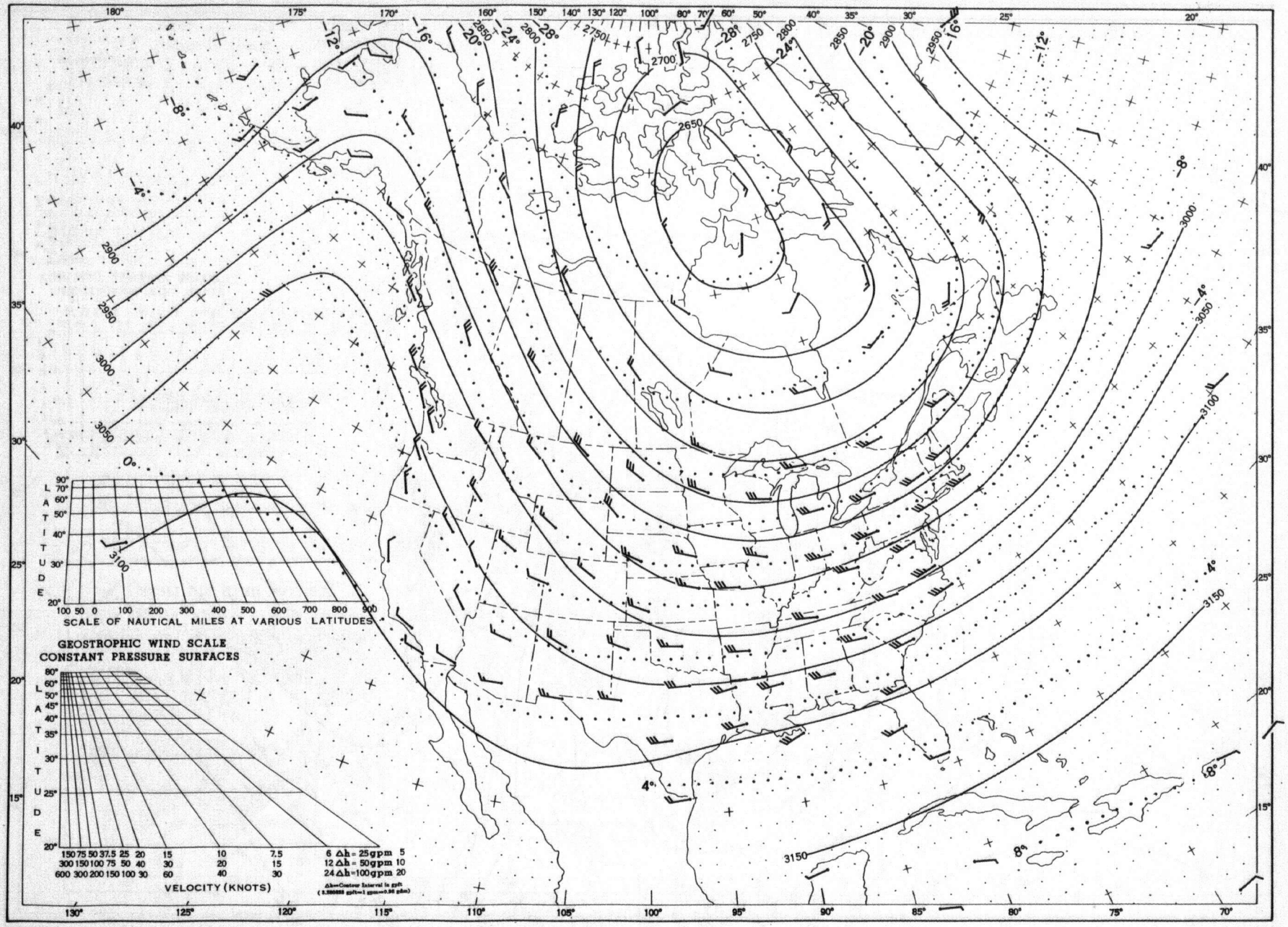
Average sea level pressures are obtained from the averages of the 7:00 a. m. and 7:00 p. m. E. S. T. readings. Windroses show percentage of time wind blew from 16 compass points or was calm during the month. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid based on readings from the Historical Weather Maps (1899-1939) for the 20 years of most complete data coverage prior to 1940.

Chart XI. 850-mb. Surface, 1200 GMT, January 1963. Average Height and Temperature, and Resultant Winds.



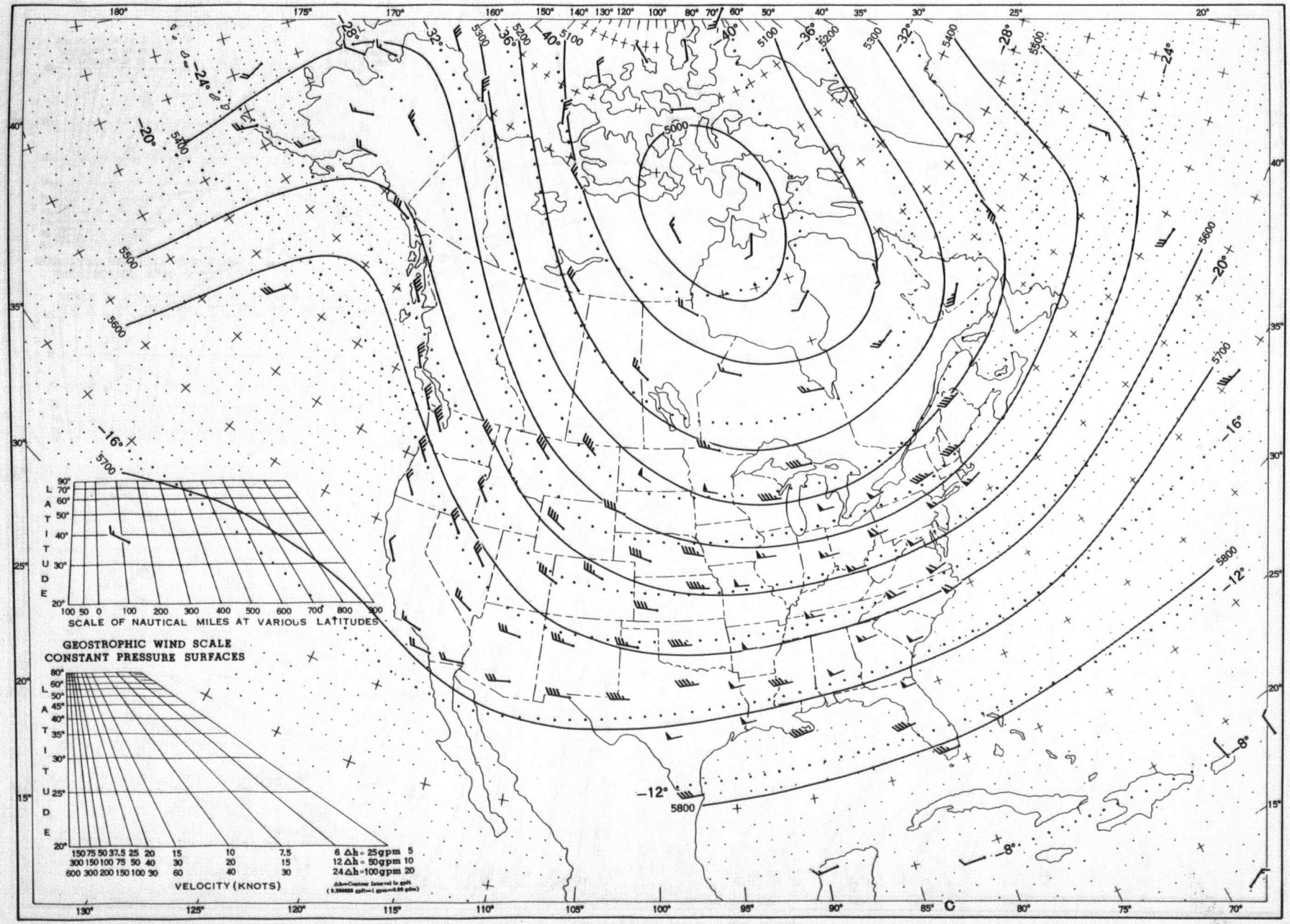
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in knots; flag represents 50 knots, full feather 10 knots, and half feather 5 knots. All wind data are based on rawin observations.

Chart XII. 700-mb. Surface, 1200 GMT, January 1963. Average Height and Temperature, and Resultant Winds.



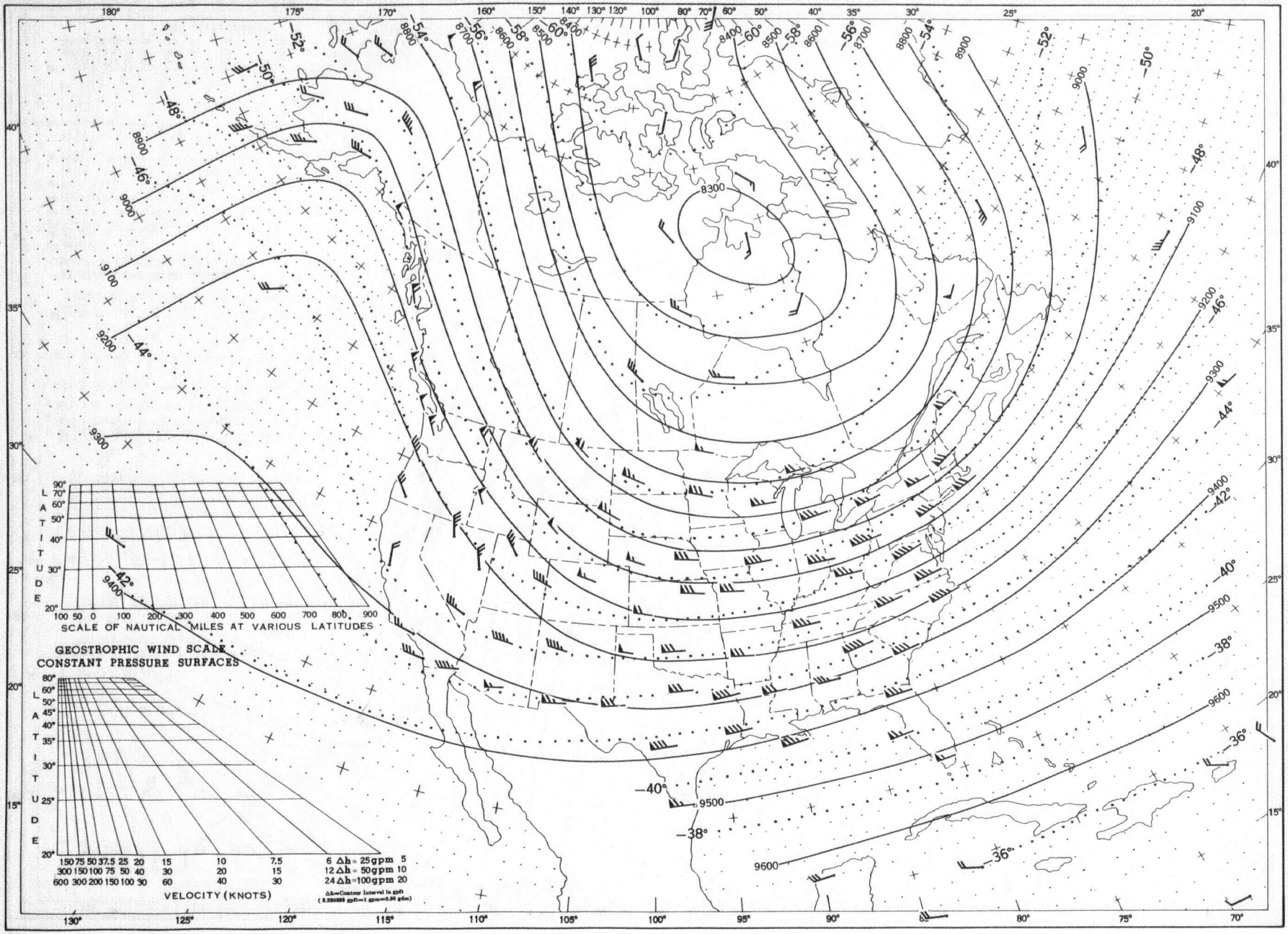
See Chart XI for explanation of map.

Chart XIII. 500-mb. Surface, 1200 GMT, January 1963. Average Height and Temperature, and Resultant Winds.



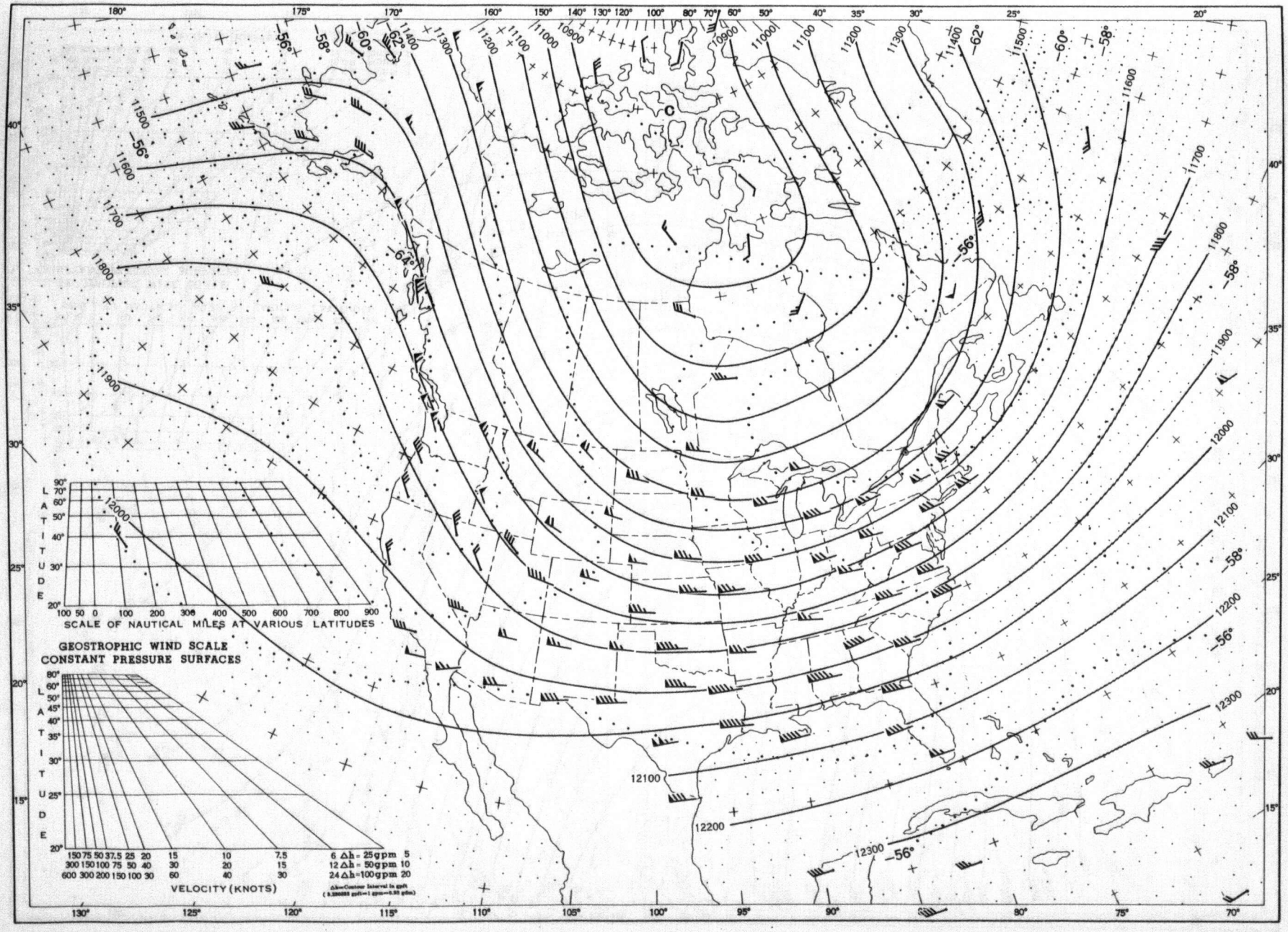
See Chart XI for explanation of map.

Chart XIV. 300-mb. Surface, 1200 GMT, January 1963. Average Height and Temperature, and Resultant Winds.



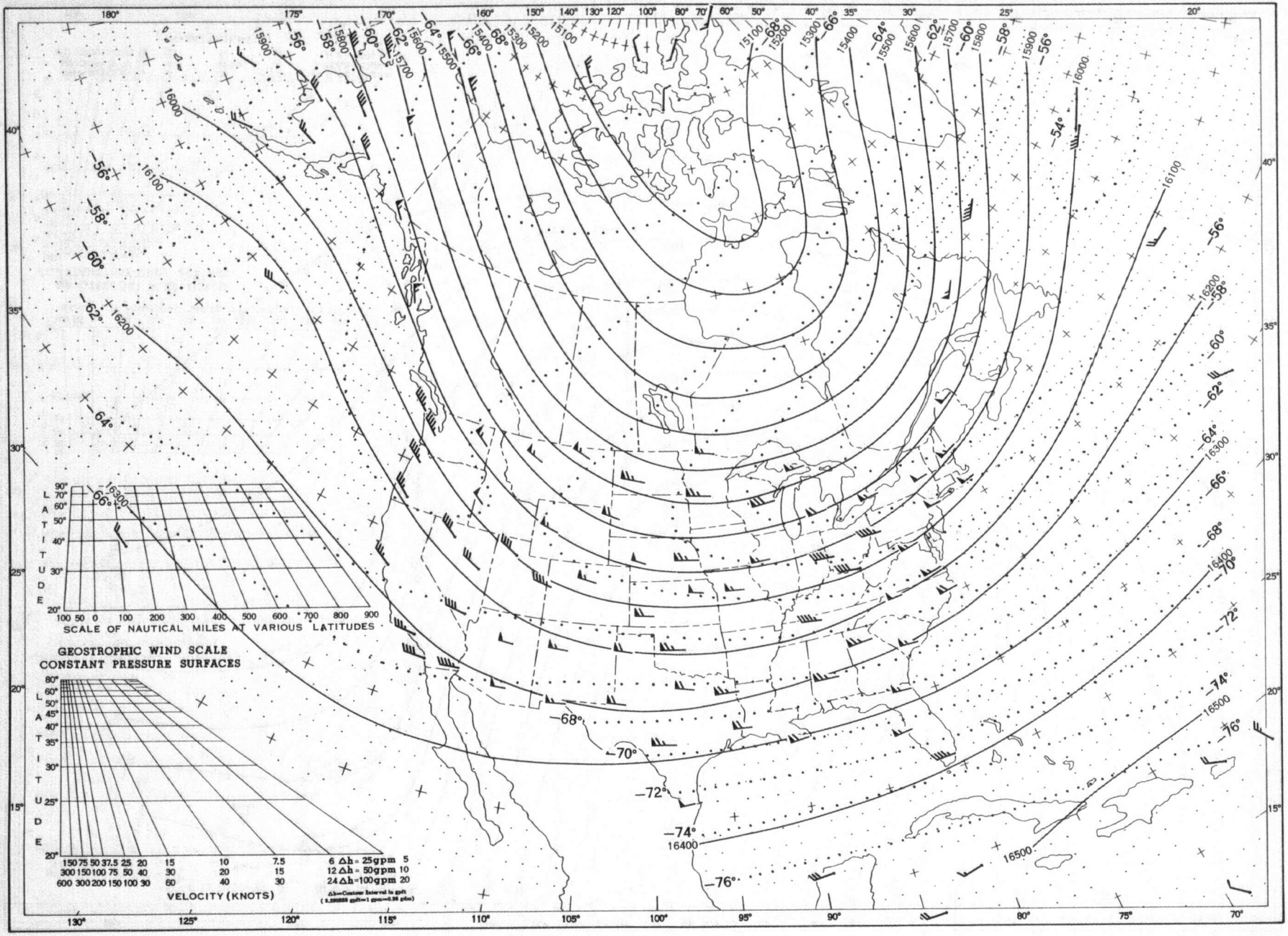
See Chart XI for explanation of map.

Chart XV. 200-mb. Surface, 1200 GMT, January 1963. Average Height and Temperature, and Resultant Winds.



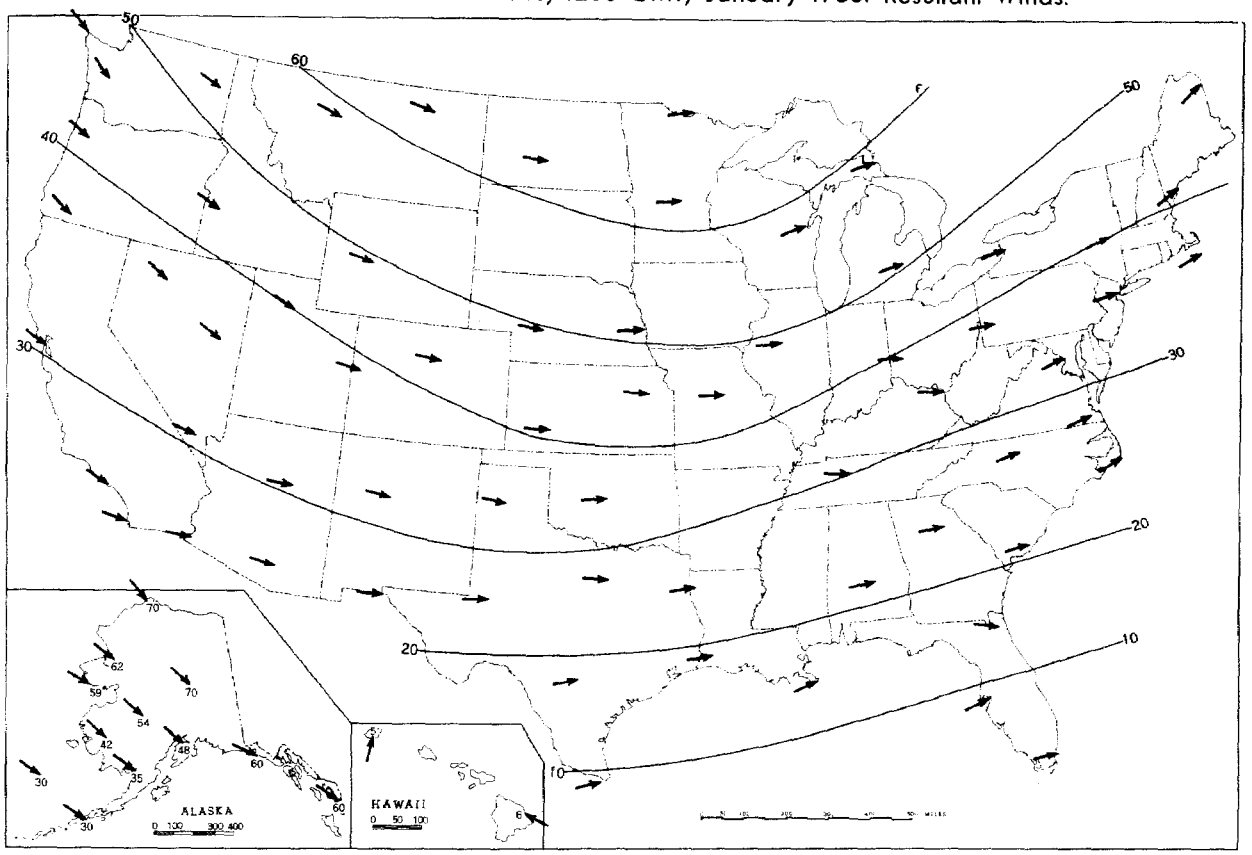
See Chart XI for explanation of map.

Chart XVI. 100-mb. Surface, 1200 GMT, January 1963. Average Height and Temperature, and Resultant Winds.

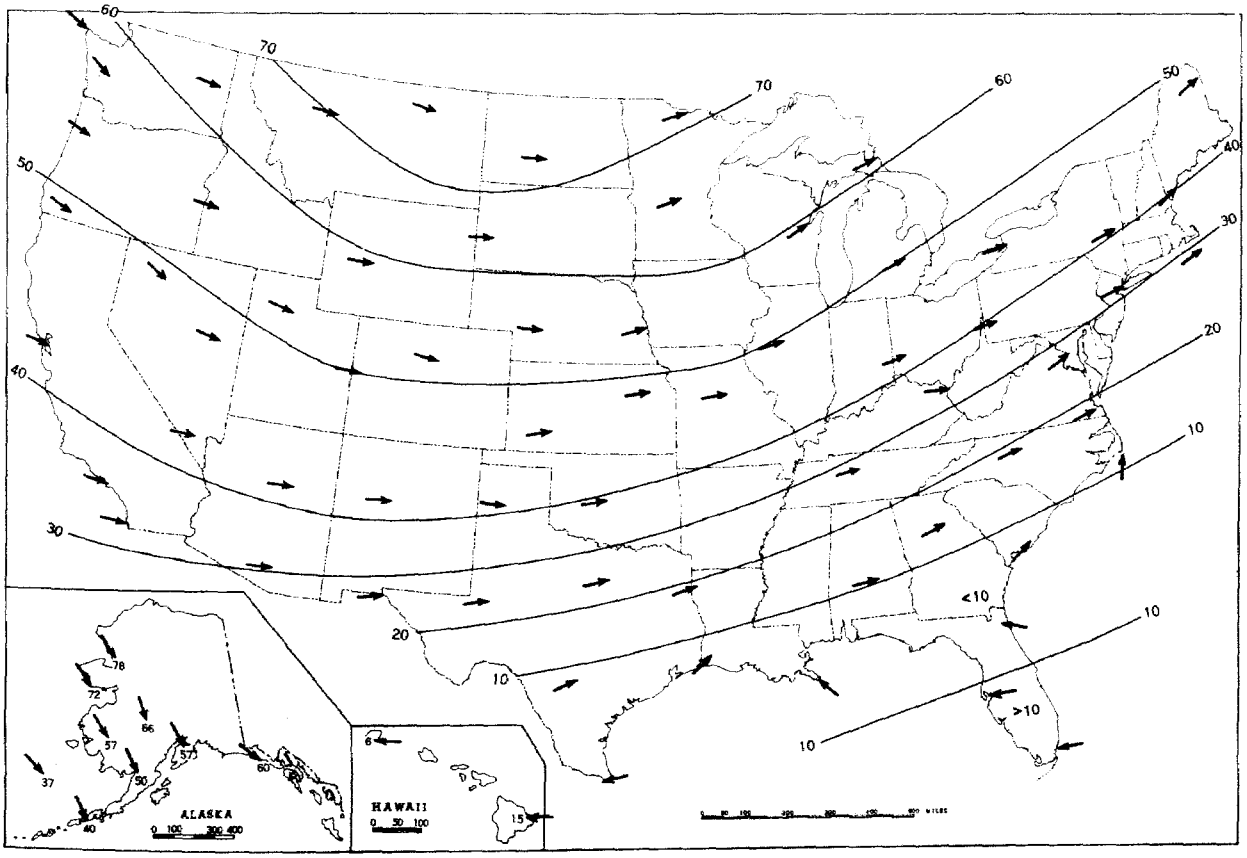


See Chart XI for explanation of map.

Chart XVII. A. 50-mb. Surface, 1200 GMT, January 1963. Resultant Winds.



B. 30-mb. Surface, 1200 GMT, January 1963. Resultant Winds.



Wind speed (isotachs) in knots. Arrows show resultant wind direction. All wind data are based on rawin observations.

USCOMM-WB-ASHEVILLE---6-3-63---1825