METEOROLOGICAL AND CLIMATOLOGICAL DATA FOR JANUARY 1948

AEROLOGICAL OBSERVATIONS

[For description of change in Table 1 and charts, see REVIEW, January 1946, p. 6]

TABLE 1.—*Mean dynamic height (geopotential) in units of 0.98 dynamic meters, temperature in degrees centigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during January 1948*

STATIONS AND MEAN SURFACE PRESSURES

Standard pressure surface (mb.)	Albany, N. Y. (1,008.5 mb.)				Albuquerque, N. Mex. (838.5 mb.)				Apalachicola, Fla. (1,020.0 mb.)				Atlanta, Ga. (985.2 mb.)				Auburn, Calif. (960.9 mb.)				Big Spring, Tex. (930.6 mb.)				Bismarck, N. Dak. (958.0 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	31	86	−8.7	75	31	1,620	1.3	57	31	5	9.5	81	31	300	2.9	70	31	501	9.8	64	30	774	3.2	54	31	505	−11.0	87
1,000	31	151	(*)	----	31	175	(*)	----	31	169	10.3	76	31	178	(*)	----	31	168	(*)	----	30	181	(*)	----	31	170	(*)	----
950	31	553	−9.4	77	31	606	(*)	----	31	602	9.7	70	31	597	2.9	65	31	598	10.9	58	30	606	(*)	----	31	573	−12.2	84
900	31	965	−10.7	78	31	1,050	(*)	----	31	1,045	8.7	56	31	1,032	3.1	61	31	1,047	10.6	40	30	1,045	4.3	48	31	984	−9.4	74
850	31	1,404	−11.9	81	31	1,509	(*)	----	31	1,517	7.5	46	31	1,495	2.7	54	31	1,521	8.5	35	30	1,509	2.8	50	31	1,426	−9.2	67
800	31	1,867	−13.1	75	31	1,998	1.6	50	31	2,015	6.2	45	31	1,985	1.5	53	31	2,020	5.9	36	30	1,998	1.7	44	31	1,894	−9.9	62
750	31	2,365	−14.0	66	31	2,522	−.7	48	31	2,550	3.8	46	31	2,507	−.6	51	31	2,549	3.0	39	30	2,525	.9	41	31	2,397	−11.8	60
700	31	2,880	−15.4	63	31	3,065	−3.4	53	31	3,100	1.2	44	31	3,051	−3.2	53	31	3,101	.2	----	30	3,070	−.9	34	31	2,917	−14.4	59
650	31	3,446	−17.7	62	31	3,647	−6.4	49	31	3,696	−1.8	40	31	3,638	−6.1	52	30	3,693	−3.2	----	30	3,664	−4.2	32	31	3,481	−17.3	59
600	31	4,032	−20.4	61	31	4,269	−9.8	44	31	4,325	−5.0	----	31	4,258	−9.2	49	30	4,320	−7.3	----	30	4,285	−8.2	----	31	4,071	−20.8	----
550	31	4,675	−24.0	----	31	4,935	−13.9	40	31	5,003	−9.2	----	31	4,930	−13.0	50	30	4,992	−11.8	----	30	4,956	−12.4	----	31	4,711	−25.0	----
500	31	5,362	−28.1	----	31	5,653	−18.5	----	31	5,733	−14.3	----	31	5,646	−17.6	50	30	5,714	−17.0	----	30	5,676	−17.6	----	31	5,395	−29.5	----
450	31	6,116	−32.6	----	31	6,435	−24.0	----	31	6,531	−20.2	----	31	6,434	−22.9	----	30	6,505	−22.8	----	30	6,462	−23.1	----	31	6,146	−34.5	----
400	31	6,933	−37.9	----	31	7,280	−30.3	----	30	7,387	−26.3	----	31	7,280	−28.9	----	30	7,349	−29.1	----	30	7,309	−29.7	----	30	6,950	−40.3	----
350	31	7,840	−43.9	----	31	8,215	−37.3	----	30	8,338	−33.5	----	31	8,221	−36.2	----	30	8,288	−36.6	----	30	8,247	−36.6	----	29	7,854	−46.1	----
300	30	8,868	−49.6	----	30	9,269	−44.7	----	30	9,402	−41.6	----	31	9,271	−44.2	----	30	9,336	−45.4	----	30	9,297	−44.3	----	26	8,889	−50.8	----
250	23	10,056	−52.6	----	27	10,478	−50.7	----	29	10,618	−49.9	----	31	10,473	−51.2	----	27	10,535	−53.6	----	29	10,504	−51.3	----	22	10,067	−53.1	----
200	9	11,532	−54.1	----	13	12,019	−53.6	----	26	12,063	−56.0	----	25	11,920	−53.2	----	24	11,956	−57.4	----	24	11,936	−54.4	----	16	11,501	−51.6	----
175	----	----	----	----	----	----	----	----	24	12,920	−58.5	----	19	12,764	−54.3	----	21	12,804	−58.0	----	12	12,819	−53.7	----	13	12,358	−50.0	----
150	----	----	----	----	----	----	----	----	16	13,880	−61.4	----	11	13,754	−57.2	----	18	13,759	−59.2	----	----	----	----	----	8	13,431	−49.9	----
125	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	14	14,924	−61.6	----	----	----	----	----	----	----	----	----

Standard pressure surface (mb.)	Boise, Idaho (922.9 mb.)				Brownsville, Tex. (1,019.5 mb.)				Buffalo, N. Y. (992.0 mb.)				Caribou, Maine (992.1 mb.)				Charleston, S. C. (1,018.8 mb.)				Ciudad Victoria, Mexico (977.2 mb.)				Columbia, Mo. (993.6 mb.)			
Surface	31	868	0.5	73	31	6	12.2	82	31	221	−7.2	80	31	191	−13.6	86	31	13	5.4	76	31	335	16.0	61	30	239	−4.5	73
1,000	31	216	(*)	----	31	167	12.3	79	31	157	(*)	----	31	127	(*)	----	31	165	6.3	74	31	137	(*)	----	30	186	(*)	----
950	31	635	(*)	----	31	603	11.5	75	31	560	−9.0	81	31	520	−14.1	87	31	592	6.0	71	31	577	15.0	58	30	593	−5.4	72
900	31	1,069	1.4	63	31	1,048	10.6	69	31	973	−10.9	83	31	927	−14.8	84	31	1,028	5.5	62	31	1,029	12.0	61	30	1,014	−6.7	66
850	31	1,528	−.7	60	31	1,524	9.3	65	31	1,410	−12.3	79	31	1,359	−15.0	80	31	1,495	4.3	60	31	1,506	9.7	65	30	1,460	−6.8	62
800	31	2,011	−2.6	61	31	2,026	8.5	53	31	1,873	−13.4	71	31	1,817	−15.9	71	31	1,987	2.6	56	31	2,009	9.0	65	30	1,932	−7.5	55
750	31	2,525	−4.8	62	31	2,568	6.8	45	31	2,372	−14.2	61	31	2,306	−17.4	67	31	2,515	0.1	54	31	2,552	8.0	52	30	2,439	−8.8	54
700	31	3,061	−7.6	61	31	3,123	4.0	45	31	2,885	−16.4	54	31	2,817	−19.1	64	31	3,058	−2.3	47	31	3,110	4.8	46	30	2,966	−11.0	50
650	31	3,639	−10.4	57	31	3,726	.1	42	31	3,449	−19.0	48	31	3,372	−21.5	----	31	3,650	−5.1	43	31	3,712	0.6	46	30	3,538	−13.4	50
600	31	4,248	−13.4	59	31	4,358	−3.7	----	31	4,031	−22.0	----	31	3,952	−24.1	----	30	4,269	−8.6	42	31	4,348	−3.4	41	30	4,138	−16.5	51
550	31	4,911	−16.8	56	30	5,044	−8.0	----	30	4,671	−25.6	----	30	4,582	−27.6	----	29	4,943	−12.4	----	31	5,033	−7.5	39	30	4,793	−20.0	----
500	31	5,616	−21.3	----	30	5,775	−13.1	----	30	5,352	−29.1	----	30	5,259	−31.5	----	29	5,661	−17.0	----	31	5,767	−12.4	41	30	5,489	−24.0	----
450	31	6,391	−26.4	----	29	6,577	−18.9	----	30	6,104	−33.6	----	29	6,008	−36.0	----	27	6,449	−22.6	----	31	6,575	−18.0	47	29	6,262	−29.3	----
400	31	7,226	−32.6	----	29	7,435	−25.3	----	29	6,916	−39.2	----	28	6,814	−41.1	----	27	7,298	−28.0	----	30	7,438	−24.0	----	29	7,087	−35.0	----
350	31	8,152	−39.7	----	28	8,389	−32.5	----	25	7,810	−45.4	----	26	7,714	−46.4	----	27	8,243	−35.0	----	30	8,397	−31.9	----	29	8,006	−41.1	----
300	31	9,187	−47.9	----	28	9,456	−40.9	----	23	8,822	−50.4	----	20	8,722	−51.2	----	25	9,299	−42.7	----	27	9,469	−40.1	----	24	9,075	−47.0	----
250	29	10,372	−54.8	----	27	10,671	−49.3	----	16	10,017	−52.4	----	14	9,888	−52.2	----	24	10,506	−51.0	----	8	10,725	−48.3	----	20	10,302	−51.7	----
200	18	11,804	−54.8	----	19	12,118	−55.4	----	10	11,456	−49.6	----	7	11,244	−46.8	----	21	11,928	−56.3	----	----	----	----	----	13	11,797	−50.8	----
175	12	12,660	−54.2	----	16	12,964	−57.2	----	----	----	----	----	6	12,142	−47.0	----	19	12,779	−57.5	----	----	----	----	----	9	12,649	−51.1	----
150	7	13,654	−56.8	----	7	13,945	−60.5	----	----	----	----	----	----	----	----	----	16	13,736	−59.7	----	----	----	----	----	5	13,665	−53.2	----

Standard pressure surface (mb.)	Dodge City, Kans. (928.6 mb.)				El Paso, Tex. (883.5 mb.)				Ely, Nev. (811.5 mb.)				Forth Worth, Tex. (997.2 mb.)				Glasgow, Mont. (941.1 mb.)				Grand Junction, Colo. (855.8 mb.)				Great Falls, Mont. (877.7 mb.)			
Surface	31	787	−2.9	67	31	1,195	5.0	49	31	1,908	−3.1	60	31	211	3.5	69	31	648	−6.2	75	31	1,474	−3.8	70	31	1,128	−1.6	61
1,000	31	192	(*)	----	31	164	(*)	----	31	209	(*)	----	31	187	.8	63	31	166	(*)	----	31	223	(*)	----	31	166	(*)	----
950	31	606	(*)	----	31	596	(*)	----	31	636	(*)	----	31	610	3.1	61	31	577	(*)	----	31	645	(*)	----	31	586	(*)	----
900	31	1,035	−1.3	60	31	1,047	(*)	----	31	1,073	(*)	----	31	1,042	1.7	61	31	997	−3.9	66	31	1,077	(*)	----	31	1,019	(*)	----
850	31	1,489	−2.4	59	31	1,512	5.8	43	31	1,535	(*)	----	31	1,502	1.3	64	31	1,448	−5.1	59	31	1,528	−3.4	66	31	1,474	−1.1	54
800	31	1,970	−3.4	60	31	2,006	4.3	38	31	2,022	.0	55	31	1,990	.7	60	31	1,923	−6.7	59	31	2,008	−3.7	60	31	1,955	−4.2	56
750	31	2,485	−5.1	57	31	2,538	2.2	36	31	2,543	−1.4	48	31	2,515	−.8	54	31	2,430	−9.3	57	31	2,521	−5.3	61	31	2,465	−7.2	58
700	31	3,017	−7.8	58	31	3,083	−.6	34	31	3,084	−4.7	50	31	3,056	−3.0	43	31	2,955	−12.2	57	31	3,056	−7.5	62	31	2,995	−10.4	58
650	31	3,597	−10.5	60	31	3,675	−3.7	32	31	3,668	−7.5	50	31	3,645	−5.9	38	31	3,524	−15.8	54	31	3,633	−10.4	63	31	3,567	−13.8	57
600	31	4,202	−13.9	61	31	4,300	−7.8	33	31	4,284	−10.4	43	31	4,263	−9.6	----	31	4,117	−19.6	53	31	4,242	−13.8	61	31	4,166	−17.5	55
550	31	4,860	−17.9	62	31	4,972	−12.5	34	31	4,950	−14.2	44	31	4,935	−13.7	----	31	4,762	−23.4	----	31	4,902	−17.4	60	31	4,811	−22.0	----
500	31	5,564	−22.8	----	31	5,691	−17.6	----	31	5,666	−18.8	----	31	5,649	−18.6	----	31	5,449	−27.8	----	31	5,606	−22.1	----	31	5,506	−26.8	----
450	31	6,339	−27.7	----	31	6,477	−23.5	----	31	6,449	−24.2	----	31	6,432	−24.6	----	31	6,205	−32.9	----	30	6,381	−27.3	----	31	6,261	−31.7	----
400	31	7,165	−33.6	----	31	7,322	−29.7	----	30	7,294	−30.4	----	31	7,273	−31.2	----	31	7,017	−38.8	----	30	7,214	−33.1	----	31	7,082	−37.2	----
350	31	8,088	−40.5	----	30	8,261	−36.8	----	30	8,228	−37.8	----	31	8,205	−38.4	----	31	7,920	−45.3	----	29	8,138	−40.0	----	31	7,992	−43.3	----
300	28	9,131	−47.4	----	29	9,315	−44.8	----	30	9,271	−46.1	----	31	9,248	−45.6	----	29	8,935	−50.9	----	28	9,183	−47.5	----	31	9,015	−49.4	----
250	25	10,330	−52.2	----	19	10,514	−51.7	----	26	10,465	−53.1	----	29	10,446	−52.1	----	26	10,130	−54.1	----	25	10,375	−53.2	----	30	10,200	−54.6	----
200	18	11,824	−52.3	----	14	11,944	−55.6	----	16	11,911	−55.7	----	23	11,912	−54.2	----	18	11,572	−52.0	----	21	11,826	−54.3	----	25	11,618	−54.5	----
175	14	12,707	−53.1	----	9	12,827	−57.8	----	12	12,748	−56.5	----	15	12,763	−55.6	----	16	12,426	−50.9	----	17	12,695	−55.2	----	14	12,478	−50.0	----
150	8	13,722	−56.4	----	7	13,822	−60.2	----	----	----	----	----	7	13,805	−57.9	----	11	13,436	−50.9	----	12	13,667	−56.8	----	9	13,512	−52.1	----
125	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5	14,681	−52.3	----	6	14,803	−58.3	----	5	14,692	−53.4	----

See footnotes at end of table.

TABLE 1.—*Mean dynamic height (geopotential) in units of 0.98 dynamic meters, temperature in degrees centigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during January 1948*—Continued

Standard pressure surface (mb.)	Greensboro, N. C. (987.9 mb.)				Hatteras, N. C. (1,019.6 mb.)				Havana, Cuba [1] (____ mb.)				Honolulu, T. H. (1,012.9 mb.)				Huntington, W. Va. (1,001.0 mb.)				International Falls, Minn. (976.8 mb.)				Joliet, Ill. (999.0 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	31	273	0.3	67	31	3	5.3	77	----	----	----	----	31	3	23.1	68	31	172	−3.2	73	31	360	−17.1	86	31	178	−7.9	75
1,000	31	173	(*)	----	31	161	5.1	73	----	----	----	----	31	115	21.6	69	31	178	(*)	----	31	182	(*)	----	31	171	(*)	----
950	31	586	.6	60	31	583	3.8	66	----	----	----	----	31	562	17.8	74	31	589	−4.8	71	31	571	−15.3	84	31	572	−9.1	74
900	31	1,017	−2.6	60	31	1,017	2.7	61	----	----	----	----	31	1,018	14.4	78	31	1,008	−6.6	73	31	977	−14.6	78	31	985	−10.1	73
850	31	1,470	−2.9	58	31	1,479	1.7	53	----	----	----	----	31	1,499	11.6	77	31	1,453	−7.6	70	31	1,411	−13.9	67	31	1,425	−10.1	65
800	31	1,950	−2.9	52	31	1,966	.2	55	----	----	----	----	31	2,005	9.8	57	31	1,924	−8.2	63	31	1,871	−14.1	57	31	1,892	−10.7	59
750	31	2,466	−4.3	51	31	2,486	−1.5	52	----	----	----	----	31	2,548	8.5	43	31	2,432	−9.1	62	31	2,365	−15.7	53	31	2,391	−12.1	54
700	31	3,002	−6.6	53	31	3,030	−3.9	54	----	----	----	----	31	3,107	5.5	36	31	2,957	−11.2	59	31	2,878	−18.0	56	31	2,912	−14.2	52
650	30	3,580	−9.1	48	30	3,616	−7.2	53	----	----	----	----	31	3,714	2.1	36	31	3,533	−13.3	58	31	3,432	−20.9	----	31	3,477	−16.8	49
600	30	4,193	−12.7	51	29	4,232	−10.3	49	----	----	----	----	31	4,351	−1.7	37	31	4,129	−16.2	62	31	4,016	−24.4	----	31	4,069	−19.8	51
550	30	4,853	−16.7	56	29	4,901	−14.0	48	----	----	----	----	31	5,039	−6.0	37	31	4,781	−20.1	60	31	4,649	−27.9	----	31	4,715	−23.0	----
500	30	5,562	−21.0	----	29	5,614	−18.7	48	----	----	----	----	31	5,777	−11.0	----	31	5,479	−24.6	----	31	5,324	−32.3	----	31	5,402	−27.7	----
450	30	6,339	−26.3	----	29	6,398	−24.0	----	----	----	----	----	31	6,586	−16.8	----	30	6,241	−29.6	----	31	6,063	−37.3	----	30	6,160	−32.4	----
400	30	7,176	−31.8	----	29	7,241	−29.8	----	----	----	----	----	31	7,452	−23.5	----	30	7,067	−34.9	----	31	6,864	−42.8	----	30	6,977	−37.8	----
350	28	8,111	−38.0	----	29	8,180	−35.9	----	----	----	----	----	31	8,415	−29.7	----	29	7,990	−40.9	----	30	7,763	−47.8	----	30	7,885	−43.4	----
300	24	9,156	−45.1	----	29	9,234	−43.0	----	----	----	----	----	31	9,499	−35.8	----	25	9,023	−47.0	----	28	8,757	−51.6	----	29	8,922	−49.0	----
250	18	10,343	−53.0	----	26	10,442	−51.1	----	----	----	----	----	30	10,743	−42.8	----	24	10,213	−51.9	----	25	9,958	−52.2	----	26	10,131	−52.2	----
200	14	11,756	−54.7	----	18	11,861	−54.8	----	----	----	----	----	30	12,220	−51.4	----	21	11,637	−52.5	----	23	11,397	−49.9	----	18	11,573	−51.2	----
175	9	12,642	−54.9	----	10	12,711	−54.7	----	----	----	----	----	29	13,075	−56.2	----	19	12,497	−53.2	----	16	12,264	−49.3	----	11	12,452	−51.3	----
150	----	----	----	----	9	13,693	−55.8	----	----	----	----	----	29	14,042	−61.6	----	19	13,490	−54.7	----	13	13,282	−49.7	----	8	13,407	−51.8	----
125	----	----	----	----	----	----	----	----	----	----	----	----	28	15,155	−67.1	----	14	14,633	−56.2	----	5	14,589	−50.8	----	----	----	----	----
100	----	----	----	----	----	----	----	----	----	----	----	----	24	16,500	−71.5	----	----	----	----	----	----	----	----	----	----	----	----	----
80	----	----	----	----	----	----	----	----	----	----	----	----	22	17,817	−70.8	----	----	----	----	----	----	----	----	----	----	----	----	----
60	----	----	----	----	----	----	----	----	----	----	----	----	15	19,535	−66.0	----	----	----	----	----	----	----	----	----	----	----	----	----
50	----	----	----	----	----	----	----	----	----	----	----	----	9	20,634	−63.9	----	----	----	----	----	----	----	----	----	----	----	----	----
40	----	----	----	----	----	----	----	----	----	----	----	----	7	22,002	−61.6	----	----	----	----	----	----	----	----	----	----	----	----	----

Standard pressure surface (mb.)	Lake Charles, La. (1,021.4 mb.)				Lander, Wyo. (829.9 mb.)				Las Vegas, Nev. (952.3 mb.)				Little Rock, Ark. (1,013.1 mb.)				Mazatlan, Mexico (1,010.9 mb.)				Medford, Oreg. (974.7 mb.)				Merida, Mexico (1,013.6 mb.)			
Surface	31	5	6.6	84	31	1,696	−6.5	69	31	574	7.5	37	31	79	1.6	69	31	14	21.0	75	31	401	2.9	82	31	27	22.7	78
1,000	31	178	7.2	77	31	209	(*)	----	31	165	(*)	----	31	183	1.3	64	31	108	20.4	70	31	193	(*)	----	31	146	22.0	78
950	31	606	6.4	71	31	626	(*)	----	31	592	(*)	----	31	599	.4	61	31	558	20.6	46	31	614	5.4	73	31	591	19.4	78
900	31	1,044	6.9	66	31	1,057	(*)	----	31	1,043	9.9	25	31	1,028	−1.1	63	31	1,017	18.6	38	31	1,052	5.5	57	31	1,053	16.8	78
850	31	1,514	5.8	63	31	1,506	(*)	----	31	1,515	7.0	28	31	1,484	−.9	60	31	1,505	15.5	33	31	1,517	3.4	52	31	1,539	13.8	77
800	31	2,009	4.4	57	31	1,983	−4.2	61	31	2,011	4.8	28	31	1,968	−1.7	62	31	2,015	11.8	36	31	2,007	1.5	44	31	2,048	11.4	68
750	31	2,538	2.4	53	31	2,496	−5.9	53	31	2,540	2.3	28	31	2,485	−3.0	59	31	2,554	8.0	38	31	2,527	−.9	39	31	2,589	9.3	54
700	31	3,088	−.4	53	31	3,030	−8.6	53	31	3,089	−.8	29	31	3,025	−5.4	56	30	3,118	4.0	39	31	3,073	−3.2	40	31	3,155	6.5	44
650	31	3,679	−3.5	47	31	3,602	−12.1	54	31	3,678	−3.8	26	30	3,609	−8.3	58	30	3,715	−0.2	42	31	3,658	−6.3	39	31	3,763	3.0	43
600	31	4,306	−7.3	39	31	4,208	−15.8	58	31	4,306	−7.8	----	30	4,224	−11.6	57	29	4,353	−4.3	38	30	4,278	−10.1	39	30	4,405	−.2	34
550	31	4,980	−11.4	----	31	4,862	−19.6	58	31	4,975	−12.1	----	30	4,887	−15.6	49	29	5,032	−8.6	----	30	4,942	−14.4	41	30	5,093	−4.5	28
500	31	5,702	−16.3	----	31	5,561	−24.4	----	31	5,699	−17.0	----	30	5,598	−20.3	50	29	5,767	−13.5	----	30	5,659	−19.2	----	29	5,839	−9.8	28
450	31	6,494	−21.8	----	31	6,327	−29.5	----	31	6,485	−22.9	----	30	6,373	−25.6	----	29	6,566	−18.9	----	30	6,435	−24.9	----	29	6,652	−15.4	----
400	31	7,343	−28.3	----	31	7,151	−35.1	----	31	7,333	−29.8	----	29	7,212	−31.7	----	29	7,427	−25.3	----	30	7,280	−31.4	----	29	7,526	−22.0	----
350	31	8,287	−35.3	----	31	8,070	−41.4	----	31	8,270	−37.4	----	27	8,143	−38.6	----	29	8,382	−32.5	----	30	8,211	−38.6	----	29	8,493	−29.5	----
300	30	9,346	−43.4	----	31	9,100	−48.4	----	31	9,316	−45.5	----	18	9,159	−46.2	----	29	9,451	−40.8	----	30	9,251	−46.8	----	28	9,575	−38.2	----
250	28	10,547	−51.7	----	30	10,279	−54.7	----	31	10,511	−53.0	----	12	10,324	−51.1	----	26	10,674	−49.7	----	29	10,436	−53.7	----	24	10,806	−47.8	----
200	27	11,987	−55.7	----	22	11,712	−54.2	----	30	11,934	−56.3	----	----	----	----	----	22	12,113	−56.8	----	26	11,853	−56.9	----	----	----	----	----
175	20	12,839	−57.0	----	17	12,578	−53.9	----	30	12,780	−57.4	----	----	----	----	----	18	12,967	−60.0	----	18	12,703	−55.6	----	----	----	----	----
150	15	13,844	−60.7	----	10	13,566	−55.4	----	23	13,752	−58.6	----	----	----	----	----	11	13,915	−62.0	----	14	13,670	−57.5	----	----	----	----	----
125	7	14,982	−64.3	----	----	----	----	----	15	14,912	−62.2	----	----	----	----	----	----	----	----	----	5	14,864	−61.4	----	----	----	----	----

Standard pressure surface (mb.)	Miami, Fla. (1,018.7 mb.)				Nantucket, Mass. (1,015.1 mb.)				Nashville, Tenn. (1,000.4 mb.)				New Orleans, La. (1,021.3 mb.)				North Platte, Nebr. (920.5 mb.)				Oakland, Calif. (1,019.5 mb.)				Ogden, Utah (869.5 mb.)			
Surface	31	4	17.8	85	31	14	−2.0	80	31	180	−1.3	72	31	2	7.6	80	31	849	−4.6	73	31	6	11.1	73	31	1,355	−1.8	72
1,000	31	163	18.0	82	31	132	−2.8	78	31	182	(*)	----	31	176	8.2	75	31	187	(*)	----	31	167	12.6	59	31	224	(*)	----
950	31	602	16.0	79	31	538	−4.7	78	31	590	−3.1	70	31	605	7.5	70	31	601	(*)	----	31	599	11.5	49	31	646	(*)	----
900	31	1,060	13.6	73	31	962	−6.2	72	31	1,017	−3.7	66	31	1,044	7.5	60	31	1,025	−3.2	65	31	1,048	10.2	42	31	1,079	(*)	----
850	31	1,540	11.4	68	31	1,408	−7.1	62	31	1,468	−4.1	63	31	1,514	6.7	54	31	1,477	−4.2	58	31	1,521	8.3	39	31	1,535	−1.0	63
800	31	2,045	9.5	57	31	1,880	−8.1	54	31	1,945	−4.8	59	31	2,011	5.3	50	31	1,953	−5.9	59	31	2,020	6.3	----	31	2,018	−3.0	56
750	31	2,584	7.7	44	31	2,385	−9.6	53	31	2,458	−5.8	59	31	2,542	2.9	51	31	2,461	−8.4	61	31	2,553	4.1	----	31	2,532	−5.9	60
700	31	3,145	5.1	40	31	2,911	−11.3	52	31	2,991	−7.7	56	31	3,093	.2	53	31	2,989	−11.3	59	31	3,105	1.3	----	31	3,064	−8.5	62
650	30	3,746	1.5	40	31	3,481	−13.9	51	30	3,569	−10.3	55	31	3,688	−2.8	50	31	3,560	−14.4	56	30	3,700	−2.6	----	31	3,640	−11.1	63
600	30	4,387	−2.3	38	31	4,081	−16.8	53	29	4,177	−13.4	55	30	4,320	−5.9	46	31	4,156	−17.9	57	30	4,327	−6.9	----	31	4,247	−14.4	61
550	30	5,072	−6.4	34	31	4,729	−20.5	54	29	4,837	−17.5	56	30	4,997	−10.0	46	31	4,805	−21.8	----	30	5,003	−11.6	----	31	4,905	−17.9	57
500	30	5,812	−11.4	35	31	5,428	−25.0	----	29	5,543	−21.5	----	30	5,725	−14.9	45	31	5,498	−26.2	----	30	5,725	−16.5	----	31	5,609	−22.4	----
450	29	6,616	−17.2	38	31	6,186	−29.7	----	29	6,316	−26.9	----	29	6,527	−20.2	----	31	6,259	−31.3	----	29	6,518	−22.1	----	31	6,384	−27.3	----
400	29	7,483	−23.4	----	31	7,016	−35.4	----	29	7,151	−32.9	----	29	7,380	−26.8	----	31	7,075	−37.2	----	29	7,366	−28.9	----	30	7,223	−32.8	----
350	29	8,445	−30.8	----	31	7,932	−41.8	----	26	8,085	−39.4	----	28	8,331	−33.7	----	31	7,986	−43.3	----	28	8,309	−36.2	----	30	8,149	−39.8	----
300	27	9,521	−38.7	----	26	8,959	−48.6	----	24	9,131	−46.3	----	28	9,394	−41.6	----	31	9,009	−49.1	----	27	9,358	−44.7	----	30	9,185	−47.6	----
250	25	10,749	−48.0	----	21	10,149	−53.2	----	18	10,343	−52.9	----	27	10,604	−50.5	----	28	10,209	−52.8	----	27	10,555	−52.9	----	24	10,368	−54.2	----
200	20	12,198	−57.0	----	11	11,576	−51.8	----	14	11,759	−53.8	----	25	12,039	−55.7	----	24	11,667	−52.8	----	21	11,986	−54.8	----	17	11,791	−55.3	----
175	13	13,051	−60.1	----	----	----	----	----	7	12,647	−55.4	----	17	12,906	−57.1	----	17	12,541	−51.0	----	18	12,841	−55.1	----	13	12,628	−53.2	----
150	6	14,027	−64.4	----	----	----	----	----	5	13,600	−58.1	----	15	13,864	−60.0	----	14	13,506	−52.9	----	15	13,805	−57.7	----	6	13,672	−54.8	----
125	----	----	----	----	----	----	----	----	----	----	----	----	12	14,992	−63.5	----	6	14,709	−55.7	----	7	14,948	−60.5	----	----	----	----	----

See footnotes at end of table.

TABLE 1.—*Mean dynamic height (geopotential) in units of 0.98 dynamic meters, temperature in degrees centigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during January 1948*—Continued

Standard pressure surface (mb.)	Oklahoma City, Okla. (975.8 mb.)				Omaha, Nebr. (985.5 mb.)				Phoenix, Ariz. (977.0 mb.)				Pittsburgh, Pa. (973.9 mb.)				Portland, Maine (1,014.5 mb.)				Rapid City, S. Dak. (903.9 mb.)				St. Cloud, Minn. (981.6 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	31	391	−1.1	73	31	308	−5.8	68	31	339	11.1	41	30	382	−5.8	73	31	20	−8.9	76	31	980	−5.4	69	31	317	−14.8	85
1,000	31	193	(*)	----	31	192	(*)	----	31	143	(*)	----	30	172	(*)	----	31	132	−8.7	72	31	173	(*)	----	31	174	(*)	----
950	31	605	−.1	65	31	596	−7.5	71	31	583	14.9	30	30	580	−7.5	73	31	533	−9.5	73	31	588	(*)	----	31	571	−13.9	85
900	31	1,036	−1.8	61	31	1,014	−7.1	60	31	1,031	12.4	29	30	995	−8.9	74	31	946	−10.5	74	31	1,014	(*)	----	31	975	−13.0	75
850	31	1,491	−1.7	59	31	1,460	−7.1	50	31	1,507	9.3	30	30	1,437	−10.3	72	31	1,385	−11.5	66	31	1,465	−2.9	54	31	1,413	−12.0	60
800	31	1,973	−2.3	58	31	1,931	−8.3	50	31	2,007	6.4	32	30	1,903	−11.2	65	31	1,848	−13.0	62	31	1,943	−5.6	54	31	1,875	−12.6	56
750	31	2,490	−3.8	59	31	2,437	−10.5	52	31	2,540	3.3	33	30	2,407	−12.2	62	31	2,343	−14.4	58	31	2,453	−8.6	54	31	2,376	−13.8	52
700	31	3,027	−5.8	58	31	2,959	−12.9	53	31	3,090	.2	33	30	2,923	−14.0	57	31	2,860	−15.9	55	31	2,978	−11.7	52	31	2,890	−15.8	49
650	31	3,608	−8.4	56	31	3,529	−15.9	54	31	3,687	−2.8	29	30	3,492	−16.3	55	30	3,418	−18.0	55	31	3,547	−14.9	51	31	3,451	−19.0	53
600	31	4,222	−11.9	48	30	4,120	−18.9	59	31	4,311	−6.9	30	30	4,083	−18.8	59	30	4,008	−20.9	----	31	4,145	−18.5	49	31	4,037	−22.5	----
550	30	4,881	−15.9	44	30	4,766	−22.5	----	31	4,988	−11.6	----	30	4,732	−22.1	----	30	4,648	−24.7	----	31	4,793	−22.2	----	31	4,674	−26.2	----
500	28	5,588	−21.4	----	30	5,458	−27.2	----	31	5,708	−17.0	----	30	5,422	−26.2	----	29	5,339	−28.7	----	31	5,483	−26.4	----	31	5,355	−30.4	----
450	26	6,355	−26.8	----	30	6,216	−32.4	----	31	6,500	−22.9	----	30	6,183	−31.3	----	29	6,090	−33.7	----	31	6,244	−31.6	----	31	6,103	−35.2	----
400	26	7,191	−32.7	----	30	7,033	−38.2	----	31	7,344	−29.2	----	30	7,001	−36.7	----	27	6,911	−38.6	----	31	7,062	−37.5	----	31	6,909	−40.6	----
350	26	8,118	−39.3	----	30	7,940	−43.8	----	30	8,294	−36.7	----	30	7,913	−42.8	----	27	7,817	−44.3	----	30	7,975	−44.0	----	31	7,808	−46.1	----
300	22	9,174	−45.6	----	30	8,962	−49.4	----	29	9,342	−44.9	----	29	8,941	−48.4	----	25	8,836	−49.7	----	28	8,985	−49.7	----	30	8,826	−50.6	----
250	12	10,330	−52.3	----	30	10,147	−52.5	----	26	10,533	−51.4	----	25	10,117	−52.1	----	21	10,002	−52.3	----	23	10,138	−52.3	----	28	10,009	−52.0	----
200	5	11,816	−54.6	----	22	11,623	−51.2	----	23	11,961	−55.6	----	17	11,573	−53.0	----	16	11,405	−50.7	----	22	11,583	−51.0	----	23	11,458	−49.7	----
175	----	----	----	----	9	12,531	−50.1	----	23	12,810	−56.7	----	14	12,432	−53.4	----	11	12,284	−50.7	----	18	12,448	−50.3	----	16	12,351	−50.1	----
150	----	----	----	----	6	13,599	−52.7	----	16	13,782	−59.2	----	8	13,427	−55.7	----	6	13,281	−49.9	----	9	13,436	−49.5	----	5	13,488	−48.9	----
125	----	----	----	----	----	----	----	----	7	14,890	−63.5	----	----	----	----	----	----	----	----	----	6	14,595	−50.2	----	----	----	----	----

Standard pressure surface (mb.)	San Antonio, Tex. (992.6 mb.)				San Juan, P. R. (1,015.3 mb.)				Santa Maria, Calif. (1,010.5 mb.)				Sault Ste. Marie, Mich. (990.0 mb.)				Spokane, Wash. (937.6 mb.)				Swan Island, W. I. (1,014.5 mb.)				Tacubaya, Mexico (774.0 mb.)			
Surface	31	240	6.7	73	31	15	24.0	80	31	71	10.5	73	31	221	−10.9	82	31	721	−2.0	81	24	10	24.6	83	31	2,306	13.1	56
1,000	31	178	(*)	----	31	148	22.9	81	31	158	11.3	68	31	142	(*)	----	31	204	(*)	----	24	137	24.0	81	31	88	(*)	----
950	31	605	7.3	70	31	594	19.6	84	31	589	12.9	46	31	539	−11.2	80	31	621	(*)	----	24	592	20.6	84	31	543	(*)	----
900	31	1,045	6.2	72	31	1,058	16.4	83	31	1,041	12.2	36	31	949	−13.3	80	31	1,045	−2.9	77	24	1,051	17.3	82	31	1,013	(*)	----
850	31	1,513	5.4	67	31	1,543	13.5	79	31	1,517	9.9	33	31	1,383	−14.6	77	31	1,498	−3.4	69	24	1,537	14.2	80	31	1,505	(*)	----
800	31	2,008	4.7	55	31	2,052	11.5	64	31	2,018	7.7	----	31	1,841	−16.3	68	31	1,976	−5.5	65	24	2,048	11.5	71	31	2,025	(*)	----
750	31	2,538	3.3	43	31	2,596	9.3	46	31	2,554	5.4	----	31	2,335	−17.5	60	31	2,485	−7.4	64	24	2,601	9.4	56	31	2,572	11.3	57
700	31	3,090	.8	39	31	3,159	7.2	35	31	3,108	2.2	----	31	2,840	−19.1	60	31	3,015	−10.1	59	23	3,156	6.4	51	31	3,142	6.9	62
650	30	3,683	−2.3	29	31	3,771	4.4	----	31	3,704	−1.8	----	31	3,395	−22.0	----	31	3,591	−13.1	59	23	3,769	3.2	46	31	3,745	2.2	70
600	30	4,312	−6.0	----	30	4,413	1.3	----	31	4,334	−6.0	----	31	3,973	−25.3	----	31	4,189	−16.4	63	23	4,405	−.7	----	31	4,390	−2.5	71
550	28	4,985	−10.8	----	30	5,108	−2.8	----	31	5,011	−10.7	----	30	4,600	−29.1	----	31	4,843	−19.8	63	23	5,102	−4.4	----	31	5,074	−6.8	64
500	28	5,708	−16.1	----	30	5,856	−7.5	----	31	5,735	−15.8	----	29	5,270	−33.2	----	31	5,541	−23.8	----	23	5,840	−9.3	----	31	5,813	−11.3	56
450	28	6,500	−21.9	----	29	6,677	−13.0	----	31	6,526	−21.6	----	28	6,017	−37.1	----	31	6,310	−29.0	----	23	6,664	−14.8	----	31	6,622	−16.6	46
400	28	7,349	−28.5	----	29	7,555	−19.4	----	31	7,378	−28.1	----	28	6,817	−42.4	----	31	7,135	−34.6	----	22	7,529	−21.2	----	31	7,490	−23.1	----
350	27	8,287	−35.8	----	29	8,533	−26.8	----	31	8,322	−35.4	----	23	7,741	−46.4	----	31	8,055	−41.0	----	22	8,499	−28.6	----	30	8,452	−30.6	----
300	26	9,339	−43.7	----	29	9,626	−35.4	----	31	9,376	−43.6	----	14	8,801	−49.2	----	29	9,089	−48.7	----	22	9,584	−37.2	----	28	9,527	−39.3	----
250	18	10,532	−50.4	----	29	10,869	−44.9	----	27	10,578	−52.6	----	----	----	----	----	26	10,277	−55.0	----	21	10,819	−46.8	----	10	10,758	−47.9	----
200	7	11,956	−57.8	----	29	12,327	−54.9	----	22	11,991	−56.6	----	----	----	----	----	11	11,683	−54.1	----	21	12,266	−56.4	----	----	----	----	----
175	5	12,851	−57.0	----	27	13,170	−59.9	----	17	12,836	−57.1	----	----	----	----	----	5	12,470	−53.4	----	20	13,105	−61.3	----	----	----	----	----
150	----	----	----	----	16	14,121	−65.0	----	13	13,811	−58.8	----	----	----	----	----	----	----	----	----	15	14,054	−66.7	----	----	----	----	----
125	----	----	----	----	5	15,217	−69.1	----	7	14,966	−61.6	----	----	----	----	----	----	----	----	----	7	15,132	−74.2	----	----	----	----	----

Standard pressure surface (mb.)	Tampa, Fla. (1,018.9 mb.)				Tatoosh Island, Wash. (1,017.1 mb.)				Toledo, Ohio (997.4 mb.)				Washington, D. C. (1,018.5 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	31	9	13.2	83	31	31	5.8	84	30	191	−7.3	76	31	25	−1.7	68
1,000	31	166	14.0	79	31	169	5.2	77	30	170	(*)	----	31	170	−2.2	61
950	31	601	12.8	72	31	591	4.2	70	30	572	−8.8	80	31	580	−3.3	60
900	31	1,052	11.2	66	31	1,027	1.9	66	30	986	−10.6	78	31	1,003	−4.9	62
850	31	1,528	9.4	57	31	1,486	.2	60	30	1,425	−11.1	69	31	1,452	−5.7	58
800	31	2,030	8.1	51	31	1,970	−1.8	53	30	1,891	−11.8	56	31	1,926	−6.7	59
750	30	2,568	5.7	45	31	2,485	−4.7	53	30	2,389	−13.5	52	31	2,434	−8.0	55
700	30	3,122	2.7	44	31	3,022	−7.2	53	30	2,906	−15.4	50	31	2,963	−10.1	54
650	30	3,719	−.3	38	31	3,598	−10.6	58	30	3,468	−18.4	54	31	3,535	−12.2	51
600	30	4,355	−3.8	37	31	4,207	−14.1	59	30	4,056	−21.2	----	31	4,140	−15.4	53
550	29	5,033	−7.9	----	31	4,861	−17.9	58	30	4,698	−24.5	----	31	4,791	−19.1	52
500	29	5,770	−12.8	----	31	5,569	−22.6	----	29	5,384	−28.4	----	30	5,494	−23.5	----
450	29	6,566	−18.5	----	31	6,336	−27.7	----	29	6,137	−33.1	----	29	6,260	−28.6	----
400	29	7,434	−24.9	----	31	7,172	−33.7	----	29	6,951	−38.6	----	29	7,090	−34.1	----
350	29	8,390	−32.1	----	30	8,102	−40.1	----	29	7,857	−44.2	----	27	8,018	−40.2	----
300	29	9,458	−40.4	----	30	9,138	−46.8	----	28	8,868	−49.9	----	27	9,052	−47.5	----
250	28	10,672	−49.1	----	29	10,338	−53.1	----	22	10,031	−52.3	----	24	10,227	−52.4	----
200	23	12,105	−56.4	----	23	11,785	−53.9	----	14	11,464	−50.2	----	22	11,650	−53.9	----
175	19	12,954	−59.8	----	19	12,645	−53.1	----	10	12,380	−51.3	----	21	12,502	−54.1	----
150	17	13,900	−62.5	----	14	13,657	−53.9	----	----	----	----	----	19	13,475	−53.9	----
125	10	15,020	−67.0	----	9	14,851	−56.4	----	----	----	----	----	14	14,621	−55.5	----
100	----	----	----	----	5	16,351	−59.8	----	----	----	----	----	9	16,036	−57.3	----

[1] Data not yet received.

*Temperature and relative humidity data for this level are not available or are available only for certain days. See note entitled "Change in Summarization of Radiosonde Data," p. 6, in the January 1946 issue of the MONTHLY WEATHER REVIEW.

NOTE.—All observations scheduled between 0300 and 0500, G. C. T., except at Ciudad Victoria, Mazatlan, and Merida, where they are taken near 0200, G. C. T. "Number of observations" refers to those of dynamic height only. (In a few cases temperature or humidity data may be missing for one or more standard pressure surfaces of some observations.) Relative humidity data are not published for standard pressure surfaces having a corresponding mean temperature below −20° C.

All relative humidity observations are obtained by electric hygrometer and have been adjusted to compensate for the values occurring below the operating range of the humidity element. For explanation of the adjustment see article entitled "Curve Method for Obtaining Monthly Means of Relative Humidity," p. 241, MONTHLY WEATHER REVIEW, December 1944.

None of the means included in these tables are based on less than 15 observations at the surface or 5 observations at a standard pressure level.

TABLE 2.—*Free-air resultant winds based on pilot balloon observations made near 5 p. m., E. S. T. (2200 G. C. T.) during January 1948. Directions given in degrees from north (N.=360°, E.=90°, S.=180°, W.=270°). Speeds in meters per second*

Altitude (meters) m. s. l.	Abilene, Tex. (534 m.)			Albuquerque, N. Mex. (1,630 m.)			Atlanta, Ga. (299 m.)			Billings, Mont. (1,095 m.)			Bismarck, N. Dak. (512 m.)			Boise, Idaho (868 m.)			Brownsville, Tex. (7 m.)			Buffalo, N. Y. (220 m.)			Burlington, Vt. (100 m.)			Charleston, S. C. (16 m.)			Cincinnati, Ohio (273 m.)			Denver, Colo. (1,618 m.)			El Paso, Tex. (1,198 m.)		
	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed
Surface	29	9	0.2	31	158	0.9	26	309	2.6	31	273	5.8	30	300	2.4	28	341	0.8	26	105	2.4	25	250	4.6	29	259	0.4	25	308	0.9	31	269	2.4	27	328	1.4	31	248	0.7
500	---	---	---	---	---	---	26	298	3.1	---	---	---	---	---	---	---	---	---	26	118	2.5	25	255	6.0	29	254	2.2	25	272	2.8	31	263	3.3	---	---	---	---	---	---
1,000	29	287	.6	---	---	---	25	287	4.5	---	---	---	29	292	7.5	28	333	.2	23	179	2.5	17	275	7.6	28	277	4.2	22	276	6.0	25	265	4.3	---	---	---	---	---	---
1,500	26	267	2.8	---	---	---	20	287	9.1	31	273	8.7	27	301	10.1	28	276	1.8	21	222	3.2	13	285	8.9	20	285	7.9	21	277	9.2	20	282	7.6	---	---	---	31	259	.9
2,000	25	278	7.6	31	224	.3	20	283	12.0	31	283	9.9	21	303	9.9	27	301	3.9	19	258	4.6	11	288	10.9	14	304	10.9	20	280	11.9	16	279	10.6	27	306	4.0	31	274	1.9
2,500	23	283	11.2	31	302	4.7	19	284	14.4	27	284	12.4	18	305	11.1	27	306	5.4	18	271	6.7	---	---	---	12	304	12.8	20	277	14.1	16	277	12.9	27	302	5.8	31	280	4.8
3,000	22	284	12.5	30	302	9.5	19	271	16.2	26	296	13.0	17	306	12.0	25	308	7.9	18	269	8.3	---	---	---	---	---	---	19	274	16.0	14	277	17.6	26	295	6.9	30	286	7.8
4,000	22	274	13.3	29	295	13.5	15	279	21.2	23	304	15.5	14	316	15.2	22	318	9.7	18	275	7.9	---	---	---	---	---	---	16	269	20.7	12	277	23.1	23	309	11.2	29	289	10.9
5,000	20	291	16.2	28	285	15.1	13	279	25.8	19	311	18.7	12	316	17.3	17	311	13.6	15	262	9.9	---	---	---	---	---	---	13	269	23.9	11	270	29.4	21	309	16.8	28	293	11.6
6,000	20	288	17.6	28	290	17.9	11	287	27.7	12	311	18.4	12	319	18.3	15	317	14.4	14	262	12.1	---	---	---	---	---	---	---	---	---	---	---	---	19	306	16.3	28	295	12.8
8,000	16	285	20.1	24	298	19.2	---	---	---	---	---	---	---	---	---	13	321	16.7	12	254	17.3	---	---	---	---	---	---	---	---	---	---	---	---	13	303	15.1	25	293	12.6
10,000	---	---	---	19	295	21.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	22	305	15.3
12,000	---	---	---	16	278	23.1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	18	286	16.9
14,000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	16	290	17.8
16,000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	10	284	16.4

Altitude (meters) m. s. l.	Ely, Nev. (1,910 m.)			Grand Junction, Colo. (1,475 m.)			Greensboro, N. C. (271 m.)			Havre, Mont. (767 m.)			Jacksonville, Fla. (16 m.)			Joliet, Ill. (178 m.)			Las Vegas, Nev. (575 m.)			Little Rock, Ark. (88 m.)			Medford, Oreg. (416 m.)			Miami, Fla. (12 m.)			Mobile, Ala. (66 m.)			Nashville, Tenn. (194 m.)			New York, N. Y. (15 m.)		
	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed
Surface	30	350	2.9	30	296	0.7	25	292	1.7	28	258	4.3	26	356	1.2	30	274	3.0	31	20	1.7	30	322	1.4	28	157	0.5	30	120	0.5	27	336	2.0	29	310	1.5	28	311	4.8
500	---	---	---	---	---	---	25	274	3.1	---	---	---	26	296	2.5	30	268	4.5	---	---	---	30	295	2.5	28	145	.6	30	142	.6	26	326	2.9	29	295	2.8	28	295	6.2
1,000	---	---	---	---	---	---	25	266	6.4	28	258	7.3	23	270	5.0	26	270	6.8	31	29	2.8	28	316	3.7	28	143	1.5	29	142	1.8	22	320	3.8	25	277	4.8	24	307	8.8
1,500	---	---	---	30	294	.7	24	278	8.4	28	277	10.3	22	273	7.8	22	280	8.9	31	10	2.9	23	299	6.4	26	184	1.3	28	251	2.8	22	301	5.7	23	282	7.0	23	302	11.1
2,000	30	344	2.9	30	305	1.5	22	284	11.0	27	290	11.6	21	278	9.6	21	282	10.2	31	340	3.3	22	288	10.5	23	115	.2	24	258	4.5	22	292	9.3	20	292	10.1	21	290	12.5
2,500	30	336	2.6	30	288	2.2	16	284	14.5	23	297	13.7	20	276	11.8	21	284	11.9	31	327	4.2	18	291	12.4	21	2	2.4	18	255	4.3	20	285	12.1	20	287	12.3	15	285	11.7
3,000	30	317	4.5	29	296	4.6	16	284	16.3	20	303	14.7	18	282	13.6	20	287	13.6	31	322	5.6	17	297	14.5	21	344	5.1	16	275	5.0	19	281	13.4	16	294	15.5	11	268	13.7
4,000	29	320	10.0	26	303	8.9	14	282	21.5	15	310	15.2	15	281	18.0	11	292	14.6	30	325	9.3	13	295	19.0	17	326	6.8	16	264	7.7	17	268	17.8	14	294	19.1	---	---	---
5,000	28	320	15.3	24	312	13.3	13	281	25.8	11	298	16.5	12	276	17.3	---	---	---	28	322	11.0	10	298	23.1	10	314	5.7	14	259	11.4	15	270	19.6	10	295	24.9	---	---	---
6,000	24	314	14.4	19	310	13.0	---	---	---	---	---	---	10	276	21.1	---	---	---	28	316	12.0	---	---	---	---	---	---	14	261	14.3	---	---	---	---	---	---	---	---	---
8,000	20	303	17.4	15	312	17.3	---	---	---	---	---	---	---	---	---	---	---	---	22	312	17.4	---	---	---	---	---	---	12	257	22.5	---	---	---	---	---	---	---	---	---
10,000	11	317	16.3	10	300	23.4	---	---	---	---	---	---	---	---	---	---	---	---	17	309	14.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
12,000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	11	319	14.2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Altitude (meters) m. s. l.	Oakland, Calif. (8 m.)			Oklahoma City, Okla. (396 m.)			Omaha, Nebr. (306 m.)			Phoenix, Ariz. (338 m.)			Rapid City, S. Dak. (982 m.)			St. Louis, Mo. (181 m.)			San Antonio, Tex. (240 m.)			San Diego, Calif. (13 m.)			Sault Ste. Marie, Mich. (225 m.)			Seattle, Wash. (116 m.)			Spokane, Wash. (603 m.)			Washington, D. C. (24 m.)		
Surface	28	297	1.0	28	340	0.9	31	310	3.1	31	166	0.2	31	316	3.2	30	267	2.4	27	275	0.3	27	306	2.9	21	300	2.0	21	180	1.6	24	173	1.0	27	298	3.0
500	28	23	2.9	28	324	1.0	31	306	3.7	31	174	.3	---	---	---	30	269	3.8	27	270	.4	27	325	3.0	21	284	2.0	21	177	3.7	---	---	---	27	295	5.2
1,000	26	30	3.7	28	309	1.4	31	303	5.3	31	87	.1	31	317	3.4	27	272	5.9	25	256	1.7	27	348	2.9	16	289	1.7	18	197	4.8	24	209	2.4	26	294	7.9
1,500	24	12	3.6	26	312	4.3	29	312	7.9	31	346	.5	31	313	7.9	25	284	8.1	22	252	4.5	25	8	2.9	14	319	4.0	17	216	5.4	22	244	3.8	25	293	10.2
2,000	24	6	4.5	24	300	6.2	28	316	10.6	31	328	2.9	29	306	10.8	23	289	9.5	19	262	8.0	25	3	4.3	14	302	5.5	16	209	5.6	21	261	5.0	24	289	11.6
2,500	23	1	5.4	24	294	8.5	25	313	11.4	31	323	4.2	26	306	11.9	21	288	10.7	18	273	10.8	24	346	4.8	13	320	4.2	14	240	4.8	20	266	5.5	22	279	13.5
3,000	23	358	6.1	24	294	11.4	24	310	13.6	31	321	5.7	23	310	12.6	19	289	13.2	18	280	12.5	23	331	4.6	12	314	5.3	14	274	6.6	20	270	5.8	18	280	17.6
4,000	22	352	6.3	20	282	15.9	21	303	15.9	29	311	7.5	22	305	14.3	17	286	18.3	17	277	15.3	23	331	5.0	---	---	---	13	284	9.9	17	298	9.7	16	274	22.0
5,000	21	338	7.0	18	287	17.4	17	299	17.4	27	311	8.9	19	306	14.8	11	291	19.6	16	285	18.9	22	328	5.8	---	---	---	10	308	12.7	14	303	13.9	13	277	27.6
6,000	19	340	8.9	17	294	20.9	15	295	18.7	23	300	10.0	18	309	18.3	---	---	---	---	---	---	22	337	6.5	---	---	---	---	---	---	---	---	---	---	---	---
8,000	13	340	8.7	10	300	21.5	13	289	29.5	16	303	10.8	---	---	---	---	---	---	---	---	---	16	335	9.0	---	---	---	---	---	---	---	---	---	---	---	---

TABLE 3.—*Free-air resultant winds based on rawin observations made near 0300 G. C. T. during January 1948. Directions given in degrees from north (N=360°, E=90°, S=180°, W=270°). Speeds in meters per second*

Altitude (meters) m. s. l.	Albuquerque, N. Mex. (1,636 m.)			Big Spring, Tex. (774 m.)			Bismarck, N. Dak. (505 m.)			Brownsville, Tex. (7 m.)			Caribou, Maine (191 m.)			Charleston, S. C. (13 m.)			Columbia, Mo. (239 m.)			Grand Junction, Colo.[1] (1,473 m.)			Hatteras, N. C. (3 m.)			International Falls, Minn. (360 m.)			Little Rock, Ark. (80 m.)			Miami, Fla. (12 m.)			Nantucket, Mass. (14 m.)		
	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed
500	---	---	---	---	---	---	---	---	---	31	113	2.1	31	308	4.1	29	287	2.3	30	287	3.6	---	---	---	29	317	2.8	31	258	2.4	31	305	2.4	31	123	1.7	30	309	6.1
1,000	---	---	---	31	172	1.0	29	302	7.4	31	172	1.4	31	308	4.5	28	265	5.4	29	310	5.1	---	---	---	29	265	5.1	31	279	4.2	31	292	5.1	31	178	1.1	29	302	5.9
1,500	---	---	---	31	284	2.0	29	309	9.5	30	244	2.9	31	274	5.5	27	252	8.7	28	307	7.9	---	---	---	28	258	8.2	30	293	4.3	31	277	7.0	30	238	2.2	28	273	8.4
2,000	31	334	2.2	31	302	3.5	28	312	10.5	30	256	4.4	29	272	6.9	28	257	11.4	28	306	10.1	---	---	---	25	266	11.3	30	307	5.6	30	279	9.1	30	252	4.2	28	267	11.5
2,500	31	304	6.1	30	282	6.6	28	313	11.6	30	253	6.0	29	263	7.2	28	259	13.3	28	302	11.7	---	---	---	25	265	13.1	29	314	7.5	30	273	11.7	30	251	6.6	29	267	14.4
3,000	31	303	9.5	30	279	9.9	28	312	13.1	30	257	7.3	29	260	8.2	26	263	14.8	28	292	14.0	---	---	---	22	265	15.2	28	317	9.0	30	269	13.5	30	249	8.1	27	263	16.9
4,000	31	299	12.2	30	279	11.8	28	317	14.1	30	258	9.2	26	258	12.3	22	263	20.2	28	291	17.7	---	---	---	17	261	22.6	28	312	13.0	28	261	17.5	30	254	10.9	24	266	20.6
5,000	31	294	14.1	30	283	14.5	28	318	16.1	29	261	11.1	21	273	13.3	18	262	21.7	27	281	22.4	---	---	---	8	263	21.4	25	304	11.5	26	280	21.4	29	258	12.6	23	257	23.0
6,000	31	296	16.9	29	276	17.7	27	319	18.1	29	259	13.6	17	265	13.6	13	270	23.5	26	274	26.5	---	---	---	6	272	24.4	24	303	13.5	25	252	23.1	28	261	16.4	17	264	22.7
8,000	26	298	17.3	23	289	17.3	22	311	21.7	25	252	18.6	12	289	16.5	10	265	33.2	22	263	28.4	---	---	---	---	---	---	22	297	17.6	22	247	24.7	24	263	20.2	8	270	14.2
10,000	21	310	20.5	19	287	18.7	15	303	24.0	20	246	21.7	8	282	20.0	---	---	---	8	276	26.2	---	---	---	---	---	---	14	297	16.1	12	247	26.7	21	247	22.0	---	---	---
12,000	6	265	23.7	14	289	15.0	8	311	23.2	15	252	21.3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	9	294	19.0	---	---	---	14	259	34.7	---	---	---

Altitude (meters) m. s. l.	Nashville, Tenn. (177 m.)			New Orleans, La. (6 m.)			Oakland, Calif. (31 m.)			Oklahoma City, Okla. (391 m.)			Rapid City, S. Dak. (980 m.)			San Antonio, Tex. (240 m.)			San Juan,[1] P. R. (28 m.)			Saint Cloud, Minn. (318 m.)			Santa Maria, Calif.[1] (72 m.)			Sault Ste. Marie, Mich. (224 m.)			Spokane, Wash. (721 m.)			Tatoosh Island, Wash. (33 m.)		
500	29	266	1.7	30	37	1.1	31	10	1.7	31	20	1.5	---	---	---	31	44	2.1	---	---	---	30	275	2.4	---	---	---	30	300	1.4	---	---	---	30	182	1.9
1,000	29	273	3.8	28	277	1.6	31	4	2.6	31	343	2.3	31	298	4.4	30	204	1.0	---	---	---	30	289	5.7	---	---	---	30	272	3.9	31	201	3.1	30	239	3.5
1,500	29	283	7.9	27	275	4.6	31	338	2.8	31	327	4.2	31	308	8.5	29	237	3.8	---	---	---	30	298	7.5	---	---	---	28	295	6.4	30	242	4.1	29	249	4.4
2,000	29	277	10.6	27	275	7.4	31	326	3.0	31	315	5.6	31	315	11.6	29	260	6.6	---	---	---	30	295	8.9	---	---	---	27	294	8.0	30	272	5.7	29	266	5.9
2,500	28	272	13.3	28	269	9.3	31	330	4.4	30	292	6.9	30	319	13.1	29	270	8.1	---	---	---	31	299	10.3	---	---	---	25	292	10.5	30	286	6.8	29	272	8.1
3,000	26	276	16.8	27	268	12.1	31	327	5.9	30	291	8.7	30	314	13.8	29	269	9.4	---	---	---	31	303	11.0	---	---	---	25	286	11.8	30	288	9.2	27	281	10.1
4,000	24	273	20.5	28	259	15.3	30	316	6.6	28	282	13.6	28	311	16.4	29	275	10.8	---	---	---	31	302	12.6	---	---	---	25	281	15.0	30	304	13.5	26	283	12.4
5,000	19	263	25.7	27	262	18.4	28	309	8.0	24	274	18.1	25	317	15.8	28	273	13.4	---	---	---	30	306	15.4	---	---	---	23	283	17.7	29	306	16.8	25	279	14.4
6,000	11	266	28.2	26	260	20.2	28	297	9.6	20	271	20.0	25	311	17.0	22	274	13.8	---	---	---	27	308	15.8	---	---	---	20	279	18.6	27	314	20.0	23	278	15.7
8,000	7	253	24.4	24	258	24.5	24	310	11.6	17	269	24.8	23	311	19.2	19	272	16.8	---	---	---	25	301	19.0	---	---	---	8	275	18.7	17	296	21.4	16	269	15.7
10,000	---	---	---	22	252	28.8	21	323	13.9	5	279	26.7	17	316	22.5	13	262	17.1	---	---	---	19	299	19.8	---	---	---	---	---	---	13	306	18.1	10	283	14.1
12,000	---	---	---	16	254	31.7	15	317	14.1	---	---	---	13	305	23.0	5	266	18.6	---	---	---	13	293	18.5	---	---	---	---	---	---	---	---	---	---	---	---
14,000	---	---	---	7	277	20.6	8	303	22.4	---	---	---	6	319	22.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

[1] Data not received.

NOTE.—Maximum free-air wind velocities for different sections of the United States, based on pilot balloon observations, formerly appearing as Table 3, were discontinued with the December 1947 issue of the REVIEW.