METEOROLOGICAL AND CLIMATOLOGICAL DATA FOR APRIL 1947

AEROLOGICAL OBSERVATIONS

[For description of change in Table 1 and charts, see REVIEW, January 1946, p. 61]

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 April 1947*

STATIONS AND MEAN SURFACE PRESSURES

Standard pressure surface (mb)	Albany, N. Y. (1,008.6 mb.)				Albuquerque, N. Mex. (834.0 mb.)				Apalachicola, Fla. (1,018.0 mb.)				Atlanta, Ga. (983.9 mb.)				Auburn, Calif. (957.9 mb.)				Big Spring, Tex. (924.4 mb.)				Bismarck, N. Dak. (955.2 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	30	86	4.8	73	30	1,620	14.2	24	30	5	19.8	89	30	300	16.3	75	30	501	15.0	57	30	774	16.9	49	30	505	5.1	71
1,000	30	155	4.4	70	30	56	(*)	----	30	159	19.9	82	30	160	(*)	----	30	134	(*)	----	30	94	(*)	----	30	126	(*)	----
950	30	576	3.1	69	30	509	(*)	----	30	602	18.9	67	30	602	16.7	66	30	576	15.6	54	30	540	(*)	----	30	549	(*)	----
900	30	1,009	1.4	69	30	974	(*)	----	30	1,065	16.8	60	30	1,059	14.1	66	30	1,028	12.8	50	30	1,001	16.9	50	30	989	3.5	64
850	30	1,468	−0.3	66	30	1,459	(*)	----	30	1,550	14.2	55	30	1,539	11.2	66	30	1,505	9.2	48	30	1,486	14.4	50	30	1,451	0.6	67
800	30	1,952	−1.3	60	30	1,970	12.5	25	30	2,060	11.7	47	30	2,043	9.0	54	30	2,004	5.5	51	30	1,996	12.0	43	30	1,936	−1.5	62
750	30	2,469	−3.6	63	30	2,510	8.4	28	30	2,599	8.8	42	30	2,579	6.5	46	30	2,533	1.6	50	30	2,536	8.8	37	30	2,450	−4.0	57
700	30	3,007	−5.9	61	30	3,071	3.7	33	30	3,165	5.7	40	30	3,139	3.8	42	30	3,080	−1.7	49	30	3,100	5.0	34	30	2,990	−7.0	59
650	30	3,591	−8.7	60	30	3,669	−1.3	40	30	3,770	2.5	39	30	3,740	0.4	38	30	3,666	−5.8	46	30	3,699	0.8	36	30	3,569	−10.6	60
600	30	4,202	−11.6	58	30	4,299	−6.7	47	30	4,409	−1.3	37	30	4,375	−3.5	36	30	4,286	−10.1	48	30	4,338	−3.7	34	30	4,176	−14.2	59
550	30	4,866	−15.5	53	29	4,970	−12.0	52	30	5,096	−6.1	38	30	5,057	−7.9	37	30	4,953	−14.6	47	30	5,018	−8.6	33	30	4,835	−18.2	59
500	30	5,576	−20.1	56	29	5,691	−17.5	56	30	5,836	−10.7	34	30	5,791	−12.9	44	30	5,665	−19.9	47	29	5,749	−13.8	----	30	5,538	−22.7	----
450	30	6,353	−25.3	----	29	6,474	−23.2	----	30	6,645	−16.0	41	30	6,590	−18.2	43	30	6,444	−25.5	----	28	6,547	−19.6	----	30	6,308	−28.1	----
400	29	7,200	−31.1	----	29	7,324	−29.3	----	30	7,515	−22.0	----	30	7,456	−24.1	----	30	7,282	−31.7	----	27	7,406	−26.2	----	30	7,138	−34.1	----
350	28	8,136	−37.7	----	29	8,264	−35.9	----	29	8,481	−29.3	----	30	8,416	−31.4	----	30	8,211	−38.9	----	27	8,358	−32.9	----	27	8,059	−40.8	----
300	27	9,190	−45.4	----	29	9,318	−42.8	----	29	9,562	−37.8	----	30	9,488	−39.7	----	30	9,250	−47.0	----	25	9,425	−40.2	----	24	9,093	−48.2	----
250	25	10,390	−53.0	----	27	10,524	−50.1	----	28	10,785	−48.0	----	29	10,710	−49.2	----	29	10,435	−54.6	----	23	10,659	−47.6	----	17	10,252	−54.4	----
200	23	11,799	−59.0	----	15	11,942	−55.4	----	26	12,221	−58.4	----	27	12,134	−59.6	----	27	11,842	−59.6	----	18	12,124	−55.7	----	9	11,688	−56.0	----
175	20	12,640	−59.7	----	7	12,818	−59.1	----	26	13,052	−62.4	----	20	12,975	−62.2	----	21	12,680	−60.8	----	13	12,961	−57.6	----	6	12,548	−54.2	----
150	15	13,587	−59.5	----	----	----	----	----	25	13,998	−65.5	----	14	13,922	−63.5	----	14	13,632	−59.6	----	----	----	----	----	----	----	----	----
125	9	14,764	−58.8	----	----	----	----	----	15	15,108	−68.2	----	7	15,018	−65.8	----	8	14,741	−58.8	----	----	----	----	----	----	----	----	----
100	----	----	----	----	----	----	----	----	7	16,412	−70.9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Standard pressure surface (mb)	Boise, Idaho (915.9 mb.)				Brownsville, Tex. (1,011.7 mb.)				Buffalo, N. Y. (991.4 mb.)				Caribou, Maine (993.6 mb.)				Charleston, S. C. (1,017.9 mb.)				Ciudad Victoria, Mexico (971.3 mb.)				Columbia, Mo. (986.7 mb.)			
Surface	30	868	10.6	56	30	6	22.1	85	30	221	4.9	74	30	191	−2.2	76	30	14	17.4	86	29	335	26.1	55	30	239	11.5	72
1,000	30	127	(*)	----	30	107	21.3	85	30	149	(*)	----	30	139	(*)	----	30	166	17.9	83	29	77	(*)	----	30	125	(*)	----
950	30	562	(*)	----	30	558	19.5	83	30	572	4.3	69	30	550	−3.0	67	30	607	17.2	74	29	532	24.7	54	30	557	11.0	66
900	30	1,014	11.4	49	30	1,017	18.9	64	30	1,006	2.5	70	30	973	−5.1	68	30	1,066	14.7	70	29	1,002	21.4	58	30	1,005	9.0	67
850	30	1,488	7.8	50	30	1,507	17.4	53	30	1,468	1.0	66	30	1,420	−7.0	71	30	1,548	12.1	68	29	1,495	18.0	62	30	1,477	7.0	70
800	30	1,985	3.9	53	30	2,024	15.6	40	30	1,953	−0.8	63	30	1,892	−9.0	68	30	2,054	9.5	56	29	2,012	14.7	63	30	1,973	4.7	66
750	30	2,504	−0.2	59	30	2,574	13.3	33	30	2,475	−2.9	59	30	2,394	−11.4	63	30	2,591	7.0	45	29	2,561	12.3	58	30	2,504	2.4	60
700	30	3,054	−4.3	62	30	3,145	9.9	27	30	3,011	−5.3	58	30	2,916	−13.7	56	30	3,151	4.2	42	29	3,133	10.0	44	30	3,052	−0.6	52
650	30	3,633	−8.4	62	28	3,760	5.8	26	30	3,597	−8.1	57	30	3,486	−16.0	53	30	3,752	0.7	41	29	3,743	5.9	43	30	3,645	−3.8	48
600	30	4,250	−12.5	55	28	4,405	0.6	33	30	4,208	−11.6	59	29	4,073	−19.0	----	30	4,386	−2.9	36	29	4,395	0.8	43	29	4,269	−7.6	44
550	30	4,908	−16.7	49	27	5,099	−4.7	38	30	4,874	−15.7	60	29	4,720	−22.4	----	29	5,074	−7.1	----	28	5,084	−4.6	44	29	4,943	−12.3	48
500	30	5,618	−21.7	----	27	5,840	−9.3	37	30	5,581	−20.8	64	29	5,410	−26.2	----	28	5,813	−12.0	----	28	5,831	−9.2	41	29	5,662	−17.3	47
450	30	6,391	−27.5	----	27	6,654	−14.9	----	29	6,357	−26.3	----	29	6,172	−30.3	----	27	6,622	−17.2	----	28	6,641	−14.7	42	29	6,451	−22.8	----
400	30	7,223	−33.9	----	25	7,527	−21.3	----	29	7,191	−32.0	----	28	6,996	−35.3	----	27	7,492	−23.1	----	27	7,526	−20.4	42	29	7,298	−28.6	----
350	30	8,144	−41.1	----	25	8,497	−28.7	----	29	8,119	−38.9	----	27	7,907	−40.9	----	27	8,451	−30.4	----	27	8,500	−28.0	----	29	8,241	−35.5	----
300	28	9,181	−48.6	----	25	9,582	−37.0	----	29	9,161	−46.1	----	26	8,950	−46.4	----	26	9,531	−38.7	----	27	9,589	−36.2	----	29	9,297	−42.9	----
250	27	10,354	−55.8	----	25	10,817	−46.3	----	28	10,353	−52.9	----	24	10,156	−50.0	----	26	10,756	−48.8	----	25	10,830	−45.8	----	28	10,507	−50.7	----
200	21	11,771	−59.6	----	24	12,270	−55.0	----	23	11,769	−58.2	----	14	11,629	−51.7	----	25	12,182	−59.5	----	21	12,278	−55.9	----	24	11,920	−57.6	----
175	15	12,579	−57.7	----	17	13,120	−58.6	----	15	12,594	−59.2	----	10	12,476	−50.6	----	21	13,010	−63.1	----	12	13,110	−60.6	----	18	12,750	−59.3	----
150	8	13,490	−53.4	----	11	14,056	−61.0	----	5	13,511	−53.8	----	5	13,492	−51.7	----	16	13,942	−64.3	----	----	----	----	----	7	13,729	−57.9	----
125	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	9	15,045	−65.3	----	----	----	----	----	----	----	----	----

Standard pressure surface (mb)	Dodge City, Kans. (922.7 mb.)				El Paso, Tex. (879.4 mb.)				Ely, Nev. (807.9 mb.)				Fort Worth, Tex. (988.4 mb.)				Glasgow, Mont. (939.0 mb.)				Grand Junction, Colo. (850.2 mb.)				Great Falls, Mont. (886.3 mb.)			
Surface	30	787	9.8	74	30	1,195	18.4	19	30	1,908	6.2	58	30	211	18.1	67	30	648	6.8	62	30	1,474	11.0	39	30	1,128	7.7	52
1,000	30	109	(*)	----	30	75	(*)	----	30	117	(*)	----	30	109	(*)	----	30	123	(*)	----	30	93	(*)	----	30	117	(*)	----
950	30	545	(*)	----	30	530	(*)	----	30	557	(*)	----	30	551	16.8	65	30	552	(*)	----	30	541	(*)	----	30	554	(*)	----
900	30	993	10.0	67	30	998	(*)	----	30	1,011	(*)	----	30	1,009	14.7	65	30	995	6.1	57	30	998	(*)	----	30	1,006	(*)	----
850	30	1,467	8.7	61	30	1,485	17.2	21	30	1,486	(*)	----	30	1,491	12.9	61	30	1,461	3.0	60	30	1,475	(*)	----	30	1,471	6.0	51
800	30	1,967	6.4	52	30	1,997	13.0	23	30	1,988	6.9	55	30	1,999	10.6	56	30	1,949	0.0	62	30	1,978	7.7	40	30	1,964	2.1	56
750	30	2,498	3.1	50	30	2,537	9.0	24	30	2,519	3.0	57	30	2,540	7.8	48	30	2,463	−3.5	62	30	2,509	3.3	47	30	2,483	−2.0	60
700	30	3,049	−0.2	47	30	3,101	4.3	26	30	3,070	−1.4	63	30	3,100	4.1	45	30	3,005	−7.3	64	30	3,061	−1.4	56	30	3,025	−6.3	65
650	30	3,642	−4.0	45	30	3,699	−0.5	27	30	3,657	−6.0	70	29	3,700	0.1	41	30	3,580	−11.0	64	30	3,646	−6.3	63	30	3,604	−10.6	68
600	30	4,264	−8.5	41	30	4,332	−5.7	30	30	4,278	−10.6	69	28	4,335	−4.4	44	30	4,189	−14.9	62	30	4,266	−11.2	72	30	4,211	−14.7	65
550	30	4,935	−13.2	42	30	5,010	−10.8	31	30	4,942	−15.2	63	28	5,017	−9.1	41	30	4,839	−19.4	62	30	4,929	−16.2	69	30	4,865	−18.9	58
500	30	5,652	−18.3	43	30	5,733	−16.4	----	30	5,655	−19.9	58	28	5,745	−14.6	----	30	5,542	−24.4	----	29	5,635	−21.8	----	30	5,567	−24.1	----
450	30	6,435	−24.0	----	30	6,521	−22.3	----	30	6,432	−25.5	----	28	6,541	−20.4	----	30	6,305	−30.0	----	27	6,417	−27.3	----	30	6,331	−29.9	----
400	29	7,278	−30.1	----	30	7,371	−28.6	----	30	7,272	−31.9	----	27	7,393	−26.8	----	29	7,133	−35.8	----	26	7,246	−33.5	----	30	7,155	−36.1	----
350	28	8,214	−37.1	----	30	8,313	−35.6	----	30	8,200	−39.4	----	27	8,342	−34.2	----	29	8,047	−42.6	----	26	8,169	−40.4	----	30	8,068	−43.1	----
300	27	9,265	−44.6	----	30	9,368	−43.4	----	30	9,237	−47.6	----	27	9,403	−42.1	----	24	9,081	−49.7	----	24	9,207	−47.7	----	30	9,089	−50.3	----
250	26	10,468	−52.1	----	30	10,571	−51.5	----	29	10,421	−54.8	----	25	10,629	−50.2	----	19	10,251	−56.3	----	19	10,402	−54.0	----	28	10,256	−56.4	----
200	19	11,893	−58.4	----	29	11,997	−58.4	----	20	11,849	−58.3	----	21	12,058	−59.3	----	11	11,673	−57.7	----	18	11,819	−58.2	----	23	11,672	−57.4	----
175	19	12,729	−59.3	----	18	12,828	−58.3	----	15	12,659	−56.7	----	18	12,871	−62.3	----	9	12,513	−55.8	----	14	12,659	−58.4	----	14	12,513	−54.5	----
150	18	13,688	−58.5	----	11	13,810	−58.9	----	7	13,632	−55.0	----	10	13,843	−61.7	----	7	13,488	−54.1	----	6	13,622	−56.6	----	7	13,505	−52.7	----
125	17	14,833	−59.6	----	----	----	----	----	5	14,765	−54.5	----	----	----	----	----	6	14,650	−54.1	----	----	----	----	----	----	----	----	----
100	9	16,227	−60.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

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 April 1947*— Continued

Standard pressure surface (mb.)	Greensboro, N. C. (987.5 mb.)				Hatteras, N. C. (1,020.2 mb.)				Havana, Cuba (1,010.8 mb.)				Honolulu, T. H. (1,016.6 mb.)				Huntington, W. Va. (997.6 mb.)				International Falls, Minn. (974.4 mb.)				Joliet, Ill. (994.5 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	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	30	273	14.0	67	30	3	14.7	88	29	50	24.4	86	28	3	25.4	60	30	172	11.8	73	29	360	1.2	63	30	178	7.3	80
1,000	30	166	(*)	----	30	172	14.6	80	29	145	24.0	85	28	148	23.3	64	30	152	(*)	----	29	149	(*)	----	30	131	(*)	----
950	30	602	13.9	61	30	609	13.6	72	29	597	21.0	81	28	596	19.4	72	30	586	11.8	65	29	565	0.9	58	30	556	6.6	73
900	30	1,054	11.7	62	30	1,060	11.7	69	29	1,061	18.7	65	28	1,056	15.6	79	30	1,033	9.6	66	29	996	−1.8	63	30	996	5.0	72
850	30	1,531	9.4	62	30	1,537	9.9	58	29	1,550	15.6	68	28	1,539	12.5	79	30	1,506	7.0	67	29	1,449	−3.7	58	30	1,462	3.3	64
800	30	2,032	6.7	59	30	2,039	7.7	47	29	2,062	11.9	74	28	2,048	12.5	43	30	2,003	4.8	63	29	1,925	−5.8	55	30	1,952	.8	64
750	30	2,565	4.0	51	30	2,574	5.3	39	29	2,603	8.7	68	28	2,592	10.8	----	30	2,531	1.8	63	29	2,434	−7.9	55	30	2,472	−1.1	60
700	30	3,118	1.4	43	29	3,128	2.6	----	29	3,168	6.2	53	28	3,160	8.1	----	30	3,080	−1.0	54	29	2,963	−10.5	57	29	3,018	−4.0	58
650	30	3,713	−1.8	----	29	3,728	−.4	----	29	3,778	3.6	35	27	3,773	4.8	----	30	3,673	−4.2	47	29	3,534	−13.5	57	29	3,605	−7.1	55
600	30	4,344	−5.5	----	29	4,359	−4.2	----	29	4,420	.3	----	27	4,417	1.1	----	30	4,295	−8.1	48	28	4,134	−17.0	59	28	4,219	−11.0	56
550	30	5,020	−9.7	----	28	5,038	−8.7	----	28	5,114	−3.8	----	26	5,108	−3.2	----	30	4,968	−12.2	48	27	4,784	−21.0	----	28	4,884	−15.0	58
500	30	5,751	−14.7	----	28	5,770	−13.4	----	25	5,859	−8.6	----	24	5,860	−8.1	----	30	5,688	−16.9	48	27	5,479	−25.8	----	28	5,597	−19.7	58
450	30	6,549	−20.3	----	27	6,569	−18.7	----	21	6,677	−13.9	----	23	6,675	−13.9	----	30	6,474	−22.3	----	27	6,241	−30.7	----	28	6,376	−25.0	----
400	30	7,404	−26.2	----	27	7,434	−24.7	----	19	7,559	−20.0	----	20	7,549	−20.7	----	29	7,328	−28.6	----	27	7,063	−36.3	----	28	7,219	−30.9	----
350	30	8,357	−33.1	----	25	8,391	−31.8	----	19	8,533	−28.0	----	17	8,526	−27.8	----	28	8,270	−35.6	----	25	7,987	−42.5	----	27	8,150	−38.0	----
300	29	9,419	−41.2	----	25	9,462	−39.9	----	18	9,621	−36.7	----	16	9,620	−35.7	----	27	9,318	−44.1	----	23	9,021	−49.5	----	27	9,196	−45.2	----
250	27	10,628	−50.8	----	24	10,682	−48.9	----	16	10,861	−46.6	----	16	10,863	−44.8	----	25	10,519	−53.0	----	22	10,194	−55.3	----	23	10,402	−52.1	----
200	25	12,056	−60.8	----	21	12,117	−58.4	----	15	12,308	−57.0	----	16	12,324	−54.2	----	20	11,927	−61.8	----	9	11,611	−54.8	----	21	11,818	−57.7	----
175	20	12,881	−62.9	----	16	12,962	−61.3	----	12	13,152	−62.5	----	16	13,170	−58.6	----	15	12,780	−63.6	----	----	----	----	----	13	12,619	−56.8	----
150	16	13,821	−63.1	----	5	13,864	−59.7	----	5	14,130	−68.8	----	15	14,125	−63.0	----	12	13,708	−62.4	----	----	----	----	----	5	13,589	−55.2	----
125	14	14,924	−64.4	----	----	----	----	----	----	----	----	----	10	15,232	−65.2	----	7	14,825	−61.8	----	----	----	----	----	----	----	----	----
100	7	16,305	−64.7	----	----	----	----	----	----	----	----	----	5	16,565	−66.6	----	----	----	----	----	----	----	----	----	----	----	----	----

Standard pressure surface (mb.)	Lake Charles, La. (1,015.1 mb.)				Lander, Wyo. (827.4 mb.)				Las Vegas, Nev. (945.2 mb.)				Little Rock, Ark. (1,006.0 mb.)				Mazatlan, Mexico (1,009.3 mb.)				Medford, Oreg. (971.2 mb.)				Merida, Mexico (1,009.0 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	30	5	19.6	85	30	1,696	4.9	63	30	574	21.3	22	29	79	16.7	70	30	14	22.0	73	30	401	15.0	56	29	27	29.6	56
1,000	30	134	19.4	81	30	117	(*)	----	30	81	(*)	----	29	130	16.9	66	30	95	21.3	67	30	151	(*)	----	29	107	28.7	57
950	30	582	17.4	74	30	555	(*)	----	30	528	(*)	----	29	573	16.0	64	30	545	22.2	30	30	593	14.5	51	29	564	25.8	56
900	30	1,035	15.7	65	30	1,006	(*)	----	30	996	19.0	22	29	1,026	13.8	65	30	1,009	21.3	----	30	1,041	10.8	55	29	1,036	22.4	60
850	30	1,519	13.6	56	30	1,474	(*)	----	30	1,482	14.7	26	29	1,506	11.4	63	30	1,501	18.6	----	30	1,514	6.9	61	29	1,531	18.7	66
800	30	2,028	11.4	50	30	1,970	4.4	57	30	1,990	10.1	31	29	2,011	9.7	51	30	2,018	15.7	----	30	2,009	3.0	65	29	2,049	14.9	69
750	30	2,570	8.5	46	30	2,495	.6	60	30	2,526	5.4	37	29	2,551	7.0	47	30	2,565	12.2	----	30	2,532	−.7	65	29	2,597	11.4	66
700	30	3,132	5.7	35	30	3,042	−3.6	65	30	3,081	.5	44	29	3,109	3.8	44	30	3,136	8.5	----	30	3,076	−4.0	62	29	3,166	8.5	52
650	30	3,738	2.4	29	30	3,624	−8.2	69	30	3,671	−4.1	49	28	3,715	1.0	40	30	3,746	4.3	----	30	3,660	−7.5	52	28	3,783	5.5	40
600	30	4,377	−2.1	29	30	4,239	−12.6	68	30	4,297	−8.7	52	28	4,350	−3.0	35	30	4,389	.0	----	30	4,274	−11.5	52	28	4,427	1.9	32
550	30	5,065	−7.1	34	30	4,898	−16.9	61	30	4,967	−13.4	51	28	5,031	−7.9	----	28	5,080	−5.0	----	30	4,936	−15.9	54	28	5,125	−2.1	----
500	30	5,798	−12.4	----	29	5,612	−22.1	----	30	5,684	−18.6	45	27	5,765	−13.2	----	28	5,822	−10.2	----	29	5,650	−20.7	59	28	5,874	−7.0	----
450	29	6,605	−18.1	----	29	6,382	−27.9	----	30	6,466	−24.3	----	27	6,566	−19.0	----	28	6,631	−15.6	----	29	6,423	−26.0	----	28	6,696	−12.6	----
400	29	7,466	−24.2	----	29	7,213	−34.1	----	30	7,310	−30.6	----	27	7,426	−25.2	----	28	7,505	−21.7	----	29	7,263	−32.1	----	28	7,577	−19.1	----
350	29	8,425	−31.3	----	29	8,133	−41.4	----	30	8,244	−37.9	----	25	8,384	−31.6	----	26	8,474	−29.4	----	29	8,191	−39.3	----	28	8,555	−26.8	----
300	29	9,499	−39.3	----	28	9,165	−48.9	----	30	9,288	−45.8	----	25	9,458	−39.0	----	25	9,557	−37.5	----	28	9,234	−47.0	----	28	9,648	−35.4	----
250	28	10,720	−48.9	----	28	10,341	−56.3	----	29	10,479	−53.5	----	23	10,683	−47.7	----	18	10,819	−46.0	----	26	10,420	−54.8	----	28	10,891	−45.1	----
200	24	12,155	−58.5	----	20	11,747	−58.3	----	25	11,888	−58.3	----	16	12,118	−57.1	----	----	----	----	----	22	11,833	−60.9	----	22	12,347	−55.9	----
175	19	12,997	−61.4	----	13	12,582	−56.4	----	17	12,712	−57.2	----	7	12,934	−59.3	----	----	----	----	----	18	12,645	−60.0	----	14	13,183	−61.6	----
150	12	13,930	−63.5	----	11	13,546	−54.7	----	9	13,658	−55.0	----	----	----	----	----	----	----	----	----	8	13,551	−55.7	----	5	14,116	−66.6	----
125	7	15,050	−66.7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Standard pressure surface (mb.)	Miami, Fla. (1,018.1 mb.)				Nantucket, Mass. (1,017.9 mb.)				Nashville, Tenn. (995.8 mb.)				New Orleans, La. (1,016.6 mb.)				North Platte, Nebr. (916.2 mb.)				Oakland, Calif. (1,016.9 mb.)				Ogden, Utah (863.3 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	30	4	24.0	80	30	14	5.1	90	29	180	15.3	68	30	2	20.4	85	30	849	6.9	74	30	6	14.9	71	30	1,355	9.0	56
1,000	30	161	23.5	80	30	159	5.4	80	29	144	(*)	----	30	144	19.8	83	30	118	(*)	----	30	147	14.0	70	30	117	(*)	----
950	30	610	20.8	79	30	581	5.7	63	29	585	14.6	63	30	589	17.7	82	30	550	(*)	----	30	583	13.0	62	30	558	(*)	----
900	30	1,076	18.3	73	30	1,020	4.3	55	29	1,034	12.0	64	30	1,047	15.6	67	30	995	7.9	64	30	1,032	12.0	47	30	1,011	(*)	----
850	30	1,564	15.7	65	30	1,484	2.9	47	29	1,511	9.5	63	30	1,532	14.2	52	30	1,465	5.8	63	30	1,509	9.5	42	30	1,484	9.0	50
800	30	2,077	13.1	58	30	1,974	1.5	47	29	2,012	7.6	53	30	2,042	11.9	48	30	1,959	3.3	63	30	2,009	6.8	36	30	1,983	5.5	51
750	30	2,620	10.0	51	30	2,493	−.6	49	29	2,547	4.9	50	30	2,584	9.2	46	30	2,489	.3	61	30	2,542	3.3	38	30	2,509	1.2	56
700	30	3,187	7.0	48	30	3,040	−3.3	50	29	3,101	2.0	40	30	3,149	6.0	45	30	3,029	−3.3	56	30	3,091	−.1	36	30	3,058	−3.0	61
650	30	3,798	3.8	42	30	3,626	−6.2	46	29	3,698	−1.4	39	30	3,756	2.7	38	30	3,618	−7.4	55	30	3,683	−3.9	32	30	3,643	−7.4	66
600	30	4,439	.0	----	30	4,241	−9.6	45	29	4,329	−5.3	40	29	4,394	−1.0	33	30	4,230	−11.5	54	30	4,307	−7.9	----	30	4,259	−11.9	68
550	30	5,132	−3.9	----	30	4,914	−13.6	46	29	5,007	−9.6	----	29	5,084	−5.6	34	30	4,899	−16.1	50	30	4,979	−12.4	----	30	4,918	−16.5	67
500	29	5,878	−8.2	----	30	5,630	−18.3	50	29	5,736	−14.5	----	28	5,826	−10.6	38	30	5,603	−21.1	----	30	5,699	−17.4	----	30	5,629	−21.4	----
450	28	6,695	−13.7	----	28	6,414	−23.6	----	29	6,533	−20.1	----	27	6,632	−16.3	----	30	6,383	−26.7	----	30	6,485	−22.8	----	30	6,405	−27.1	----
400	28	7,573	−19.9	----	28	7,259	−29.4	----	28	7,388	−26.3	----	25	7,496	−22.8	----	30	7,212	−33.0	----	30	7,336	−29.0	----	29	7,239	−33.4	----
350	27	8,547	−27.3	----	28	8,197	−36.1	----	27	8,340	−33.3	----	23	8,456	−30.3	----	29	8,144	−39.9	----	30	8,276	−36.1	----	29	8,163	−40.6	----
300	26	9,639	−35.6	----	26	9,257	−43.4	----	26	9,404	−41.0	----	21	9,535	−38.0	----	29	9,179	−47.7	----	29	9,326	−43.8	----	28	9,189	−48.5	----
250	26	10,882	−45.3	----	25	10,466	−51.9	----	23	10,624	−50.1	----	19	10,761	−47.5	----	28	10,364	−54.8	----	23	10,545	−51.1	----	28	10,367	−55.9	----
200	25	12,336	−55.0	----	20	11,913	−58.6	----	19	12,053	−58.9	----	15	12,230	−56.5	----	24	11,767	−57.3	----	18	11,952	−56.6	----	19	11,762	−57.2	----
175	20	13,182	−59.7	----	17	12,733	−59.6	----	17	12,884	−61.0	----	9	13,061	−59.5	----	23	12,606	−56.7	----	12	12,788	−55.5	----	14	12,613	−57.0	----
150	16	14,130	−64.4	----	9	13,655	−56.5	----	13	13,813	−60.7	----	----	----	----	----	20	13,580	−56.9	----	6	13,730	−55.8	----	11	13,575	−55.6	----
125	10	15,220	−67.5	----	----	----	----	----	10	14,952	−60.2	----	----	----	----	----	11	14,735	−56.3	----	----	----	----	----	----	----	----	----

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 April 1947*—Continued

Standard pressure surface (mb.)	Oklahoma City, Okla. (967.0 mb.)				Omaha, Nebr. (978.8 mb.)				Phoenix, Ariz. (971.0 mb.)				Pittsburgh, Pa. (972.9 mb.)				Portland, Maine (1,016.3 mb.)				Rapid City, S. Dak. (901.9 mb.)				St. Paul, Minn. (987.7 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	27	391	14.2	74	30	308	9.1	72	30	339	22.7	27	30	382	9.6	63	30	20	3.4	75	30	980	5.0	71	30	225	5.8	73
1,000	27	106	(*)	----	30	128	(*)	----	30	80	(*)	----	30	151	(*)	----	30	151	3.9	69	30	123	(*)	----	30	122	(*)	----
950	27	540	14.2	70	30	556	7.4	71	30	533	23.4	22	30	586	8.9	63	30	570	2.9	62	30	552	(*)	----	30	543	4.1	70
900	27	995	12.0	69	30	998	5.2	74	30	997	19.6	23	30	1,025	7.2	65	30	1,003	.7	57	30	997	(*)	----	30	980	1.7	74
850	27	1,473	10.4	68	30	1,464	3.8	74	30	1,485	15.3	26	30	1,494	5.4	61	30	1,460	−1.3	59	30	1,463	4.2	65	30	1,439	−.3	67
800	27	1,976	8.7	57	30	1,954	1.5	71	30	1,994	10.8	30	30	1,988	3.3	56	30	1,942	−3.0	53	30	1,954	1.3	69	30	1,923	−2.0	61
750	27	2,511	5.8	49	30	2,479	−.9	65	30	2,532	6.2	34	30	2,515	.7	57	30	2,456	−4.8	51	30	2,472	−2.0	73	30	2,440	−4.1	60
700	27	3,069	2.5	42	30	3,021	−3.6	57	30	3,088	1.4	35	29	3,060	−2.4	58	30	2,992	−7.2	50	30	3,016	−5.2	74	30	2,976	−6.8	59
650	26	3,666	−1.5	35	29	3,607	−6.9	50	30	3,683	−2.7	34	29	3,652	−5.4	57	30	3,573	−10.2	55	30	3,597	−8.6	69	30	3,557	−10.2	58
600	25	4,305	−5.6	32	28	4,225	−10.8	48	29	4,309	−7.1	34	29	4,270	−9.0	55	30	4,180	−13.3	57	30	4,211	−12.4	63	30	4,164	−13.8	61
550	25	4,984	−10.0	----	28	4,890	−15.1	49	29	4,986	−11.8	35	29	4,944	−13.1	56	30	4,841	−16.7	54	30	4,871	−16.7	58	30	4,820	−18.1	59
500	25	5,710	−15.0	----	28	5,602	−20.2	51	29	5,706	−17.0	----	29	5,659	−17.7	55	30	5,548	−21.2	----	30	5,580	−21.5	52	30	5,525	−22.9	----
450	24	6,498	−20.9	----	28	6,381	−25.9	----	29	6,496	−22.7	----	29	6,444	−23.0	----	30	6,326	−26.5	----	30	6,354	−27.0	----	30	6,295	−28.1	----
400	24	7,356	−27.2	----	28	7,217	−32.3	----	29	7,342	−28.8	----	29	7,292	−29.1	----	30	7,159	−32.4	----	30	7,187	−33.2	----	30	7,125	−34.3	----
350	23	8,299	−34.0	----	26	8,145	−39.1	----	29	8,283	−35.8	----	28	8,229	−36.4	----	30	8,087	−39.4	----	30	8,111	−40.3	----	30	8,046	−41.3	----
300	14	9,371	−40.8	----	26	9,185	−46.3	----	28	9,342	−43.7	----	28	9,281	−43.7	----	30	9,125	−46.8	----	29	9,139	−47.7	----	30	9,075	−48.7	----
250	11	10,590	−48.5	----	25	10,379	−52.7	----	26	10,553	−52.2	----	28	10,483	−52.2	----	29	10,314	−53.8	----	25	10,333	−53.9	----	25	10,257	−54.6	----
200	8	12,044	−55.4	----	23	11,799	−56.5	----	20	11,967	−59.4	----	26	11,904	−59.3	----	24	11,753	−58.0	----	10	11,770	−57.2	----	18	11,664	−55.9	----
175	5	12,841	−58.9	----	21	12,649	−56.5	----	12	12,796	−59.3	----	22	12,748	−60.4	----	19	12,616	−58.3	----	----	----	----	----	11	12,525	−54.5	----
150	----	----	----	----	13	13,618	−55.7	----	5	13,764	−58.7	----	19	13,713	−59.6	----	12	13,527	−55.6	----	----	----	----	----	7	13,509	−52.9	----
125	----	----	----	----	8	14,780	−55.4	----	----	----	----	----	11	14,852	−60.2	----	8	14,663	−54.3	----	----	----	----	----	----	----	----	----

Standard pressure surface (mb.)	San Antonio, Tex. (984.9 mb.)				San Juan, P. R. (1,016.5 mb.)				Santa Maria, Calif. (1,008.7 mb.)				Sault Ste. Marie, Mich. (989.7 mb.)				Spokane, Wash. (946.0 mb.)				Swan Island, W. I. (1,013.6 mb.)				Tacubaya, Mexico.[1] (------ mb.)			
Surface	30	240	19.4	73	30	15	24.7	79	29	71	14.0	71	30	221	−0.2	79	30	598	11.2	58	30	10	26.2	79	----	----	----	----
1,000	30	108	(*)	----	30	159	23.5	78	29	144	13.6	72	30	136	(*)	----	30	130	(*)	----	30	130	25.3	80	----	----	----	----
950	30	554	18.3	73	30	606	20.1	78	29	581	12.7	64	30	554	−1.2	67	30	565	(*)	----	30	583	21.8	82	----	----	----	----
900	30	1,014	17.0	71	30	1,071	16.6	76	29	1,029	12.7	49	30	977	−2.3	61	30	1,013	9.4	50	30	1,048	18.8	78	----	----	----	----
850	30	1,500	15.0	65	30	1,556	13.6	72	29	1,508	10.4	46	30	1,430	−3.5	62	30	1,484	5.5	56	30	1,538	16.2	67	----	----	----	----
800	30	2,012	13.1	49	30	2,065	11.0	66	29	2,009	7.1	45	30	1,908	−4.9	55	30	1,976	1.5	63	30	2,052	13.3	63	----	----	----	----
750	30	2,557	11.0	43	30	2,608	9.2	40	29	2,540	4.1	37	30	2,421	−6.5	52	30	2,495	−2.4	65	30	2,597	10.0	60	----	----	----	----
700	30	3,125	7.8	35	30	3,172	7.5	----	29	3,095	1.1	31	30	2,952	−8.7	55	30	3,036	−6.2	65	30	3,164	7.7	45	----	----	----	----
650	29	3,729	3.6	26	30	3,781	4.7	----	29	3,692	−2.5	30	30	3,531	−11.6	54	30	3,617	−9.9	60	30	3,778	4.9	26	----	----	----	----
600	29	4,373	−1.1	27	29	4,425	1.1	----	29	4,316	−6.5	----	30	4,133	−15.1	50	30	4,224	−13.7	56	30	4,421	1.8	----	----	----	----	----
550	28	5,064	−6.0	----	29	5,117	−3.3	----	29	4,995	−10.8	----	30	4,790	−18.9	46	30	4,882	−18.0	52	30	5,121	−1.7	----	----	----	----	----
500	28	5,801	−11.6	----	29	5,864	−8.5	----	29	5,716	−15.7	----	28	5,493	−23.7	----	29	5,590	−22.5	----	30	5,870	−6.5	----	----	----	----	----
450	28	6,609	−17.3	----	29	6,681	−14.1	----	29	6,510	−21.1	----	27	6,264	−28.9	----	28	6,364	−27.8	----	29	6,696	−11.6	----	----	----	----	----
400	26	7,472	−23.2	----	29	7,556	−20.2	----	29	7,360	−27.8	----	26	7,091	−34.4	----	28	7,196	−33.9	----	29	7,577	−17.7	----	----	----	----	----
350	25	8,438	−30.2	----	29	8,531	−27.4	----	29	8,304	−35.2	----	26	8,012	−40.9	----	27	8,108	−40.8	----	28	8,561	−25.2	----	----	----	----	----
300	21	9,517	−38.0	----	29	9,621	−35.9	----	29	9,361	−42.6	----	23	9,033	−47.8	----	27	9,139	−48.1	----	27	9,660	−33.8	----	----	----	----	----
250	18	10,752	−46.6	----	29	10,861	−45.5	----	28	10,581	−50.2	----	22	10,222	−53.2	----	26	10,310	−54.6	----	27	10,912	−43.5	----	----	----	----	----
200	16	12,200	−55.4	----	26	12,312	−55.4	----	17	12,025	−58.6	----	14	11,608	−54.3	----	23	11,709	−56.4	----	25	12,378	−54.7	----	----	----	----	----
175	15	13,045	−59.0	----	25	13,154	−60.9	----	7	12,856	−61.1	----	9	12,509	−54.0	----	23	12,557	−55.6	----	25	13,219	−60.9	----	----	----	----	----
150	7	14,036	−61.5	----	17	14,092	−66.4	----	----	----	----	----	----	----	----	----	23	13,542	−53.8	----	17	14,175	−66.8	----	----	----	----	----
125	----	----	----	----	7	15,208	−70.7	----	----	----	----	----	----	----	----	----	18	14,694	−53.5	----	9	15,282	−72.4	----	----	----	----	----
100	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	14	16,117	−53.8	----	----	----	----	----	----	----	----	----

Standard pressure surface (nib.)	Tampa, Fla. (1,017.8 mb.)				Tatoosh Island, Wash. (1,015.2 mb.)				Toledo, Ohio (994.5 mb.)				Washington, D. C. (1,016.6 mb.)			
Surface	30	9	22.3	84	30	31	9.0	84	30	191	6.3	76	29	25	12.7	65
1,000	30	163	21.9	83	30	156	8.9	79	30	144	(*)	----	29	162	12.2	64
950	30	606	20.2	76	30	580	7.3	75	30	568	5.8	70	29	595	10.9	63
900	30	1,074	17.5	77	30	1,024	5.0	71	30	1,007	4.6	67	29	1,041	9.0	61
850	30	1,561	14.8	74	30	1,488	2.6	68	30	1,472	3.1	66	29	1,513	7.2	61
800	30	2,072	12.4	60	30	1,977	.3	61	30	1,962	1.7	55	29	2,010	4.9	59
750	30	2,613	9.5	51	30	2,495	−2.4	54	29	2,488	−.5	58	29	2,538	1.8	56
700	30	3,180	6.1	46	30	3,036	−5.5	52	29	3,028	−3.6	57	29	3,087	−.9	52
650	30	3,786	2.7	39	30	3,615	−8.8	48	29	3,617	−6.8	57	29	3,679	−3.8	48
600	30	4,427	−1.0	38	30	4,230	−12.6	46	29	4,230	−10.4	59	29	4,304	−7.6	44
550	29	5,114	−4.9	35	30	4,887	−17.0	47	28	4,900	−14.5	55	29	4,977	−11.8	46
500	29	5,858	−9.8	----	30	5,597	−21.9	----	28	5,612	−19.1	53	29	5,699	−16.7	50
450	29	6,669	−14.9	----	30	6,367	−27.1	----	28	6,399	−24.4	----	29	6,487	−22.2	----
400	29	7,545	−20.9	----	30	7,203	−33.1	----	28	7,236	−30.4	----	29	7,338	−28.2	----
350	29	8,517	−28.1	----	28	8,125	−39.8	----	28	8,171	−37.4	----	29	8,282	−35.2	----
300	29	9,604	−36.4	----	27	9,172	−46.4	----	27	9,217	−45.1	----	29	9,337	−43.5	----
250	28	10,839	−46.4	----	25	10,370	−53.2	----	27	10,416	−52.6	----	29	10,539	−52.7	----
200	27	12,281	−57.0	----	16	11,814	−56.6	----	25	11,834	−58.7	----	23	11,961	−60.5	----
175	22	13,118	−60.9	----	10	12,672	−55.5	----	20	12,675	−58.6	----	19	12,791	−62.0	----
150	13	14,104	−65.1	----	7	13,650	−53.6	----	15	13,637	−57.9	----	13	13,738	−60.9	----
125	7	15,179	−67.9	----	----	----	----	----	7	14,764	−56.0	----	7	14,817	−61.0	----

[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.

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TABLE 2.—*Free-air resultant winds based on pilot balloon observations made near 5 p. m., E. S. T. (2200 G. C. T.) during April 1947. Directions given in degrees from north (N=360°, E=90°, S=180°, W=270°). Velocities 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 (150 m.)			Denver, Colo. (1,627 m.)			El Paso, Tex. (1,198 m.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	29	206	1.9	29	270	3.2	28	228	1.3	27	301	2.7	27	268	2.6	30	320	4.4	29	126	5.3	27	242	4.4	28	249	2.6	28	158	2.5	25	228	1.8	27	348	2.2	30	244	4.0
500	---	---	---	---	---	---	28	235	1.5	---	---	---	---	---	---	---	---	---	28	142	7.9	27	241	6.4	28	245	3.8	28	172	4.6	25	215	3.0	---	---	---	---	---	---
1,000	29	215	4.4	---	---	---	27	234	2.8	---	---	---	27	284	3.7	30	319	4.8	25	160	9.5	26	245	9.2	27	248	4.8	23	221	4.7	19	216	6.9	---	---	---	---	---	---
1,500	26	224	5.2	---	---	---	26	244	3.8	27	298	5.0	26	290	4.6	30	310	5.5	22	178	9.2	22	242	10.6	21	263	7.8	22	248	6.0	18	229	7.6	---	---	---	30	247	5.0
2,000	22	234	8.4	29	249	4.8	24	246	5.7	24	295	5.7	22	290	7.0	30	307	5.3	21	196	7.3	17	248	9.9	19	264	10.8	21	258	8.2	14	255	8.2	27	334	2.0	30	251	5.0
2,500	20	237	10.0	29	261	4.4	21	258	6.8	24	291	6.2	22	291	7.9	30	305	5.8	19	207	6.1	11	261	12.8	13	277	13.4	20	256	9.6	11	263	9.8	27	298	1.6	29	259	4.7
3,000	18	239	11.2	29	263	4.2	19	263	8.7	23	288	8.0	19	294	9.3	28	294	5.4	18	222	5.8	---	---	---	10	287	15.6	19	261	9.1	---	---	---	24	262	3.7	28	260	6.6
4,000	15	246	14.0	28	266	8.2	13	278	11.6	20	299	10.6	14	298	11.1	20	315	6.1	17	221	6.3	---	---	---	---	---	---	17	262	13.5	---	---	---	21	270	7.5	26	259	12.1
5,000	14	248	16.2	24	285	13.1	11	269	13.2	16	310	9.2	10	301	8.8	17	317	7.5	15	230	7.3	---	---	---	---	---	---	13	261	13.2	---	---	---	16	286	10.0	25	257	15.8
6,000	14	252	21.4	22	274	14.1	---	---	---	15	302	9.9	---	---	---	15	303	7.7	14	237	12.4	---	---	---	---	---	---	13	263	14.7	---	---	---	14	302	10.2	23	258	16.6
8,000	12	263	21.9	16	288	14.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	21	258	21.9
10,000	---	---	---	10	277	22.3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	13	254	23.2

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	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	29	322	3.4	30	311	2.3	28	217	2.6	26	289	3.1	30	103	2.4	27	224	2.2	30	314	0.5	28	161	1.7	30	324	1.7	30	125	4.8	27	165	1.6	30	222	2.2	25	228	2.5
500	---	---	---	---	---	---	28	214	3.8	---	---	---	28	159	2.8	27	247	2.5	---	---	---	27	208	3.3	30	316	1.8	30	120	5.7	27	193	2.9	30	204	4.0	25	254	5.1
1,000	---	---	---	---	---	---	28	214	4.7	26	279	3.3	25	222	3.6	25	246	4.7	30	269	1.2	25	216	4.3	30	302	2.3	30	132	4.2	22	248	1.4	27	200	5.7	24	264	7.7
1,500	---	---	---	30	294	3.6	25	233	7.1	26	268	4.0	21	245	5.2	19	251	4.2	30	223	1.3	22	219	5.2	29	268	2.0	28	146	1.7	22	275	2.6	25	223	6.5	23	265	9.6
2,000	29	328	3.5	30	288	4.0	21	258	8.8	23	265	5.6	21	250	6.6	17	281	6.5	30	234	2.4	21	234	6.5	25	270	1.3	26	208	1.1	19	267	4.9	22	230	8.8	18	268	12.4
2,500	29	327	2.8	30	284	3.0	20	269	10.4	21	265	8.2	19	246	6.9	14	280	9.1	29	274	3.2	19	252	8.8	24	282	.9	24	225	.8	15	278	5.2	21	244	11.2	16	270	14.7
3,000	28	321	2.8	28	281	2.7	19	269	12.7	18	281	8.4	17	244	7.0	13	278	11.3	29	292	4.1	17	254	10.4	23	323	1.7	22	215	.8	15	279	6.6	21	246	12.2	10	276	13.6
4,000	21	304	5.0	24	258	4.2	15	270	14.3	12	302	10.2	16	253	8.3	---	---	---	28	305	5.0	15	255	14.1	16	327	5.7	20	208	1.9	12	271	9.4	18	255	13.7	---	---	---
5,000	17	322	10.2	20	276	5.8	---	---	---	10	305	10.7	16	255	11.4	---	---	---	20	318	7.9	11	265	14.5	13	3	5.6	14	284	2.4	---	---	---	11	256	12.1	---	---	---
6,000	12	334	12.1	14	315	9.1	---	---	---	---	---	---	15	253	14.2	---	---	---	19	324	10.7	10	262	19.2	13	10	7.4	14	278	5.2	---	---	---	10	265	14.4	---	---	---
8,000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	12	338	17.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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.)			St. Paul, Minn. (225 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.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	30	268	4.9	25	187	1.8	27	280	1.7	30	239	1.2	27	336	5.2	28	206	1.3	25	286	1.8	29	162	2.4	30	257	3.1	23	318	3.5	29	254	3.2	29	233	2.0	28	210	4.1
500	30	289	4.0	25	187	2.1	27	280	2.0	30	237	2.2	---	---	---	28	218	2.3	25	291	1.7	29	151	3.0	30	274	2.9	23	317	4.0	29	238	4.0	---	---	---	28	218	5.5
1,000	29	328	3.2	24	208	3.5	25	249	2.8	30	239	3.5	27	336	5.2	25	211	4.6	20	253	3.0	29	159	4.0	25	289	1.3	22	297	3.7	29	231	4.8	29	246	4.0	27	229	6.3
1,500	28	334	4.1	21	212	4.2	22	238	4.4	30	244	4.0	27	335	5.3	24	228	6.3	16	275	5.0	21	187	4.3	24	318	2.0	18	284	5.1	26	238	4.5	28	245	5.2	24	241	7.8
2,000	27	338	4.5	21	236	6.6	17	243	6.5	30	252	4.3	24	319	6.0	22	245	8.4	16	278	7.1	21	216	5.9	23	323	3.2	18	291	8.0	23	262	4.9	24	261	5.8	22	256	10.8
2,500	25	328	4.2	18	250	8.9	14	265	8.4	30	265	4.1	20	290	6.0	19	255	12.3	15	285	7.2	18	241	6.3	21	318	3.3	16	293	11.4	19	269	5.9	21	264	5.1	22	270	13.4
3,000	24	333	4.9	17	263	11.3	13	255	9.4	30	270	4.8	19	293	7.5	18	252	13.8	---	---	---	14	252	8.5	19	333	3.6	15	289	13.1	19	290	6.2	17	277	5.8	21	270	14.7
4,000	24	336	6.0	14	272	14.7	11	270	9.2	29	275	6.0	10	304	7.9	16	260	15.7	---	---	---	13	252	12.0	19	312	5.8	12	296	18.2	15	296	9.1	11	278	8.0	19	277	18.6
5,000	23	328	7.5	11	277	17.1	---	---	---	25	274	8.3	---	---	---	13	263	19.0	---	---	---	13	257	14.0	17	312	7.7	---	---	---	15	296	11.6	11	294	9.7	18	270	22.2
6,000	22	325	8.5	---	---	---	---	---	---	24	276	11.7	---	---	---	10	272	18.3	---	---	---	13	263	15.1	17	317	10.1	---	---	---	14	298	11.1	11	290	9.8	14	271	22.8
8,000	12	314	9.2	---	---	---	---	---	---	14	283	15.0	---	---	---	---	---	---	---	---	---	---	---	---	12	325	13.9	---	---	---	---	---	---	10	314	15.3	---	---	---

TABLE 3.—*Maximum free-air wind velocities (m. p. s.) for different sections of the United States based on pilot balloon observations during April 1947*

Section	Surface to 2,500 meters (m. s. l.)					2,501 to 5,000 meters (m. s. l.)					Above 5,000 meters (m. s. l.)				
	Maximum velocity	Direction	Altitude (m.) m. s. l.	Date	Station	Maximum velocity	Direction	Altitude (m.) m. s. l.	Date	Station	Maximum velocity	Direction	Altitude (m.) m. s. l.	Date	Station
Northeast [1]	47.6	wsw.	1,488	6	Akron, Ohio	36.7	sw.	2,501	5	Akron, Ohio	75.8	nw.	10,738	3	Akron, Ohio.
East-Central [2]	50.7	ssw.	2,500	5	Louisville, Ky	53.2	ssw.	2,619	5	Louisville, Ky	72.0	wnw.	12,830	2	Hatteras, N. C.
Southeast [3]	36.8	ssw.	1,700	5	Birmingham, Ala	33.4	sw.	3,871	16	Charleston, S. C	70.0	wsw.	13,972	17	Miami, Fla.
North-Central [4]	38.6	sw.	1,188	6	Muskegon, Mich	52.6	nw.	4,995	14	Bismarck, N. Dak	83.0	wsw.	9,621	5	Sault Ste. Marie, Mich.
Central [5]	51.4	wsw.	1,534	6	Springfield, Ill	47.4	s.	3,959	5	Columbia, Mo	74.0	ssw.	10,179	11	Columbia, Mo.
South-Central [6]	55.4	sw.	2,500	5	Memphis, Tenn	63.8	sw.	3,663	5	Memphis, Tenn	84.8	sw.	11,369	12	Little Rock, Ark.
Northwest [7]	48.4	nw.	1,884	4	Burns, Oreg	48.2	nw.	5,000	4	Tatoosh Is., Wash	72.0	w.	10,043	29	Tatoosh Is., Wash.
West-Central [8]	38.8	nw.	2,093	5	Cheyenne, Wyo	50.8	nnw.	5,000	9	Oakland, Calif	75.0	wsw.	9,214	3	Grand Junction, Colo.
Southwest [9]	39.0	nnw.	2,178	5	Sandberg, Calif	62.0	nnw.	2,727	9	Sandberg, Calif	86.0	wsw.	10,425	3	Las Vegas, Nev.

[1] Maine, Vermont, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, and northern Ohio.
[2] Delaware, Maryland, Virginia, West Virginia, southern Ohio, Kentucky, eastern Tennessee, and North Carolina.
[3] South Carolina, Georgia, Florida, and Alabama.
[4] Michigan, Wisconsin, Minnesota, North Dakota, and South Dakota.
[5] Indiana, Illinois, Iowa, Nebraska, Kansas, and Missouri.
[6] Mississippi, Arkansas, Louisiana, Oklahoma, Texas (except El Paso), and western Tennessee.
[7] Montana, Idaho, Washington, and Oregon.
[8] Wyoming, Colorado, Utah, northern Nevada, and northern California.
[9] Southern California, southern Nevada, Arizona, New Mexico, and extreme west Texas.