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METEOROLOGICAL AND CLIMATOLOGICAL DATA FOR MAY 1947

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 May 1947*

STATIONS AND MEAN SURFACE PRESSURES

Standard pressure surface (mb.)	Albany, N. Y. (1,002.9 mb.)				Albuquerque, N. Mex. (834.5 mb.)				Apalachicola, Fla. (1,016.1 mb.)				Atlanta, Ga. (981.5 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	26	86	11.2	79	31	1,620	21.7	24	31	5	22.8	83	31	300	19.2	70
1,000	26	110	(*)	----	31	16	(*)	----	31	144	22.2	81	31	138	(*)	----
950	26	540	9.7	73	31	483	(*)	----	31	595	19.8	76	31	584	19.1	63
900	26	986	8.0	74	31	962	(*)	----	31	1,054	17.5	67	31	1,045	16.3	62
850	26	1,455	5.4	76	31	1,460	(*)	----	31	1,541	14.9	63	31	1,529	13.0	64
800	26	1,949	2.5	72	31	1,984	19.6	25	31	2,052	11.9	59	31	2,036	9.8	62
750	26	2,478	0.0	63	31	2,537	15.3	29	31	2,592	8.7	58	31	2,575	7.1	52
700	26	3,018	−3.0	64	31	3,114	10.3	34	31	3,157	5.7	51	31	3,134	4.1	46
650	25	3,606	−5.7	62	31	3,725	4.9	42	30	3,765	2.6	42	31	3,736	.8	42
600	25	4,224	−8.7	54	31	4,371	−.7	51	29	4,402	−1.3	40	31	4,373	−2.9	42
550	25	4,896	−12.5	----	30	5,057	−6.4	59	29	5,089	−5.6	----	31	5,058	−7.0	39
500	24	5,613	−17.1	----	30	5,796	−12.0	66	29	5,830	−10.3	----	31	5,794	−11.7	40
450	24	6,400	−22.1	----	30	6,595	−18.0	60	29	6,639	−15.8	----	31	6,600	−16.9	44
400	24	7,252	−28.1	----	30	7,464	−23.9	----	28	7,508	−21.9	----	31	7,468	−22.9	----
350	23	8,191	−34.7	----	29	8,422	−31.2	----	28	8,477	−29.0	----	31	8,432	−30.5	----
300	22	9,253	−42.1	----	29	9,496	−39.3	----	28	9,560	−37.3	----	30	9,510	−38.6	----
250	22	10,464	−50.0	----	28	10,716	−48.2	----	27	10,787	−47.6	----	30	10,737	−48.0	----
200	20	11,902	−56.2	----	25	12,150	−56.5	----	25	12,223	−58.5	----	28	12,174	−58.0	----
175	19	12,731	−58.4	----	18	12,995	−59.5	----	22	13,064	−63.1	----	26	13,004	−62.0	----
150	16	13,713	−58.2	----	12	13,940	−58.5	----	15	13,975	−66.6	----	16	13,926	−63.3	----
125	13	14,856	−57.1	----	----	------	------	----	9	15,085	−67.4	----	9	15,004	−63.6	----
100	9	16,244	−58.4	----	----	------	------	----	----	------	------	----	----	------	------	----

Standard pressure surface (mb.)	Auburn, Calif. (954.0 mb.)				Big Spring, Tex. (923.7 mb.)				Bismarck, N. Dak. (953.4 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
Surface	31	501	20.8	43	31	774	22.2	52	31	505	12.3	49
1,000	31	88	(*)	----	31	75	(*)	----	31	101	(*)	----
950	31	542	21.7	41	31	526	(*)	----	31	537	(*)	----
900	31	1,003	18.6	40	31	1,000	22.5	47	31	986	9.9	47
850	31	1,490	15.1	39	31	1,494	19.4	47	31	1,458	6.5	52
800	31	2,000	11.3	40	31	2,013	16.9	40	31	1,952	2.9	58
750	31	2,538	7.4	42	31	2,561	13.5	35	31	2,474	−0.6	61
700	31	3,099	3.4	39	31	3,136	9.0	38	31	3,019	−3.9	60
650	31	3,696	−.9	40	31	3,741	4.5	37	31	3,607	−7.2	58
600	31	4,329	−5.0	32	31	4,391	−.2	38	31	4,222	−10.7	55
550	31	5,006	−9.4	----	31	5,077	−5.2	36	31	4,888	−14.5	51
500	31	5,737	−14.6	----	31	5,822	−10.1	32	31	5,603	−18.7	51
450	31	6,529	−20.6	----	31	6,633	−15.8	----	31	6,390	−23.9	----
400	31	7,387	−27.1	----	31	7,504	−22.1	----	30	7,233	−29.6	----
350	30	8,330	−34.9	----	30	8,471	−29.0	----	30	8,173	−36.4	----
300	30	9,387	−43.2	----	28	9,519	−37.4	----	27	9,227	−43.2	----
250	29	10,595	−51.9	----	25	10,786	−46.6	----	23	10,427	−49.9	----
200	29	12,012	−59.8	----	23	12,241	−55.1	----	19	11,892	−54.1	----
175	26	12,852	−60.8	----	18	13,092	−59.1	----	12	12,739	−51.9	----
150	20	13,797	−60.2	----	5	14,023	−62.5	----	6	13,746	−50.5	----
125	14	14,918	−60.7	----	----	------	------	----	----	------	------	----
100	5	16,307	−60.7	----	----	------	------	----	----	------	------	----

Standard pressure surface (mb.)	Boise, Idaho (912.1 mb.)				Brownsville, Tex. (1,010.7 mb.)				Buffalo, N. Y. (987.1 mb.)				Caribou, Maine (990.0 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
Surface	31	868	19.1	43	31	6	25.2	85	31	221	9.6	78	31	191	6.9	76
1,000	31	65	(*)	----	31	100	24.6	85	31	112	(*)	----	31	107	(*)	----
950	31	519	(*)	----	31	553	22.3	77	31	546	9.8	75	31	531	6.3	68
900	31	982	20.0	37	31	1,020	21.0	59	31	988	8.1	73	31	971	4.4	70
850	31	1,472	16.5	36	31	1,513	18.9	47	31	1,457	5.5	73	31	1,436	3.1	73
800	31	1,984	12.3	41	31	2,032	16.2	42	31	1,951	3.3	69	31	1,925	0.8	71
750	31	2,522	8.0	46	31	2,581	13.5	35	31	2,481	0.8	66	31	2,448	−1.1	64
700	31	3,085	3.5	51	31	3,155	9.9	34	31	3,024	−2.2	60	31	2,991	−3.6	58
650	31	3,684	−1.0	53	31	3,767	5.7	35	30	3,616	−5.2	56	31	3,579	−6.2	53
600	31	4,316	−5.4	56	31	4,415	1.2	35	30	4,237	−8.8	52	30	4,193	−9.4	51
550	31	4,996	−9.9	56	30	5,108	−3.6	36	30	4,912	−12.6	47	30	4,862	−13.3	49
500	31	5,722	−15.0	56	29	5,855	−8.3	----	29	5,630	−17.5	50	30	5,579	−17.8	47
450	31	6,514	−20.8	50	29	6,672	−13.8	----	28	6,422	−22.8	----	30	6,366	−22.9	----
400	30	7,370	−27.5	56	29	7,549	−20.3	----	28	7,267	−28.8	----	30	7,214	−28.4	----
350	30	8,315	−35.1	61	29	8,524	−27.1	----	27	8,202	−36.0	----	30	8,158	−35.2	----
300	30	9,370	−43.6	----	29	9,617	−35.1	----	27	9,257	−42.6	----	29	9,216	−42.7	----
250	29	10,573	−52.2	----	29	10,862	−44.5	----	25	10,470	−48.9	----	28	10,426	−49.9	----
200	28	11,992	−59.2	----	25	12,320	−54.6	----	24	11,909	−54.6	----	26	11,875	−54.6	----
175	20	12,832	−60.1	----	21	13,157	−59.3	----	21	12,753	−55.5	----	18	12,718	−55.6	----
150	10	13,773	−58.8	----	13	14,118	−64.5	----	17	13,719	−54.5	----	11	13,646	−52.2	----
125	----	------	------	----	----	------	------	----	13	14,871	−54.8	----	----	------	------	----
100	----	------	------	----	----	------	------	----	11	16,288	−56.7	----	----	------	------	----
80	----	------	------	----	----	------	------	----	7	17,652	−55.7	----	----	------	------	----

Standard pressure surface (mb.)	Charleston, S. C. (1,014.8 mb.)				Ciudad Victoria, Mexico (971.2 mb.)				Columbia, Mo. (985.7 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
Surface	29	14	19.4	88	31	335	28.4	61	31	239	16.1	65
1,000	29	140	20.0	80	31	72	(*)	----	31	115	(*)	----
950	29	587	19.1	63	31	530	26.7	62	31	553	15.4	62
900	29	1,047	16.4	61	31	1,006	22.6	67	31	1,009	12.7	63
850	29	1,532	13.3	63	31	1,502	19.0	71	31	1,486	9.8	65
800	29	2,039	10.2	61	31	2,020	15.4	75	31	1,988	7.1	60
750	29	2,580	7.2	55	31	2,568	12.3	68	30	2,526	4.5	53
700	29	3,139	3.9	51	30	3,143	9.1	59	30	3,079	1.9	47
650	29	3,741	0.7	46	28	3,752	4.8	54	30	3,676	−1.4	49
600	29	4,377	−2.7	38	27	4,400	0.2	53	30	4,308	−5.2	52
550	29	5,062	−6.9	----	27	5,089	−4.6	52	30	4,987	−9.3	49
500	29	5,799	−11.5	----	27	5,836	−9.4	50	30	5,717	−14.0	47
450	29	6,607	−16.7	----	27	6,649	−14.2	51	30	6,512	−19.4	44
400	28	7,481	−22.7	----	24	7,525	−20.1	----	30	7,374	−25.7	----
350	28	8,446	−29.9	----	24	8,503	−27.0	----	30	8,328	−32.8	----
300	28	9,526	−38.2	----	24	9,595	−35.5	----	30	9,395	−40.7	----
250	27	10,765	−47.8	----	24	10,839	−45.3	----	28	10,609	−49.4	----
200	25	12,205	−58.2	----	20	12,305	−55.7	----	22	12,035	−56.9	----
175	21	13,040	−63.3	----	10	13,157	−62.4	----	13	12,870	−57.3	----
150	15	13,982	−65.1	----	----	------	------	----	5	13,789	−54.7	----
125	6	15,085	−65.7	----	----	------	------	----	----	------	------	----
100	----	------	------	----	----	------	------	----	----	------	------	----
80	----	------	------	----	----	------	------	----	----	------	------	----

See footnotes at end of table.

TABLE 1.—*Mean dynamic height (geopotential) in units of 0.98 dynamic meters, temperature in degrees centrigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during May 1947*—Continued

Standard pressure surface (mb.)	Dodge City, Kans. (923.5 mb.)				El Paso, Tex. (878.4 mb.)				Ely, Nev. (807.5 mb.)				Fort Worth, Tex. (987.8 mb.)				Glasgow, Mont. (937.6 mb.)				Grand Junction, Colo. (848.9 mb.)				Great Falls, Mont. (885.7 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	30	787	14.4	74	31	1,195	24.1	25	30	1,908	14.0	46	31	211	22.5	64	31	648	13.8	41	31	1,474	19.6	31	31	1,128	14.0	37
1,000	30	105	(*)	----	31	40	(*)	----	30	57	(*)	----	31	103	(*)	----	31	98	(*)	----	31	33	(*)	----	31	87	(*)	----
950	30	549	(*)	----	31	507	(*)	----	30	510	(*)	----	31	553	21.3	62	31	537	(*)	----	31	496	(*)	----	31	533	(*)	----
900	30	1,005	14.5	65	31	985	(*)	----	30	981	(*)	----	31	1,017	18.2	60	31	992	11.9	41	31	969	(*)	----	31	995	(*)	----
850	30	1,487	12.2	61	31	1,482	23.3	23	30	1,469	(*)	----	31	1,505	15.7	55	31	1,467	8.1	45	31	1,462	(*)	----	31	1,473	11.8	38
800	30	1,994	10.4	60	31	2,006	19.1	24	30	1,987	15.9	40	31	2,018	13.7	47	31	1,964	4.4	52	31	1,982	16.8	32	31	1,977	7.7	44
750	30	2,535	7.8	57	31	2,558	14.2	28	30	2,531	12.1	39	31	2,564	10.9	39	31	2,488	0.4	59	31	2,527	12.4	36	31	2,505	3.3	53
700	30	3,096	4.8	52	31	3,132	9.1	33	30	3,104	7.3	44	31	3,131	6.9	40	31	3,035	−3.2	58	31	3,100	7.5	41	31	3,060	−0.9	61
650	30	3,697	1.2	49	31	3,742	3.8	39	30	3,707	2.0	54	31	3,739	2.5	40	31	3,621	−6.4	49	31	3,705	2.2	49	31	3,649	−5.0	66
600	30	4,336	−3.3	51	31	4,383	−1.5	44	30	4,349	−3.3	61	31	4,378	−2.0	39	31	4,240	−10.3	52	31	4,346	−3.4	59	30	4,273	−9.0	64
550	30	5,020	−8.2	53	31	5,069	−6.5	43	30	5,027	−8.5	62	31	5,066	−6.5	35	31	4,906	−14.3	49	31	5,026	−9.0	65	30	4,942	−13.3	61
500	30	5,752	−13.3	51	31	5,806	−12.3	41	30	5,763	−13.9	55	30	5,801	−11.8	33	31	5,621	−19.1	54	31	5,757	−14.7	60	30	5,661	−18.0	58
450	30	6,549	−18.6	45	31	6,609	−18.4	----	30	6,558	−19.4	44	30	6,609	−17.3	----	31	6,401	−24.6	----	31	6,554	−20.3	53	30	6,443	−23.6	----
400	29	7,415	−24.9	----	31	7,471	−25.0	----	30	7,419	−26.1	----	30	7,474	−23.5	----	31	7,245	−30.7	----	30	7,412	−26.7	----	30	7,290	−30.0	----
350	27	8,370	−32.5	----	31	8,427	−32.4	----	30	8,370	−33.4	----	30	8,468	−31.1	----	30	8,178	−37.3	----	29	8,363	−34.0	----	29	8,230	−37.1	----
300	27	9,437	−41.0	----	31	9,495	−40.5	----	29	9,431	−41.7	----	30	9,508	−39.6	----	27	9,218	−45.1	----	26	9,422	−42.2	----	29	9,276	−45.3	----
250	27	10,650	−50.6	----	31	10,713	−49.5	----	28	10,635	−50.7	----	30	10,732	−48.4	----	23	10,407	−52.9	----	25	10,631	−50.5	----	28	10,466	−53.8	----
200	25	12,080	−59.1	----	28	12,145	−58.1	----	25	12,069	−58.6	----	26	12,165	−58.0	----	15	11,847	−55.7	----	22	12,069	−58.2	----	25	11,877	−59.5	----
175	22	12,909	−62.0	----	26	12,973	−60.9	----	22	12,909	−59.4	----	22	13,002	−62.4	----	14	12,707	−54.3	----	18	12,899	−60.0	----	16	12,706	−57.5	----
150	15	13,845	−61.6	----	16	13,909	−61.4	----	15	13,872	−60.4	----	11	13,944	−64.5	----	10	13,677	−53.7	----	9	13,893	−59.3	----	9	13,685	−55.1	----
125	10	14,958	−61.9	----	----	----	----	----	10	15,014	−62.1	----	----	----	----	----	8	14,843	−54.1	----	----	----	----	----	----	----	----	----
100	8	16,343	−62.8	----	----	----	----	----	5	16,396	−63.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Standard pressure surface (mb.)	Greensboro, N. C. (983.6 mb.)				Hatteras, N. C. (1,016.1 mb.)				Havana, Cuba (1,009.5 mb.)				Honolulu, T. H. (1,016.6 mb.)				Huntington, W. Va. (994.5 mb.)				International Falls, Minn. (971.5 mb.)				Joliet, Ill. (992.3 mb.)			
Surface	31	273	17.5	71	31	3	19.0	85	26	50	24.2	86	31	3	25.6	62	30	172	14.3	79	31	360	7.2	64	31	178	10.6	84
1,000	31	130	(*)	----	31	140	18.5	80	26	134	23.8	85	31	148	23.8	63	30	124	(*)	----	31	123	(*)	----	31	113	(*)	----
950	31	574	17.6	62	31	585	17.0	69	26	584	21.3	81	31	597	19.9	69	30	563	15.2	64	31	543	7.1	60	31	545	10.8	75
900	31	1,031	14.9	61	31	1,040	14.7	67	26	1,050	18.6	77	31	1,058	16.4	73	30	1,016	11.8	66	31	986	4.4	62	31	992	8.7	73
850	31	1,513	11.5	62	31	1,521	12.0	61	26	1,540	15.3	82	31	1,543	13.5	77	30	1,492	8.6	66	31	1,449	1.3	66	31	1,463	6.1	75
800	31	2,018	8.1	62	31	2,027	9.3	58	26	2,051	12.2	78	31	2,053	12.0	61	30	1,992	5.9	62	31	1,934	−1.9	69	31	1,957	3.3	76
750	31	2,553	4.8	62	31	2,565	6.1	56	26	2,593	9.5	63	31	2,597	10.2	40	30	2,524	2.8	56	31	2,450	−4.6	58	31	2,481	1.1	67
700	31	3,107	1.4	58	31	3,122	3.4	44	26	3,161	6.6	49	31	3,163	7.8	22	29	3,073	−0.5	56	31	2,986	−7.3	56	31	3,032	−1.5	61
650	31	3,703	−1.8	49	31	3,724	0.1	45	26	3,769	3.4	40	31	3,775	5.3	----	29	3,666	−3.8	53	31	3,567	−10.4	57	31	3,625	−4.5	58
600	31	4,334	−4.9	40	30	4,356	−3.3	----	22	4,411	−0.2	----	31	4,420	2.0	----	29	4,291	−7.1	46	31	4,172	−14.0	55	31	4,245	−8.1	51
550	31	5,014	−8.7	----	29	5,044	−6.9	----	22	5,103	−4.1	----	31	5,118	−2.0	----	29	4,965	−11.0	----	31	4,829	−18.2	50	31	4,917	−12.2	47
500	30	5,745	−13.7	----	29	5,780	−11.3	----	21	5,848	−9.3	----	31	5,867	−7.0	----	28	5,688	−16.0	----	30	5,536	−22.4	----	31	5,638	−16.6	42
450	29	6,542	−19.0	----	28	6,586	−16.8	----	20	6,656	−15.0	----	31	6,690	−12.7	----	28	6,479	−21.1	----	28	6,298	−27.6	----	31	6,426	−22.1	----
400	29	7,404	−25.2	----	28	7,454	−22.8	----	19	7,534	−21.1	----	31	7,569	−18.9	----	28	7,334	−27.3	----	28	7,131	−33.4	----	31	7,279	−28.2	----
350	29	8,360	−32.3	----	25	8,424	−29.7	----	18	8,504	−28.2	----	31	8,548	−26.3	----	28	8,282	−34.2	----	28	8,055	−39.7	----	31	8,222	−35.2	----
300	29	9,429	−40.3	----	25	9,504	−37.6	----	17	9,592	−36.6	----	31	9,642	−34.9	----	28	9,344	−41.8	----	25	9,100	−46.0	----	30	9,280	−42.5	----
250	29	10,649	−49.0	----	25	10,737	−46.7	----	15	10,828	−46.4	----	31	10,890	−43.8	----	26	10,561	−50.0	----	22	10,314	−51.3	----	25	10,501	−49.9	----
200	29	12,084	−57.8	----	22	12,172	−56.6	----	13	12,268	−57.3	----	30	12,356	−53.6	----	23	11,981	−57.2	----	14	11,743	−51.0	----	18	11,972	−55.2	----
175	26	12,922	−61.1	----	17	12,992	−60.7	----	11	13,098	−62.9	----	27	13,199	−58.2	----	20	12,808	−58.7	----	11	12,580	−49.8	----	13	12,834	−57.3	----
150	17	13,882	−62.8	----	10	13,926	−61.3	----	8	14,027	−68.0	----	22	14,155	−61.7	----	16	13,779	−59.3	----	9	13,563	−50.4	----	8	13,811	−57.8	----
125	11	14,992	−62.1	----	5	15,128	−63.8	----	----	----	----	----	8	15,274	−65.0	----	13	14,002	−60.1	----	7	14,732	−51.3	----	----	----	----	----
100	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	7	16,284	−60.3	----	----	----	----	----	----	----	----	----

	Lake Charles, La. (1,013.9 mb.)				Lander, Wyo. (827.8 mb.)				Las Vegas, Nev. (941.1 mb.)				Little Rock, Ark. (1,004.9 mb.)				Mazatlan, Mexico (1,008.2 mb.)				Medford, Oreg. (966.5 mb.)				Merida, Mexico (1,008.4 mb.)			
Surface	31	5	22.2	84	31	1,696	12.0	55	31	574	28.8	19	30	79	20.1	73	31	14	24.3	77	31	401	21.5	42	31	27	28.9	64
1,000	31	125	21.6	81	31	75	(*)	----	31	28	(*)	----	30	120	20.2	69	31	86	23.5	73	31	103	(*)	----	31	102	28.0	65
950	31	575	19.3	75	31	521	(*)	----	31	491	(*)	----	30	567	19.5	64	31	541	23.1	48	31	554	20.4	41	31	557	25.2	65
900	31	1,033	17.4	65	31	987	(*)	----	31	970	26.6	----	30	1,028	16.5	65	31	1,005	23.0	37	31	1,012	16.5	44	31	1,030	22.3	66
850	31	1,521	15.9	52	31	1,470	(*)	----	31	1,468	22.1	21	30	1,513	14.2	59	31	1,501	20.5	33	31	1,495	12.5	50	31	1,525	18.8	70
800	31	2,034	13.1	49	31	1,982	11.7	49	31	1,989	17.2	24	30	2,022	12.0	52	31	2,021	16.9	38	31	1,999	8.5	56	31	2,017	15.1	73
750	31	2,577	9.9	46	31	2,521	7.7	53	31	2,537	12.1	30	30	2,563	8.7	57	31	2,574	13.1	37	31	2,533	4.9	57	31	2,591	11.3	73
700	31	3,143	6.4	43	31	3,083	3.2	60	31	3,106	6.8	36	30	3,128	5.6	57	31	3,144	9.0	41	31	3,088	1.3	57	31	3,161	8.4	57
650	30	3,748	2.3	44	31	3,679	−1.5	65	31	3,711	1.5	41	30	3,730	1.8	56	31	3,755	4.6	44	31	3,683	−2.1	47	31	3,775	5.1	48
600	30	4,387	−1.7	42	31	4,312	−6.0	68	31	4,349	−3.3	40	29	4,371	−2.0	47	31	4,401	0.1	43	31	4,312	−5.9	45	31	4,421	1.5	38
550	30	5,070	−6.3	42	31	4,987	−10.8	67	31	5,033	−8.7	42	29	5,057	−6.3	45	31	5,092	−4.8	39	31	4,986	−10.3	41	30	5,116	−2.4	----
500	30	5,813	−11.4	40	31	5,714	−16.0	59	31	5,762	−14.2	----	28	5,800	−10.6	40	31	5,836	−9.4	----	31	5,714	−15.6	----	30	5,866	−6.9	----
450	30	6,616	−16.9	42	30	6,506	−21.7	----	30	6,560	−19.9	----	27	6,611	−16.0	----	31	6,653	−14.3	----	31	6,502	−21.5	----	30	6,690	−12.2	----
400	30	7,487	−23.3	----	30	7,359	−28.0	----	30	7,418	−26.4	----	27	7,481	−22.2	----	31	7,527	−20.6	----	31	7,356	−28.0	----	30	7,570	−18.3	----
350	30	8,450	−30.7	----	30	8,301	−35.6	----	29	8,363	−34.0	----	25	8,447	−29.3	----	31	8,501	−27.7	----	31	8,300	−35.5	----	30	8,552	−25.9	----
300	29	9,525	−38.9	----	30	9,354	−43.9	----	29	9,425	−41.9	----	24	9,527	−37.5	----	31	9,591	−35.6	----	31	9,353	−43.7	----	30	9,648	−34.4	----
250	29	10,750	−48.4	----	28	10,559	−52.6	----	29	10,636	−50.6	----	24	10,761	−46.8	----	30	10,836	−44.8	----	31	10,554	−52.3	----	30	10,897	−44.2	----
200	29	12,185	−58.4	----	27	11,978	−59.5	----	27	12,069	−58.4	----	23	12,214	−55.7	----	20	12,307	−55.0	----	31	11,970	−59.1	----	24	12,357	−55.2	----
175	28	13,019	−62.6	----	23	12,810	−60.6	----	19	12,886	−59.5	----	17	13,067	−59.5	----	11	13,170	−60.4	----	30	12,798	−59.9	----	9	13,209	−60.9	----
150	19	13,967	−64.9	----	16	13,782	−59.9	----	9	13,827	−57.8	----	----	----	----	----	7	14,125	−66.3	----	25	13,768	−59.2	----	----	----	----	----
125	7	15,084	−69.3	----	7	14,934	−59.6	----	5	14,959	−60.6	----	----	----	----	----	----	----	----	----	16	14,901	−58.5	----	----	----	----	----
100	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5	16,311	−57.6	----	----	----	----	----

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 May 1947*—Continued

Standard pressure surface (mb.)	Miami, Fla. (1,016.6 mb.)				Nantucket, Mass. (1,013.5 mb.)				Nashville, Tenn. (994.1 mb.)				New Orleans, La. (1,015.1 mb.)				North Platte, Nebr. (916.9 mb.)				Oakland, Calif. (1,012.6 mb.)				Ogden, Utah (861.6 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	4	24.2	77	31	14	9.9	90	31	180	17.7	73	30	2	23.0	81	31	849	12.3	69	31	6	15.7	70	31	1,355	16.9	47
1,000	31	148	23.6	75	31	126	11.3	84	31	129	(*)	----	30	133	22.6	79	31	109	(*)	----	31	112	14.9	70	31	58	(*)	----
950	31	599	20.9	76	31	561	13.3	64	31	571	17.1	67	30	584	20.9	73	31	550	(*)	----	31	551	15.3	57	31	512	(*)	----
900	31	1,062	18.1	68	31	1,011	11.6	51	31	1,028	13.9	66	29	1,045	18.4	66	31	1,005	12.7	61	31	1,006	16.6	34	31	982	(*)	----
850	31	1,549	15.2	64	31	1,487	9.2	48	31	1,508	11.2	59	29	1,534	16.2	58	31	1,482	10.0	60	31	1,490	14.7	32	31	1,471	17.7	39
800	31	2,061	12.7	56	31	1,987	6.5	46	31	2,012	8.4	54	29	2,048	14.2	51	31	1,984	7.2	64	31	2,000	12.0	27	31	1,985	14.0	40
750	31	2,604	10.1	47	31	2,517	3.7	51	31	2,548	5.6	45	29	2,594	11.0	45	31	2,515	4.4	68	31	2,538	8.7	----	31	2,529	9.4	45
700	31	3,171	7.0	42	31	3,071	0.8	52	31	3,104	2.7	42	29	3,162	7.5	45	31	3,072	1.2	68	31	3,103	5.5	----	31	3,093	4.6	52
650	31	3,782	3.6	43	31	3,665	−2.5	48	31	3,701	−0.9	45	29	3,773	3.9	38	31	3,669	−2.4	64	31	3,704	1.6	----	31	3,694	−0.3	57
600	31	4,423	0.1	35	30	4,301	−5.5	43	31	4,334	−4.5	44	28	4,416	0.2	----	31	4,295	−6.6	61	30	4,342	−2.8	----	31	4,327	−5.1	59
550	31	5,117	−3.9	----	30	4,981	−9.4	46	31	5,016	−8.6	44	28	5,110	−4.0	----	30	4,969	−11.0	58	30	5,025	−7.3	----	31	5,005	−9.9	56
500	31	5,862	−8.6	----	30	5,709	−14.0	44	31	5,748	−13.1	----	27	5,853	−8.8	----	30	5,693	−15.9	58	29	5,760	−12.6	----	31	5,734	−15.1	55
450	31	6,681	−14.0	----	29	6,516	−18.8	45	31	6,547	−18.7	----	27	6,672	−14.1	----	30	6,486	−21.3	----	29	6,558	−18.3	----	31	6,526	−21.0	----
400	31	7,556	−20.1	----	28	7,378	−24.6	----	31	7,410	−24.7	----	23	7,543	−20.5	----	30	7,337	−27.5	----	29	7,424	−24.8	----	31	7,381	−27.5	----
350	31	8,531	−27.2	----	28	8,335	−31.9	----	31	8,368	−31.6	----	21	8,514	−27.7	----	30	8,249	−34.6	----	28	8,378	−32.0	----	30	8,325	−35.0	----
300	29	9,619	−35.3	----	27	9,407	−40.0	----	31	9,441	−39.4	----	17	9,601	−35.8	----	30	9,341	−42.9	----	27	9,450	−40.1	----	30	9,381	−43.2	----
250	28	10,861	−44.9	----	26	10,625	−49.2	----	31	10,663	−48.5	----	15	10,840	−44.9	----	29	10,545	−51.5	----	26	10,679	−48.3	----	30	10,585	−52.0	----
200	25	12,321	−55.3	----	22	12,053	−56.6	----	25	12,078	−57.2	----	14	12,293	−54.1	----	26	11,962	−58.3	----	21	12,141	−55.9	----	27	12,005	−58.6	----
175	22	13,155	−60.7	----	22	12,894	−59.0	----	25	12,917	−59.4	----	6	13,178	−59.3	----	24	12,803	−59.8	----	16	12,968	−57.9	----	22	12,841	−59.4	----
150	10	14,091	−65.8	----	15	13,854	−58.9	----	20	13,857	−60.0	----	----	----	----	----	19	13,768	−58.7	----	11	13,931	−56.8	----	12	13,798	−59.4	----
125	----	----	----	----	9	14,990	−56.9	----	10	14,951	−61.6	----	----	----	----	----	13	14,909	−59.1	----	----	----	----	----	5	14,913	−57.0	----

Standard pressure surface (mb.)	Oklahoma City, Okla. (967.4 mb.)				Omaha, Nebr. (977.9 mb.)				Phoenix, Ariz. (968.0 mb.)				Pittsburgh, Pa. (969.7 mb.)				Portland, Maine (1,011.2 mb.)				Rapid City, S. Dak. (901.8 mb.)				St. Paul, Minn. (986.4 mb.)			
Surface	29	391	19.0	71	31	308	15.0	64	31	339	29.6	25	31	382	13.7	71	31	20	9.0	85	31	980	10.6	65	20	225	12.6	63
1,000	29	104	(*)	----	31	117	(*)	----	31	47	(*)	----	31	119	(*)	----	31	112	9.8	80	31	105	(*)	----	20	110	(*)	----
950	29	547	19.4	62	31	555	13.9	60	31	512	29.9	23	31	560	13.3	69	31	544	10.4	72	31	545	(*)	----	20	541	11.3	60
900	29	1,011	16.7	61	31	1,007	11.1	61	31	985	26.1	25	31	1,008	11.0	70	31	988	9.2	72	31	997	(*)	----	20	989	8.6	63
850	29	1,496	14.0	58	31	1,481	8.2	65	31	1,484	21.7	28	31	1,483	7.9	73	31	1,461	7.2	69	31	1,473	9.7	56	20	1,459	5.0	68
800	29	2,006	12.0	56	31	1,979	5.4	66	31	2,004	17.2	31	31	1,981	5.2	68	31	1,958	4.6	65	31	1,974	6.5	64	20	1,951	2.1	66
750	29	2,546	9.5	48	31	2,507	2.7	64	31	2,557	12.4	35	31	2,514	2.5	62	31	2,487	2.0	60	31	2,507	3.5	66	20	2,473	−0.1	----
700	29	3,113	6.4	37	31	3,060	−0.2	62	31	3,123	7.5	37	31	3,061	−0.5	59	31	3,035	−0.9	54	31	3,057	0.1	62	20	3,020	−2.9	----
650	29	3,715	2.2	41	29	3,652	−3.6	63	31	3,733	2.6	38	31	3,655	−3.6	54	31	3,630	−4.1	54	31	3,652	−3.4	55	20	3,606	−6.1	----
600	29	4,358	−2.0	37	29	4,279	−6.8	57	31	4,370	−2.4	38	31	4,278	−7.5	51	31	4,251	−7.3	49	31	4,276	−6.9	54	20	4,227	−9.7	----
550	28	5,042	−6.6	38	29	4,954	−10.8	51	31	5,059	−7.5	37	31	4,954	−11.7	52	31	4,928	−11.1	46	31	4,954	−11.1	55	20	4,898	−13.4	----
500	27	5,782	−11.9	----	29	5,679	−15.5	46	31	5,790	−12.9	----	31	5,675	−15.9	47	31	5,650	−15.8	48	31	5,675	−15.7	49	20	5,613	−18.0	----
450	26	6,583	−17.6	----	29	6,469	−21.0	----	30	6,593	−18.7	----	31	6,470	−21.3	----	31	6,444	−21.0	----	31	6,471	−21.0	----	20	6,398	−23.4	----
400	24	7,446	−24.2	----	29	7,324	−27.4	----	30	7,452	−25.3	----	31	7,321	−27.2	----	31	7,297	−27.3	----	31	7,322	−27.0	----	20	7,245	−29.7	----
350	23	8,402	−30.8	----	28	8,270	−34.4	----	29	8,407	−32.9	----	31	8,265	−34.0	----	31	8,245	−34.3	----	30	8,276	−34.1	----	20	8,183	−36.6	----
300	23	9,478	−38.7	----	26	9,345	−41.9	----	28	9,472	−41.2	----	30	9,342	−40.9	----	30	9,321	−42.2	----	30	9,337	−41.8	----	20	9,233	−44.3	----
250	18	10,732	−47.2	----	24	10,554	−49.8	----	25	10,687	−49.7	----	30	10,562	−48.2	----	26	10,544	−50.9	----	27	10,556	−50.0	----	20	10,434	−52.0	----
200	9	12,158	−55.8	----	17	12,013	−57.0	----	24	12,120	−57.5	----	30	12,006	−55.7	----	23	11,971	−58.4	----	20	11,992	−56.4	----	19	11,873	−54.9	----
175	5	13,013	−56.6	----	15	12,855	−58.5	----	17	12,936	−58.8	----	29	12,847	−58.0	----	18	12,789	−59.0	----	8	12,782	−55.8	----	18	12,726	−55.5	----
150	----	----	----	----	10	13,818	−59.2	----	11	13,910	−59.8	----	24	13,793	−57.4	----	14	13,746	−59.2	----	----	----	----	----	15	13,710	−54.4	----
125	----	----	----	----	5	14,968	−60.0	----	----	----	----	----	12	14,957	−58.5	----	9	14,897	−58.2	----	----	----	----	----	9	14,920	−56.8	----
100	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	7	16,263	−59.1	----	----	----	----	----	----	----	----	----

Standard pressure surface (mb.)	San Antonio, Tex. (984.6 mb.)				San Juan, P. R. (1,015.2 mb.)				Santa Maria, Calif. (1,005.5 mb.)				Sault Ste. Marie, Mich. (986.4 mb.)				Spokane, Wash. (942.4 mb.)				Swan Island, W. I. (1,012.5 mb.)				Tacubaya, Mexico (774.2 mb.)			
Surface	31	240	23.2	74	31	15	24.8	80	31	71	14.5	76	31	221	5.6	76	31	598	19.3	38	31	10	26.6	80	26	2,306	16.1	68
1,000	31	103	(*)	----	31	147	23.5	79	31	118	14.1	77	31	107	(*)	----	31	84	(*)	----	31	120	25.7	81	26	63	(*)	----
950	31	556	22.4	73	31	598	20.1	81	31	557	13.7	74	31	535	5.4	67	31	533	(*)	----	31	575	22.2	85	26	527	(*)	----
900	31	1,021	19.7	78	31	1,059	17.0	82	31	1,009	15.7	48	31	969	3.7	64	31	991	16.7	39	31	1,040	19.6	75	26	1,002	(*)	----
850	31	1,513	17.5	71	31	1,545	14.2	77	31	1,494	15.4	35	31	1,431	1.9	61	31	1,475	12.6	45	31	1,531	16.9	67	26	1,498	(*)	----
800	31	2,030	15.5	55	31	2,056	11.6	69	31	2,005	12.6	33	31	1,919	−0.2	58	31	1,980	8.3	51	31	2,046	13.9	63	26	2,025	(*)	----
750	31	2,577	12.6	44	31	2,599	9.2	56	31	2,548	9.5	27	31	2,441	−3.0	59	31	2,515	3.9	58	31	2,593	10.7	57	26	2,577	14.1	68
700	31	3,151	9.2	36	31	3,162	6.3	53	31	3,112	6.2	27	31	2,977	−5.4	61	31	3,065	−0.2	61	31	3,161	8.1	43	26	3,155	9.7	72
650	31	3,761	4.9	41	30	3,767	3.2	53	31	3,718	2.4	28	31	3,564	−8.5	55	31	3,661	−3.7	56	31	3,773	4.9	36	26	3,769	5.2	81
600	30	4,408	0.2	42	30	4,412	−0.3	40	31	4,356	−1.9	27	30	4,173	−11.9	51	31	4,283	−7.2	49	31	4,418	1.4	33	26	4,418	0.8	86
550	30	5,097	−4.6	42	30	5,101	−4.2	38	30	5,046	−6.3	----	30	4,843	−15.8	48	31	4,961	−11.3	42	31	5,115	−2.6	30	25	5,114	−3.6	87
500	28	5,842	−9.9	----	29	5,848	−8.7	36	30	5,780	−11.5	----	30	5,547	−20.2	60	31	5,681	−15.9	40	31	5,864	−7.1	30	25	5,859	−8.0	82
450	28	6,653	−15.4	----	28	6,670	−13.7	----	30	6,589	−17.3	----	30	6,333	−24.9	----	31	6,473	−21.7	----	31	6,689	−12.0	----	24	6,681	−12.9	76
400	28	7,526	−21.5	----	28	7,542	−19.4	----	30	7,452	−23.8	----	30	7,168	−30.7	----	31	7,323	−27.9	----	30	7,571	−17.5	----	24	7,563	−18.4	66
350	27	8,494	−28.7	----	28	8,521	−26.5	----	30	8,413	−31.1	----	29	8,099	−37.5	----	31	8,268	−35.1	----	30	8,557	−24.6	----	23	8,545	−25.6	----
300	26	9,579	−36.6	----	26	9,615	−34.8	----	30	9,487	−37.1	----	26	9,136	−44.2	----	31	9,324	−43.2	----	30	9,660	−33.0	----	23	9,643	−34.2	----
250	26	10,818	−45.6	----	26	10,862	−44.4	----	28	10,715	−47.8	----	21	10,330	−49.0	----	30	10,529	−52.0	----	30	10,916	−42.7	----	15	10,903	−43.3	----
200	24	12,279	−54.4	----	23	12,320	−55.1	----	17	12,166	−55.7	----	18	11,783	−51.0	----	28	11,958	−58.3	----	30	12,384	−54.5	----	7	12,361	−56.3	----
175	19	13,129	−58.9	----	23	13,160	−61.1	----	11	12,980	−57.6	----	9	12,654	−50.0	----	25	12,793	−57.7	----	30	13,225	−60.1	----	----	----	----	----
150	10	14,112	−61.4	----	17	14,094	−67.1	----	6	13,890	−58.8	----	----	----	----	----	20	13,770	−55.8	----	25	14,169	−68.0	----	----	----	----	----
125	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	17	14,931	−55.8	----	12	15,246	−75.0	----	----	----	----	----
100	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	9	16,341	−56.3	----	----	----	----	----	----	----	----	----
80	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	6	17,736	−55.9	----	----	----	----	----	----	----	----	----

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 May 1947*—Continued

Standard pressure surface (mb.)	Tampa, Fla. (1,016.4 mb.)				Tatoosh Island, Wash. (1,014.0 mb.)				Toledo, Ohio (990.6 mb.)				Washington, D. C. (1,012.2 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
Surface	30	9	23.3	80	31	31	10.7	90	31	191	11.2	79	31	25	17.2	71
1,000	30	151	22.7	81	31	146	10.3	87	31	110	(*)	----	31	128	17.1	69
950	30	597	20.3	76	31	576	9.4	74	31	543	10.9	70	31	565	15.4	65
900	30	1,063	17.3	73	31	1,021	8.4	61	31	990	8.8	73	31	1,023	12.9	64
850	30	1,551	15.1	67	31	1,492	6.6	56	31	1,461	6.0	72	31	1,501	9.9	65
800	30	2,062	12.3	63	31	1,988	4.3	48	31	1,956	3.7	63	31	2,003	6.5	67
750	30	2,601	9.2	58	31	2,515	2.3	41	31	2,484	1.1	61	31	2,534	3.7	58
700	29	3,169	5.9	52	31	3,066	−0.6	40	30	3,035	−1.5	53	31	3,088	0.7	58
650	28	3,777	2.4	51	31	3,655	−3.8	40	30	3,628	−4.9	47	31	3,684	−2.8	55
600	28	4,416	−1.1	52	31	4,282	−7.5	41	30	4,247	−8.3	49	31	4,310	−6.5	49
550	28	5,102	−4.6	38	31	4,954	−11.7	44	29	4,917	−12.7	49	31	4,987	−10.2	42
500	28	5,849	−9.2	----	31	5,679	−16.0	45	27	5,629	−17.6	46	31	5,715	−14.8	43
450	28	6,662	−14.8	----	31	6,470	−21.4	----	27	6,416	−22.8	----	31	6,508	−20.3	45
400	28	7,537	−20.9	----	31	7,324	−27.7	----	27	7,264	−29.0	----	31	7,368	−26.0	----
350	28	8,509	−28.0	----	31	8,269	−34.6	----	27	8,204	−36.1	----	31	8,322	−32.9	----
300	27	9,597	−36.2	----	28	9,336	−41.9	----	27	9,259	−42.6	----	31	9,389	−40.8	----
250	26	10,837	−45.7	----	27	10,548	−50.2	----	24	10,478	−49.6	----	31	10,606	−49.5	----
200	25	12,286	−56.4	----	21	11,975	−56.0	----	20	11,928	−54.9	----	27	12,035	−57.5	----
175	23	13,123	−61.8	----	16	12,826	−55.0	----	14	12,769	−57.5	----	23	12,855	−58.8	----
150	14	14,084	−65.8	----	10	13,809	−53.4	----	8	13,721	−55.4	----	17	13,797	−59.0	----
125	9	15,159	−67.2	----	----	----	----	----	----	----	----	----	13	14,942	−59.4	----
100	----	----	----	----	----	----	----	----	----	----	----	----	8	16,344	−61.1	----

(*) 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.

LATE REPORT FOR TACUBAYA, MEXICO

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*

STATION AND MEAN SURFACE PRESSURE

Standard pressure surface (mb.)	Tacubaya, Mexico (773.3 mb.)				Standard pressure surface (mb.)	Tacubaya, Mexico (773.3 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity		Number of observations	Dynamic height	Temperature	Relative humidity
Surface	21	2,306	17.7	44	550	21	5,108	−4.2	68
1,000	21	37	(*)	----	500	21	5,854	−9.3	66
950	21	501	(*)	----	450	21	6,672	−14.1	----
900	21	983	(*)	----	400	21	7,549	−19.4	----
850	21	1,482	(*)	----	350	21	8,527	−26.9	----
800	21	2,015	(*)	----	300	21	9,620	−35.4	----
750	21	2,570	15.7	47	250	18	10,871	−44.9	----
700	21	3,148	11.2	52	200	9	12,336	−55.9	----
650	21	3,765	6.4	58	175	6	13,174	−61.4	----
600	21	4,414	1.2	65					

TABLE 2.—*Free-air resultant winds based on pilot balloon observations made near 5 p. m., E. S. T. (2200 G. C. T.) during May 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 (276 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	31	144	3.8	31	242	3.2	28	254	3.3	31	343	1.3	31	313	2.9	31	316	4.9	31	132	5.9	28	240	5.0	24	206	1.6	31	182	3.1	23	232	3.3	29	63	0.9	31	227	2.9
500							28	253	3.8										31	136	7.4	28	251	6.5	24	218	4.2	31	196	5.0	23	233	5.2						
1,000	31	160	5.1				28	249	4.3				31	310	3.9	31	314	5.1	28	150	5.3	24	245	7.0	24	220	5.0	30	234	4.4	22	229	5.8						
1,500	28	189	4.6				28	259	5.2	31	323	2.2	30	295	4.7	31	312	5.4	24	150	3.6	23	239	7.8	20	249	8.0	30	257	5.3	21	238	6.6				31	217	3.2
2,000	27	217	4.8	31	234	4.2	28	271	6.5	31	306	1.9	26	288	5.1	31	305	4.9	22	159	1.6	16	243	8.9	17	244	9.0	30	264	6.0	16	242	7.9	29	66	.9	31	218	2.9
2,500	26	231	5.8	31	239	4.2	25	276	8.6	29	294	3.5	23	283	7.4	31	300	4.7	21	140	1.4	13	260	11.2	14	256	10.6	28	267	7.1	12	247	10.1	27	245	.4	31	220	3.6
3,000	23	242	7.4	31	236	4.4	22	284	9.4	28	289	6.8	22	284	8.9	30	286	5.2	18	88	1.3	12	273	12.9	12	272	11.4	27	264	7.9	10	241	11.4	25	268	1.9	31	231	4.4
4,000	22	267	8.3	31	258	5.3	20	292	12.2	19	278	11.5	17	298	11.8	28	276	6.9	17	343	2.1	10	267	14.7	10	274	13.4	23	265	7.9				21	281	8.0	31	241	6.4
5,000	20	284	9.5	28	272	8.5	12	279	14.4	15	285	11.9	14	290	13.2	25	278	8.9	15	308	2.9							19	279	8.3				20	284	11.7	30	247	7.4
6,000	17	292	10.4	27	274	8.5	12	278	13.7	13	275	13.0				22	276	10.0	15	299	4.6							15	270	10.0				16	286	14.3	29	250	8.6
8,000	14	284	11.5	21	273	10.7										14	279	13.6	12	266	9.8							11	265	12.8				11	305	17.8	23	269	7.4
10,000				17	274	12.8										10	289	16.3																			17	264	7.6
12,000																																					14	269	11.8

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	31	209	0.9	31	280	3.3	30	230	2.8	29	324	2.4	31	120	2.0	29	263	2.4	31	195	1.7	31	212	1.3	31	303	2.2	30	119	3.7	29	179	1.7	31	270	1.3	28	214	2.7
500							30	235	3.8				31	184	1.6	29	266	2.8				31	225	1.7	31	300	1.9	30	115	4.9	29	202	2.8	31	246	3.5	28	236	4.7
1,000							30	231	5.5	29	313	2.9	30	224	3.0	27	262	4.9	31	201	3.0	31	239	3.5	31	307	2.6	29	111	2.7	23	241	2.7	29	243	4.1	28	251	6.5
1,500				31	278	3.4	30	244	6.7	29	302	3.4	27	243	4.8	24	262	6.4	31	194	3.9	30	250	4.3	31	292	1.6	29	109	.9	22	255	2.2	28	243	4.9	25	262	8.3
2,000	31	208	1.2	31	285	4.1	30	255	7.5	28	289	4.0	25	258	6.0	21	259	7.0	31	195	4.1	27	257	5.7	30	227	1.1	27	96	.6	19	270	1.6	25	265	5.9	23	264	8.5
2,500	31	225	1.8	31	280	4.2	26	269	9.1	25	272	5.8	24	271	6.2	14	265	9.6	31	212	4.1	24	271	8.2	30	200	1.8	26	62	.2	18	285	2.1	23	273	8.2	21	278	9.9
3,000	31	257	3.1	30	270	4.0	20	274	10.7	21	277	7.6	22	275	5.9	12	270	12.1	31	227	4.4	22	285	9.7	27	189	1.6	26	126	.4	17	284	4.2	22	279	10.9	15	288	11.4
4,000	27	256	4.4	26	266	5.7	17	278	11.1	14	286	9.7	17	267	8.3				26	254	5.0	18	294	12.2	22	286	2.7	18	307	1.7	11	294	7.9	19	277	12.8			
5,000	23	266	5.9	26	269	8.4	11	289	10.6				13	274	7.5				23	264	5.1	15	295	13.6	14	301	5.5	15	264	3.3				13	290	14.1			
6,000	19	276	6.4	18	294	9.9	10	280	12.4				10	263	9.6				23	278	5.5				14	293	6.4	15	268	4.8									
8,000	14	297	10.0	14	297	13.4													13	278	7.9				13	293	8.9	13	283	6.7									
10,000	13	297	13.4																																				

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	31	280	5.0	29	170	3.3	30	305	1.4	31	270	1.5	31	344	2.6	30	244	2.2	19	308	2.8	31	126	3.2	31	246	3.7	28	278	3.3	31	270	2.2	31	246	2.3	31	230	2.3
500	31	263	4.7	29	65	.3	30	278	1.6	31	266	2.2				30	253	3.3	19	314	4.0	31	135	3.9	31	258	3.2	28	287	3.4	31	274	1.5				31	232	5.2
1,000	31	266	3.6	29	196	4.1	30	272	2.4	31	254	2.9	31	344	2.5	28	246	5.1	18	319	5.2	30	143	5.2	24	244	2.0	27	280	3.8	30	248	1.6	31	243	3.5	30	241	6.9
1,500	31	234	2.4	27	214	4.7	28	282	4.5	31	240	3.5	31	331	1.8	28	253	7.0	16	305	3.8	26	156	5.0	19	271	2.6	23	281	5.5	29	226	1.4	30	237	3.2	30	245	7.9
2,000	30	243	1.8	25	245	6.8	27	289	5.6	31	239	3.6	29	300	4.2	25	270	8.8	15	286	5.7	24	174	4.2	19	276	3.4	22	285	6.6	26	244	2.4	29	249	3.2	29	252	9.3
2,500	29	232	2.2	23	254	7.9	23	283	7.3	30	234	3.0	27	295	6.2	24	284	10.9	11	285	8.0	22	199	3.8	18	271	3.4	18	288	8.6	26	232	2.5	26	255	4.4	26	256	11.2
3,000	29	225	3.0	23	258	9.2	21	292	9.9	29	234	3.3	24	290	7.7	24	289	13.5				21	204	3.6	17	258	4.1	15	288	10.0	24	256	3.9	24	262	5.7	24	265	12.7
4,000	27	280	2.3	19	274	10.9	18	295	13.7	28	231	4.0	16	297	12.6	19	291	17.0				20	228	4.5	17	243	4.9	12	293	8.9	22	274	6.6	20	276	8.8	18	262	14.7
5,000	25	262	2.7	17	290	12.7	15	304	19.2	27	231	4.0	13	300	16.2	15	298	21.3				18	255	5.1	16	240	6.2				18	268	8.2	17	288	11.1	17	261	16.3
6,000	25	292	3.0	16	296	14.3	11	304	20.2	26	262	3.9	12	299	18.0	13	287	19.4				15	264	6.8	14	250	8.6				17	267	9.2	16	293	15.6	14	256	18.8
8,000	18	321	5.1							21	280	6.0										10	261	11.7							11	277	14.0	14	291	16.0			
10,000	13	299	8.0							12	266	3.7																						12	289	20.2			

TABLE 3.—*Maximum free-air wind velocities (m. p. s.) for different sections of the United States based on pilot balloon observations during May 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]	32.8	wnw.	1,557	6	Portland, Maine	53.2	sw.	4,418	8	Nantucket, Mass	71.6	sw.	11,232	23	Caribou, Maine.
East-Central [2]	39.4	wsw.	1,936	25	Richmond, Va	51.8	ssw.	4,461	2	Richmond, Va	80.8	ssw.	6,081	2	Richmond, Va.
Southeast [3]	35.0	wsw.	2,322	2	Spartanburg, S. C	50.0	w.	4,873	1	Birmingham, Ala	67.0	wsw.	13,782	9	Miami, Fla.
North-Central [4]	42.4	nw.	1,199	1	Huron, S. Dak	44.4	w.	4,873	26	Muskegon, Mich	73.5	sw.	8,961	29	Sault Ste. Marie, Mich.
Central [5]	37.8	n.	1,891	2	Omaha, Nebr	46.4	nw.	4,285	1	Wichita, Kans	58.0	nw.	5,208	1	Lander, Wyo.
South-Central [6]	38.0	s.	1,766	15	Big Springs, Tex	54.4	nw.	4,611	1	Tulsa, Okla	86.0	ssw.	13,429	24	Little Rock, Ark.
Northwest [7]	31.4	sw.	2,500	1	Port Angeles, Wash	42.4	wsw.	4,041	3	Ellensburg, Wash					
						42.4	nnw.	5,000	10	Medford, Oreg	66.0	nw.	7,230	1	Glasgow, Mont.
West-Central [8]	32.8	w.	2,271	18	Rock Springs, Wyo	41.0	n.	5,000	10	Oakland, Calif	58.0	n.	13,370	14	Oakland, Calif.
Southwest [9]	41.6	ssw.	2,490	10	Tucson, Ariz	52.0	nnw.	4,600	10	Santa Maria, Calif	58.0	wsw.	9,500	28	Albuquerque, N. Mex.

[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.