METEOROLOGICAL AND CLIMATOLOGICAL DATA FOR NOVEMBER 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 November 1947*

STATIONS AND MEAN SURFACE PRESSURES

Standard pressure surface (mb.)	Albany, N. Y. (1,006.4 mb.)				Albuquerque, N. Mex. (836.1 mb.)				Apalachicola, Fla. (1,015.8 mb.)				Atlanta, Ga. (982.2 mb.)				Auburn, Calif. (959.3 mb.)				Big Spring, Tex. (927.0 mb.)				Bismarck, N. Dak. (956.0 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	86	1.5	77	30	1,620	5.9	40	30	5	16.2	85	30	300	8.7	82	30	501	9.0	63	30	774	9.6	60	30	505	−4.9	82
1,000	30	138	(*)	----	30	126	(*)	----	30	138	16.6	79	30	150	(*)	----	30	154	(*)	----	30	135	(*)	----	30	147	(*)	----
950	30	555	.7	69	30	563	(*)	----	30	580	15.5	71	30	580	9.2	72	30	585	10.6	56	30	571	(*)	----	30	556	(*)	----
900	30	983	−1.8	71	30	1,016	(*)	----	30	1,032	14.0	62	30	1,024	8.4	69	30	1,032	9.1	43	30	1,019	10.1	56	30	978	−6.1	79
850	30	1,436	−3.6	70	30	1,484	(*)	----	30	1,513	12.1	54	30	1,496	7.5	55	30	1,504	6.8	42	30	1,493	8.7	50	30	1,425	−7.4	77
800	30	1,914	−4.7	67	30	1,980	4.4	40	30	2,019	10.2	45	30	1,993	5.7	51	30	1,999	3.7	43	30	1,993	6.4	47	30	1,896	−8.5	71
750	30	2,427	−6.6	62	30	2,510	.9	44	30	2,565	7.9	46	30	2,526	3.7	44	30	2,521	.7	44	30	2,525	3.8	44	30	2,399	−9.8	64
700	30	2,957	−9.0	63	30	3,053	−2.6	48	30	3,121	5.2	46	30	3,077	1.1	43	29	3,070	−2.5	39	30	3,077	.5	40	30	2,925	−12.1	61
650	29	3,533	−11.9	55	30	3,641	−6.3	51	30	3,727	1.8	46	30	3,674	−1.8	40	29	3,652	−5.8	37	30	3,672	−2.3	36	30	3,492	−14.8	55
600	29	4,137	−15.1	48	30	4,259	−10.0	46	29	4,365	−2.0	45	30	4,303	−5.1	----	29	4,277	−9.5	37	30	4,300	−5.7	----	30	4,092	−17.9	52
550	28	4,798	−19.0	----	30	4,928	−13.6	40	29	5,050	−6.0	43	29	4,985	−8.7	----	29	4,941	−13.4	41	30	4,976	−9.8	----	30	4,737	−22.0	----
500	27	5,498	−23.5	----	30	5,644	−18.0	43	29	5,791	−10.5	49	29	5,714	−13.3	----	29	5,663	−18.3	41	29	5,706	−14.4	----	30	5,432	−26.2	----
450	27	6,267	−28.3	----	30	6,430	−23.3	----	29	6,602	−15.3	54	29	6,515	−18.4	----	27	6,439	−24.3	----	29	6,504	−20.0	----	30	6,186	−31.5	----
400	27	7,096	−33.5	----	29	7,268	−29.4	----	29	7,425	−21.2	----	29	7,378	−24.2	----	27	7,284	−30.5	----	29	7,360	−26.2	----	30	7,009	−37.4	----
350	25	8,027	−38.9	----	29	8,207	−36.1	----	29	8,446	−28.1	----	29	8,338	−30.8	----	25	8,231	−36.7	----	29	8,312	−32.9	----	30	7,918	−43.9	----
300	24	9,067	−45.2	----	28	9,266	−43.1	----	29	9,534	−36.2	----	29	9,414	−38.5	----	25	9,280	−44.7	----	28	9,377	−39.8	----	30	8,937	−50.5	----
250	23	10,262	−50.1	----	22	10,492	−49.7	----	29	10,773	−45.6	----	28	10,645	−47.5	----	25	10,475	−53.2	----	28	10,603	−47.2	----	25	10,143	−53.5	----
200	16	11,720	−52.6	----	12	11,965	−54.2	----	27	12,226	−56.1	----	27	12,086	−55.9	----	22	11,896	−58.3	----	27	12,052	−54.4	----	18	11,583	−52.8	----
175	9	12,552	−53.0	----	6	12,853	−55.8	----	24	13,063	−61.2	----	22	12,916	−59.2	----	19	12,744	−59.8	----	23	12,912	−56.7	----	13	12,459	−52.5	----
150	5	13,557	−55.3	----	----	----	----	----	21	14,009	−65.0	----	10	13,825	−59.9	----	13	13,725	−59.9	----	14	13,904	−60.6	----	11	13,481	−53.7	----
125	----	----	----	----	----	----	----	----	15	15,107	−67.8	----	----	----	----	----	----	----	----	----	5	15,043	−65.3	----	----	----	----	----
100	----	----	----	----	----	----	----	----	5	16,456	−72.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Standard pressure surface (mb.)	Boise, Idaho (919.0 mb.)				Brownsville, Tex. (1,013.1 mb.)				Buffalo, N. Y. (990.3 mb.)				Caribou, Maine (992.0 mb.)				Charleston, S. C. (1,015.1 mb.)				Ciudad Victoria, Mexico (974.7 mb.)				Columbia, Mo. (987.7 mb.)			
Surface	30	868	2.4	81	30	6	20.2	81	29	221	3.1	72	30	191	−1.4	86	30	13	11.2	89	29	335	21.4	64	30	239	4.1	74
1,000	30	178	(*)	----	30	118	20.8	77	29	141	(*)	----	30	127	(*)	----	30	138	12.6	82	29	111	(*)	----	30	137	(*)	----
950	30	600	(*)	----	30	566	18.9	74	29	559	1.7	68	30	540	−1.4	81	30	575	12.3	75	29	562	20.7	60	30	557	3.0	75
900	30	1,037	3.3	75	30	1,025	16.7	68	29	990	−.7	72	30	965	−3.3	76	30	1,022	10.9	69	29	1,022	17.5	64	30	991	1.6	69
850	30	1,499	1.0	73	30	1,511	14.6	57	29	1,444	−3.3	73	30	1,416	−4.7	68	30	1,498	9.3	58	29	1,509	14.5	68	30	1,451	.4	68
800	30	1,984	−1.9	77	30	2,022	12.6	52	29	1,922	−5.2	73	30	1,892	−5.9	65	30	1,999	7.7	47	29	2,019	12.3	68	30	1,936	−1.0	65
750	30	2,501	−4.6	75	30	2,567	10.4	46	29	2,437	−7.0	62	30	2,401	−7.5	64	30	2,535	5.6	43	29	2,564	10.6	59	30	2,454	−3.5	68
700	30	3,035	−7.6	72	30	3,134	7.3	43	29	2,963	−9.2	55	30	2,932	−9.4	58	29	3,090	2.6	43	29	3,132	7.2	51	30	2,992	−6.2	70
650	30	3,610	−10.7	70	29	3,743	3.3	42	29	3,539	−12.0	52	30	3,509	−12.1	61	29	3,689	−.4	----	29	3,740	3.2	52	29	3,570	−9.5	62
600	30	4,221	−14.1	64	29	4,385	−.5	37	27	4,150	−15.1	42	29	4,114	−15.2	59	28	4,324	−3.9	----	29	4,383	−.7	48	29	4,179	−12.8	49
550	30	4,875	−18.3	61	29	5,075	−4.7	36	27	4,808	−19.1	----	29	4,769	−19.1	60	26	5,010	−7.3	----	29	5,072	−4.8	44	29	4,841	−16.6	----
500	30	5,580	−23.1	----	29	5,818	−9.6	----	25	5,514	−23.6	----	28	5,470	−23.4	----	26	5,744	−11.8	----	29	5,815	−9.6	45	29	5,547	−21.3	----
450	30	6,348	−28.8	----	29	6,632	−15.3	----	25	6,290	−28.5	----	28	6,239	−28.4	----	26	6,551	−16.9	----	29	6,628	−14.9	44	28	6,323	−26.6	----
400	30	7,176	−34.5	----	28	7,504	−21.2	----	25	7,112	−34.2	----	28	7,009	−34.0	----	26	7,420	−22.6	----	29	7,504	−20.5	----	28	7,156	−32.5	----
350	30	8,095	−41.2	----	28	8,477	−27.8	----	24	8,048	−40.1	----	28	7,991	−40.6	----	26	8,386	−29.5	----	29	8,477	−27.8	----	26	8,092	−38.6	----
300	29	9,130	−47.8	----	28	9,566	−35.8	----	24	9,086	−46.4	----	26	9,011	−47.6	----	26	9,469	−37.2	----	29	9,566	−36.2	----	24	9,144	−44.6	----
250	25	10,291	−53.6	----	27	10,808	−45.0	----	22	10,288	−51.4	----	21	10,192	−52.6	----	25	10,710	−46.5	----	29	10,805	−46.2	----	22	10,344	−50.2	----
200	16	11,754	−55.4	----	27	12,266	−54.7	----	15	11,748	−54.8	----	6	11,596	−53.1	----	23	12,157	−56.6	----	25	12,255	−57.1	----	17	11,769	−52.7	----
175	8	12,556	−55.8	----	25	13,115	−60.0	----	8	12,582	−54.0	----	----	----	----	----	18	12,997	−61.7	----	19	13,088	−62.8	----	14	12,628	−53.6	----
150	----	----	----	----	21	14,073	−64.6	----	----	----	----	----	----	----	----	----	9	13,965	−64.5	----	6	14,063	−67.2	----	10	13,598	−55.7	----
125	----	----	----	----	5	15,208	−67.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	6	14,731	−58.8	----

Standard pressure surface (mb.)	Dodge City, Kans. (924.2 mb.)				El Paso, Tex. (881.1 mb.)				Ely, Nev. (808.7 mb.)				Fort Worth, Tex. (992.0 mb.)				Glasgow, Mont. (940.2 mb.)				Grand Junction, Colo. (851.7 mb.)				Great Falls, Mont. (886.0 mb.)			
Surface	30	787	3.1	72	30	1,195	10.4	43	30	1,908	−1.6	70	30	211	10.5	68	29	648	−3.4	74	29	1,474	1.1	68	30	1,128	−0.7	73
1,000	30	141	(*)	----	30	120	(*)	----	30	175	(*)	----	30	144	(*)	----	29	154	(*)	----	29	158	(*)	----	30	149	(*)	----
950	30	565	(*)	----	30	557	(*)	----	30	604	(*)	----	30	577	10.3	61	29	566	(*)	----	29	589	(*)	----	30	573	(*)	----
900	30	1,002	4.5	66	30	1,018	(*)	----	30	1,042	(*)	----	30	1,021	8.7	58	29	993	−3.6	73	29	1,026	(*)	----	30	1,009	(*)	----
850	30	1,466	2.4	65	30	1,491	10.0	40	30	1,505	(*)	----	30	1,493	7.1	57	29	1,443	−5.5	76	29	1,490	(*)	----	30	1,460	−.9	67
800	30	1,955	.7	61	30	1,991	7.0	41	30	1,994	−.5	69	30	1,989	4.7	54	29	1,917	−7.3	76	29	1,977	−.1	63	30	1,941	−3.5	66
750	30	2,475	−2.0	57	30	2,525	3.7	41	30	2,511	−2.9	66	30	2,517	2.5	49	29	2,424	−8.9	67	28	2,490	−3.6	65	30	2,451	−6.6	71
700	30	3,016	−4.7	53	30	3,075	.3	39	30	3,051	−6.4	67	30	3,069	.1	43	29	2,950	−11.5	64	28	3,028	−7.3	73	20	2,985	−9.9	73
650	30	3,601	−8.2	53	30	3,669	−3.2	36	30	3,631	−9.7	68	30	3,664	−2.9	34	29	3,520	−14.2	64	27	3,600	−11.4	76	30	3,557	−13.3	73
600	30	4,213	−11.8	49	30	4,295	−6.9	34	30	4,241	−12.8	61	30	4,290	−6.4	----	29	4,118	−18.0	66	27	4,205	−15.3	77	30	4,158	−17.1	71
550	30	4,878	−15.6	45	30	4,969	−11.5	----	30	4,900	−16.6	51	30	4,967	−10.8	----	29	4,763	−22.1	----	26	4,862	−19.1	70	30	4,807	−21.0	----
500	30	5,586	−20.2	45	30	5,692	−16.3	----	30	5,610	−21.4	----	30	5,692	−15.7	----	29	5,457	−26.8	----	26	5,564	−23.2	----	30	5,502	−26.0	----
450	30	6,360	−25.7	----	30	6,480	−22.0	----	30	6,382	−26.9	----	30	6,485	−21.4	----	29	6,213	−31.8	----	25	6,335	−28.3	----	30	6,261	−31.2	----
400	30	7,201	−32.0	----	30	7,331	−28.4	----	30	7,217	−32.8	----	30	7,337	−27.5	----	29	7,033	−37.6	----	25	7,167	−34.3	----	30	7,082	−37.4	----
350	29	8,142	−38.0	----	30	8,275	−35.1	----	30	8,145	−39.1	----	30	8,285	−33.7	----	29	7,941	−43.6	----	25	8,087	−41.3	----	30	7,991	−43.5	----
300	29	9,187	−45.1	----	29	9,337	−42.4	----	29	9,193	−46.0	----	30	9,351	−40.7	----	29	8,964	−49.3	----	25	9,118	−48.0	----	30	9,013	−49.5	----
250	24	10,386	−50.8	----	25	10,540	−50.2	----	25	10,398	−51.9	----	29	10,572	−48.6	----	29	10,147	−53.0	----	22	10,294	−52.6	----	25	10,206	−53.6	----
200	21	11,838	−54.2	----	21	11,978	−56.6	----	19	11,817	−56.1	----	25	12,012	−55.8	----	22	11,598	−52.9	----	20	11,724	−54.6	----	16	11,638	−53.7	----
175	16	12,686	−55.7	----	14	12,847	−59.3	----	13	12,693	−56.9	----	18	12,863	−59.2	----	16	12,445	−52.3	----	16	12,584	−55.1	----	10	12,522	−54.5	----
150	11	13,670	−58.0	----	10	13,826	−62.7	----	6	13,784	−60.2	----	12	13,803	−62.0	----	10	13,431	−52.3	----	11	13,549	−56.8	----	----	----	----	----
125	5	14,781	−57.7	----	5	14,921	−65.3	----	----	----	----	----	----	----	----	----	----	----	----	----	6	14,740	−59.9	----	----	----	----	----

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 November 1947*—Continued

Standard pressure surface (mb.)	Greensboro, N. C. (985.6 mb.)				Hatteras, N. C. (1,016.3 mb.)				Havana, Cuba [1] (---- mb.)				Honolulu, T. H. (1,013.1 mb.)				Huntington, W. Va. (997.5 mb.)				International Falls, Minn. (973.6 mb.)				Joliet, Ill. (995.1 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	6.1	81	30	3	13.8	75	----	----	----	----	30	3	25.8	72	30	172	5.4	79	30	360	−6.0	86	30	78	1.0	80
1,000	30	153	(*)	----	30	138	13.5	69	----	----	----	----	30	118	24.7	72	30	151	(*)	----	30	149	(*)	----	30	138	(*)	----
950	30	579	7.4	67	30	572	11.1	65	----	----	----	----	30	570	21.3	78	30	573	4.5	73	30	550	−5.8	85	30	553	−.5	77
900	30	1,020	5.7	69	30	1,019	8.7	61	----	----	----	----	30	1,034	18.0	81	30	1,009	1.8	75	30	974	−8.1	85	30	981	−1.8	75
850	30	1,486	3.6	70	30	1,490	6.3	59	----	----	----	----	30	1,522	15.1	79	30	1,468	−.2	77	30	1,417	−9.3	80	30	1,434	−3.2	71
800	30	1,976	2.3	59	30	1,986	4.8	53	----	----	----	----	30	2,034	12.9	63	30	1,953	−1.8	76	30	1,884	−11.3	72	30	1,914	−4.4	65
750	30	2,501	.2	54	30	2,518	3.3	43	----	----	----	----	30	2,584	10.6	51	30	2,472	−3.1	66	30	2,382	−12.5	68	30	2,426	−6.2	59
700	30	3,048	−1.6	48	30	3,068	1.1	41	----	----	----	----	30	3,147	7.6	44	30	3,010	−5.1	59	30	2,903	−14.3	63	30	2,958	−8.7	61
650	29	3,636	−4.5	38	30	3,664	−1.6	----	----	----	----	----	30	3,759	4.8	38	30	3,595	−7.8	52	30	3,466	−16.3	60	30	3,539	−11.4	57
600	29	4,260	−7.9	38	30	4,293	−5.2	----	----	----	----	----	30	4,403	1.6	34	30	4,209	−11.0	48	30	4,060	−19.4	57	30	4,140	−14.4	53
550	29	4,935	−11.5	----	30	4,976	−9.2	----	----	----	----	----	30	5,100	−2.6	33	30	4,875	−15.0	45	30	4,701	−23.4	----	29	4,800	−18.5	51
500	29	5,656	−16.4	----	30	5,702	−13.6	----	----	----	----	----	30	5,848	−7.2	30	30	5,587	−19.7	50	30	5,394	−27.4	----	28	5,496	−22.9	----
450	29	6,450	−21.9	----	30	6,508	−18.5	----	----	----	----	----	30	6,674	−12.4	----	30	6,366	−24.9	----	30	6,149	−32.7	----	28	6,267	−28.4	----
400	29	7,298	−27.2	----	30	7,364	−24.3	----	----	----	----	----	28	7,548	−18.9	----	29	7,213	−29.9	----	29	6,968	−38.6	----	28	7,094	−34.4	----
350	29	8,247	−33.2	----	30	8,324	−30.9	----	----	----	----	----	28	8,527	−26.2	----	29	8,151	−36.2	----	29	7,872	−44.7	----	28	8,017	−40.0	----
300	29	9,314	−40.3	----	29	9,397	−38.3	----	----	----	----	----	28	9,623	−34.9	----	29	9,206	−42.8	----	28	8,889	−49.6	----	27	9,056	−45.3	----
250	29	10,535	−48.3	----	24	10,634	−46.8	----	----	----	----	----	27	10,873	−43.4	----	28	10,426	−49.0	----	27	10,083	−52.1	----	25	10,264	−49.3	----
200	25	11,983	−56.0	----	20	12,077	−55.0	----	----	----	----	----	25	12,346	−52.0	----	25	11,865	−55.4	----	23	11,536	−51.8	----	18	11,703	−50.2	----
175	21	12,824	−59.1	----	9	12,926	−57.2	----	----	----	----	----	22	13,204	−56.5	----	21	12,725	−57.4	----	15	12,413	−52.1	----	12	12,592	−51.2	----
150	15	13,781	−61.0	----	----	----	----	----	----	----	----	----	19	14,171	−61.2	----	17	13,697	−59.7	----	6	13,378	−52.9	----	7	13,563	−53.4	----
125	6	14,862	−63.0	----	----	----	----	----	----	----	----	----	12	15,274	−66.6	----	9	14,828	−62.4	----	5	14,523	−53.7	----	----	----	----	----

Standard pressure surface (mb.)	Lake Charles, La. (1,015.6 mb.)				Lander, Wyo. (826.9 mb.)				Las Vegas, Nev. (948.9 mb.)				Little Rock, Ark. (1,007.1 mb.)				Mazatlan, Mexico (1,009.6 mb.)				Medford, Oreg. (974.2 mb.)				Merida, Mexico (1,009.6 mb.)			
Surface	30	5	13.8	82	30	1,696	−3.6	78	30	574	10.4	40	30	79	8.8	80	30	14	24.6	69	30	401	6.7	87	30	27	26.0	81
1,000	30	135	14.9	73	30	163	(*)	----	30	132	(*)	----	30	137	(*)	----	30	98	24.1	65	30	185	(*)	----	30	111	25.6	80
950	30	574	12.8	70	30	583	(*)	----	30	567	(*)	----	30	567	8.7	66	30	548	22.6	45	30	613	7.0	80	30	564	22.9	79
900	30	1,023	12.3	58	30	1,020	(*)	----	30	1,017	11.1	32	30	1,009	7.4	62	30	1,015	20.0	44	30	1,051	5.3	77	30	1,033	19.6	80
850	30	1,501	10.6	52	30	1,476	(*)	----	30	1,491	7.4	36	30	1,478	5.3	58	30	1,505	16.5	47	30	1,516	2.5	77	30	1,524	17.0	74
800	30	2,004	8.1	54	30	1,958	−2.0	68	30	1,986	3.9	40	30	1,972	2.9	58	30	2,017	13.0	47	30	2,004	−.2	79	30	2,040	14.6	63
750	30	2,542	5.8	52	30	2,473	−4.3	63	30	2,513	.3	44	30	2,500	.8	56	30	2,562	9.3	48	30	2,522	−2.7	73	30	2,588	11.9	55
700	30	3,097	3.4	45	30	3,010	−7.2	64	30	3,057	−3.5	50	30	3,045	−1.4	53	30	3,126	5.7	42	30	3,064	−5.0	64	30	3,158	8.9	46
650	30	3,699	.1	44	30	3,590	−10.9	68	30	3,643	−6.9	53	29	3,634	−4.2	49	30	3,730	2.5	----	30	3,646	−8.0	50	30	3,768	5.3	45
600	30	4,333	−3.5	41	30	4,195	−15.0	71	30	4,260	−10.4	51	29	4,257	−7.5	----	30	4,371	−1.3	----	30	4,261	−11.4	47	29	4,417	1.3	43
550	30	5,016	−7.6	----	30	4,851	−19.5	71	30	4,925	−14.6	52	29	4,933	−11.4	----	29	5,060	−5.2	----	30	4,922	−15.3	45	29	5,111	−2.6	35
500	30	5,751	−12.2	----	30	5,548	−24.4	----	30	5,641	−19.4	50	29	5,654	−16.0	----	28	5,799	−10.1	----	30	5,637	−18.9	50	29	5,861	−7.6	37
450	30	6,558	−17.5	----	30	6,310	−29.7	----	30	6,422	−24.9	----	29	6,451	−21.0	----	28	6,614	−15.4	----	30	6,413	−25.3	----	29	6,681	−12.7	----
400	30	7,423	−23.4	----	29	7,138	−35.6	----	30	7,263	−30.9	----	29	7,301	−26.8	----	28	7,486	−21.4	----	30	7,256	−31.3	----	29	7,563	−18.4	----
350	30	8,387	−30.5	----	28	8,060	−42.3	----	30	8,197	−37.4	----	29	8,253	−33.2	----	28	8,455	−28.6	----	30	8,188	−38.2	----	27	8,541	−26.1	----
300	30	9,466	−38.0	----	28	9,086	−49.2	----	30	9,245	−44.7	----	26	9,312	−40.6	----	28	9,541	−36.7	----	30	9,230	−46.0	----	26	9,636	−34.8	----
250	28	10,697	−46.9	----	28	10,266	−54.0	----	28	10,454	−51.5	----	25	10,532	−48.2	----	24	10,778	−45.9	----	30	10,419	−54.4	----	24	10,890	−44.9	----
200	28	12,144	−56.2	----	26	11,690	−54.5	----	26	11,883	−56.2	----	11	11,988	−54.8	----	16	12,219	−57.0	----	23	11,852	−58.5	----	14	12,354	−56.5	----
175	27	12,984	−60.3	----	23	12,537	−55.1	----	23	12,743	−58.4	----	----	----	----	----	13	13,055	−62.5	----	17	12,702	−59.4	----	8	13,202	−62.7	----
150	17	13,937	−63.7	----	15	13,528	−55.8	----	21	13,701	−59.4	----	----	----	----	----	8	14,022	−68.0	----	13	13,660	−60.7	----	----	----	----	----
125	10	15,041	−65.0	----	6	14,598	−54.8	----	9	14,746	−58.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Standard pressure surface (mb.)	Miami, Fla. (1,014.8 mb.)				Nantucket, Mass. (1,014.0 mb.)				Nashville, Tenn. (995.7 mb.)				New Orleans, La. (1,015.7 mb.)				North Platte, Nebr. (916.7 mb.)				Oakland, Calif. (1,018.2 mb.)				Ogden, Utah (865.6 mb.)			
Surface	30	4	23.1	83	30	14	5.9	73	30	180	8.4	75	30	2	15.2	84	30	849	0.1	81	30	6	11.6	72	30	1,355	1.3	76
1,000	30	132	23.1	81	30	127	5.2	70	30	144	(*)	----	30	134	15.8	76	30	143	(*)	----	30	157	12.0	65	30	174	(*)	----
950	30	583	20.5	81	30	545	2.2	74	30	566	6.9	74	30	575	13.9	73	30	563	(*)	----	30	592	10.8	52	30	601	(*)	----
900	30	1,045	17.8	78	30	980	.5	72	30	1,009	5.0	73	30	1,025	12.7	64	30	997	.9	76	30	1,035	9.0	45	30	1,040	(*)	----
850	30	1,533	15.5	72	30	1,438	−.7	58	30	1,475	3.5	71	29	1,503	11.0	53	30	1,454	−1.3	72	30	1,507	7.2	40	30	1,501	1.1	73
800	30	2,046	13.1	64	30	1,921	−2.2	55	30	1,966	1.6	63	29	2,007	9.2	48	30	1,936	−3.3	69	30	2,003	4.8	33	30	1,986	−1.9	72
750	30	2,592	10.7	57	30	2,434	−4.3	50	30	2,490	−.3	56	28	2,545	7.0	49	30	2,451	−5.3	62	30	2,536	2.4	27	30	2,501	−5.2	78
700	30	3,160	7.8	54	30	2,973	−6.4	50	30	3,034	−2.8	51	28	3,104	4.5	44	30	2,984	−8.1	57	30	3,082	−.2	----	30	3,036	−8.3	78
650	30	3,768	4.4	49	30	3,554	−9.1	47	30	3,621	−5.7	47	28	3,709	1.1	49	30	3,562	−11.6	55	30	3,677	−3.4	----	30	3,614	−11.7	78
600	29	4,416	.7	43	28	4,163	−12.6	50	30	4,242	−8.7	48	28	4,344	−2.6	50	30	4,164	−15.1	53	30	4,300	−7.0	----	30	4,216	−15.2	72
550	29	5,109	−3.2	38	28	4,824	−16.0	----	30	4,914	−12.6	46	28	5,030	−6.7	48	30	4,821	−18.9	52	30	4,976	−11.2	----	30	4,873	−18.9	63
500	29	5,858	−7.8	42	28	5,534	−20.6	----	29	5,633	−16.9	----	28	5,767	−11.2	49	29	5,521	−23.8	----	29	5,705	−15.7	----	30	5,573	−23.5	----
450	29	6,674	−13.3	44	28	6,308	−25.7	----	28	6,422	−21.7	----	26	6,573	−16.5	51	29	6,290	−29.2	----	29	6,498	−21.2	----	30	6,343	−29.0	----
400	28	7,557	−19.2	48	28	7,150	−31.4	----	27	7,274	−27.0	----	26	7,442	−22.4	----	29	7,114	−35.0	----	29	7,350	−27.4	----	30	7,167	−35.4	----
350	27	8,537	−26.0	----	24	8,103	−36.9	----	27	8,224	−33.2	----	26	8,409	−29.2	----	29	8,032	−41.3	----	29	8,297	−34.7	----	30	8,083	−42.0	----
300	27	9,663	−34.3	----	22	9,153	−43.3	----	27	9,292	−40.4	----	26	9,492	−37.1	----	29	9,062	−47.7	----	29	9,356	−42.8	----	30	9,111	−48.7	----
250	26	10,883	−44.3	----	18	10,359	−49.5	----	25	10,503	−48.2	----	26	10,729	−45.9	----	27	10,238	−52.4	----	26	10,585	−50.9	----	30	10,295	−53.4	----
200	25	12,343	−55.9	----	----	----	----	----	18	11,933	−53.7	----	25	12,178	−55.6	----	27	11,675	−53.4	----	21	12,006	−58.0	----	28	11,730	−54.6	----
175	18	13,182	−61.8	----	----	----	----	----	13	12,773	−56.2	----	22	13,019	−60.4	----	22	12,531	−54.3	----	13	12,901	−59.2	----	23	12,618	−55.3	----
150	10	14,125	−67.3	----	----	----	----	----	11	13,738	−58.3	----	17	13,962	−63.4	----	17	13,540	−55.7	----	5	13,926	−60.0	----	17	13,604	−57.6	----
125	----	----	----	----	----	----	----	----	7	14,879	−60.2	----	12	15,082	−65.7	----	----	----	----	----	----	----	----	----	12	14,732	−59.2	----
100	----	----	----	----	----	----	----	----	----	----	----	----	6	16,445	−68.2	----	----	----	----	----	----	----	----	----	----	----	----	----

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 November 1947*—Continued

Standard pressure surface (mb.)	Oklahoma City, Okla. (970.2 mb.)				Omaha, Nebr. (979.7 mb.)				Phoenix, Ariz. (974.2 mb.)				Pittsburgh, Pa. (971.5 mb.)				Portland, Maine (1,013.2 mb.)				Rapid City, S. Dak. (902.2 mb.)				St. Cloud, Minn. (977.0 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	391	7.1	72	30	308	2.8	78	29	339	13.0	54	30	382	3.9	71	30	20	1.2	76	30	980	−3.3	76	30	317	−3.7	88
1,000	30	140	(*)	----	30	140	(*)	----	29	117	(*)	----	30	145	(*)	----	30	125	2.2	69	30	153	(*)	----	30	132	(*)	----
950	30	565	7.8	65	30	559	.6	81	29	556	15.9	41	30	568	3.2	69	30	542	.4	66	30	567	(*)	----	30	544	−4.0	87
900	30	1,009	6.0	64	30	988	−1.1	80	29	1,009	12.8	41	30	1,000	.5	72	30	970	−1.6	66	30	999	(*)	----	30	963	−5.5	86
850	30	1,475	4.4	61	30	1,443	−2.4	81	29	1,486	9.0	46	30	1,457	−1.5	68	30	1,424	−2.8	58	30	1,454	−2.4	68	30	1,410	−7.1	84
800	30	1,968	2.9	57	30	1,923	−4.1	78	29	1,984	5.2	48	30	1,938	−3.3	65	30	1,904	−4.1	53	30	1,934	−4.5	65	30	1,881	−8.3	78
750	30	2,494	.3	56	30	2,434	−6.4	75	29	2,516	1.7	49	30	2,454	−4.9	58	30	2,417	−5.9	49	30	2,442	−6.8	64	30	2,389	−9.7	69
700	30	3,039	−2.4	53	30	2,967	−9.1	71	29	3,061	−1.4	42	29	2,988	−6.8	53	30	2,948	−8.4	46	30	2,977	−9.1	60	30	2,911	−11.9	63
650	30	3,626	−5.6	48	30	3,545	−12.0	67	29	3,656	−4.0	41	29	3,575	−9.4	50	29	3,531	−11.1	----	30	3,553	−12.0	58	30	3,481	−14.4	59
600	30	4,248	−9.3	42	30	4,147	−15.4	61	29	4,275	−8.1	40	29	4,179	−12.9	51	29	4,136	−14.7	----	30	4,156	−15.3	58	30	4,080	−17.5	57
550	30	4,917	−13.2	----	29	4,807	−19.3	60	29	4,948	−12.1	37	29	4,840	−16.9	46	28	4,791	−18.5	----	30	4,811	−19.3	58	29	4,733	−21.0	----
500	30	5,635	−18.1	----	29	5,505	−24.1	----	29	5,668	−17.3	41	29	5,546	−21.1	----	28	5,493	−23.0	----	30	5,511	−23.9	----	29	5,429	−25.3	----
450	29	6,417	−23.5	----	29	6,273	−29.4	----	29	6,459	−22.8	----	29	6,325	−26.2	----	28	6,261	−28.3	----	30	6,278	−29.3	----	28	6,198	−30.7	----
400	28	7,261	−29.6	----	29	7,098	−35.0	----	29	7,304	−29.3	----	29	7,159	−31.9	----	28	7,093	−33.6	----	30	7,104	−35.3	----	28	7,018	−36.4	----
350	27	8,197	−35.6	----	29	8,017	−40.9	----	29	8,243	−36.3	----	29	8,090	−38.0	----	28	8,019	−39.1	----	27	8,028	−41.9	----	26	7,943	−42.2	----
300	22	9,266	−42.1	----	28	9,053	−47.2	----	29	9,295	−44.1	----	28	9,149	−43.6	----	27	9,066	−45.5	----	25	9,062	−48.3	----	25	8,968	−47.8	----
250	18	10,472	−48.0	----	27	10,245	−52.0	----	27	10,506	−51.5	----	28	10,357	−49.2	----	25	10,258	−50.9	----	24	10,248	−52.8	----	23	10,160	−51.6	----
200	9	11,928	−51.9	----	22	11,668	−52.8	----	19	11,978	−56.5	----	24	11,822	−54.0	----	18	11,713	−54.1	----	22	11,692	−52.6	----	15	11,633	−51.9	----
175	5	12,819	−54.6	----	16	12,532	−53.5	----	13	12,818	−57.5	----	20	12,678	−56.0	----	14	12,534	−54.0	----	21	12,557	−53.1	----	10	12,489	−52.9	----
150	----	----	----	----	12	13,488	−54.7	----	10	13,774	−59.8	----	13	13,669	−58.2	----	9	13,501	−55.3	----	10	13,544	−53.2	----	----	----	----	----

Standard pressure surface (mb.)	San Antonio, Tex. (987.3 mb.)				San Juan, P. R. (1,012.7 mb.)				Santa Maria, Calif. (1,009.0 mb.)				Sault Ste. Marie, Mich. (987.9 mb.)				Spokane, Wash. (948.0 mb.)				Swan Island, W. I. (1,011.6 mb.)				Tacubaya, Mexico (773.7 mb.)			
Surface	30	240	13.5	70	30	15	25.8	78	30	71	10.6	74	30	221	−0.1	78	30	598	2.1	86	30	10	26.5	83	29	2,306	15.1	60
1,000	30	131	(*)	----	30	126	25.0	79	30	147	10.9	69	30	123	(*)	----	30	164	(*)	----	30	112	26.0	83	29	66	(*)	----
950	30	570	14.3	63	30	580	21.8	84	30	581	11.6	50	30	538	−1.4	76	30	583	(*)	----	30	570	22.7	83	29	527	(*)	----
900	30	1,021	13.2	62	30	1,045	18.5	85	30	1,025	10.1	42	30	962	−3.8	76	30	1,016	.7	84	30	1,033	20.0	76	29	1,001	(*)	----
850	30	1,500	10.9	59	30	1,535	15.6	81	30	1,498	7.8	37	30	1,412	−6.2	79	30	1,473	−1.6	79	30	1,525	17.2	73	29	1,496	(*)	----
800	30	2,004	8.7	53	30	2,048	13.5	65	30	1,996	5.6	33	30	1,884	−8.7	80	30	1,953	−4.2	81	30	2,041	14.4	67	29	2,023	(*)	----
750	30	2,541	6.8	41	30	2,595	11.8	46	30	2,529	3.3	----	30	2,388	−11.1	75	30	2,468	−6.8	80	30	2,591	11.7	56	29	2,572	13.8	58
700	30	3,100	4.1	37	30	3,165	9.1	35	30	3,078	1.0	----	30	2,911	−13.0	65	30	2,996	−9.4	76	29	3,159	8.4	51	29	3,148	9.5	63
650	30	3,702	.6	34	30	3,778	5.9	31	30	3,675	−2.1	----	30	3,479	−15.6	62	30	3,571	−12.5	73	29	3,771	4.8	52	29	3,761	4.8	71
600	30	4,338	−3.0	----	30	4,427	2.3	29	29	4,299	−6.1	----	30	4,073	−18.8	61	30	4,172	−16.2	72	28	4,416	.8	46	29	4,407	.3	71
550	29	5,022	−7.3	----	30	5,125	−1.7	----	29	4,976	−10.3	----	30	4,720	−22.0	----	30	4,825	−20.2	69	28	5,111	−3.5	46	29	5,101	−4.0	66
500	29	5,755	−12.2	----	30	5,876	−6.4	----	29	5,701	−15.3	----	30	5,413	−26.3	----	30	5,521	−25.0	----	28	5,857	−7.9	47	29	5,847	−8.3	56
450	28	6,560	−17.5	----	30	6,701	−11.6	----	29	6,494	−21.0	----	29	6,177	−31.5	----	30	6,284	−30.1	----	28	6,678	−12.8	48	29	6,665	−13.3	46
400	28	7,423	−23.3	----	30	7,584	−17.6	----	29	7,347	−27.5	----	28	6,992	−36.9	----	30	7,108	−36.2	----	27	7,561	−18.3	50	28	7,546	−19.0	43
350	28	8,387	−30.0	----	30	8,568	−25.1	----	27	8,293	−34.7	----	27	7,913	−42.5	----	30	8,022	−42.4	----	27	8,544	−25.2	----	28	8,526	−26.2	----
300	24	9,463	−37.7	----	30	9,669	−33.6	----	23	9,352	−42.8	----	18	8,919	−47.7	----	28	9,054	−48.6	----	27	9,644	−33.6	----	28	9,610	−35.1	----
250	22	10,692	−45.8	----	28	10,920	−43.6	----	7	10,563	−50.8	----	----	----	----	----	24	10,238	−53.1	----	27	10,896	−43.7	----	22	10,867	−45.1	----
200	19	12,139	−55.3	----	28	12,383	−54.7	----	----	----	----	----	----	----	----	----	17	11,646	−53.5	----	26	12,357	−55.7	----	----	----	----	----
175	16	12,982	−58.9	----	27	13,226	−60.8	----	----	----	----	----	----	----	----	----	14	12,498	−54.2	----	25	13,195	−62.3	----	----	----	----	----
150	11	13,941	−61.3	----	13	14,467	−67.4	----	----	----	----	----	----	----	----	----	6	13,580	−55.4	----	20	14,128	−69.4	----	----	----	----	----
125	7	15,064	−63.9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

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 November 1947*—Continued

Standard pressure surface (mb.)	Tampa, Fla. (1,015.2 mb.)				Tatoosh Island, Wash. (1,016.4 mb.)				Toledo, Ohio (993.6 mb.)				Washington, D. C. (1,015.6 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
Surface	30	9	19.2	86	30	31	7.7	86	30	191	2.7	81	30	25	7.5	67
1,000	30	138	19.3	83	30	165	7.5	82	30	137	(*)	----	30	152	7.1	64
950	30	584	17.5	76	30	590	5.4	77	30	556	1.1	78	30	574	4.8	65
900	30	1,040	15.4	74	30	1,027	3.1	76	30	985	−1.5	77	30	1,011	2.4	67
850	30	1,524	13.5	67	30	1,488	1.1	74	30	1,440	−2.8	69	30	1,472	1.0	58
800	30	2,033	11.1	58	30	1,974	−1.3	70	30	1,919	−4.5	61	30	1,958	−1.5	61
750	30	2,578	8.4	59	30	2,492	−3.7	61	30	2,431	−6.2	58	30	2,476	−3.2	55
700	30	3,137	5.7	55	30	3,029	−6.5	57	30	2,964	−8.3	55	30	3,015	−5.1	50
650	30	3,744	2.5	50	30	3,609	−9.9	55	30	3,542	−11.2	56	30	3,599	−7.3	45
600	29	4,387	−1.0	47	30	4,219	−13.3	53	29	4,145	−14.3	51	30	4,216	−10.3	39
550	29	5,078	−4.8	49	30	4,879	−17.0	58	29	4,801	−18.3	49	30	4,883	−14.1	38
500	29	5,820	−9.3	46	30	5,586	−21.5	----	29	5,505	−22.4	----	29	5,595	−18.8	40
450	29	6,634	−14.1	49	30	6,363	−26.6	----	29	6,274	−27.5	----	29	6,374	−24.0	----
400	28	7,512	−20.1	53	30	7,196	−32.4	----	29	7,109	−33.6	----	29	7,221	−30.2	----
350	28	8,488	−26.9	----	30	8,124	−38.8	----	29	8,033	−39.7	----	29	8,159	−36.2	----
300	28	9,580	−35.1	----	30	9,167	−45.8	----	27	9,069	−45.8	----	29	9,215	−42.3	----
250	28	10,826	−44.7	----	28	10,371	−53.0	----	26	10,281	−50.1	----	29	10,432	−48.6	----
200	27	12,279	−55.9	----	20	11,765	−56.1	----	23	11,730	−53.0	----	27	11,873	−54.1	----
175	24	13,119	−61.5	----	15	12,613	−54.4	----	14	12,576	−53.2	----	20	12,720	−56.0	----
150	20	14,060	−66.9	----	11	13,583	−54.1	----	10	13,597	−57.3	----	13	13,682	−58.1	----
125	15	15,152	−69.6	----	----	------	------	----	7	14,777	−59.3	----	----	------	------	----
100	6	16,460	−72.6	----	----	------	------	----	----	------	------	----	----	------	------	----

[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 November 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. (1,618 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	25	213	1.5	30	285	1.9	21	301	2.6	29	251	2.4	29	309	4.3	29	322	2.8	28	72	1.9	29	244	2.1	28	299	1.0	22	291	0.9	29	258	1.8	29	339	2.0	30	267	2.8
500	---	---	---	---	---	---	21	295	3.6	---	---	---	---	---	---	---	---	---	28	75	2.1	29	242	3.6	28	268	2.4	22	293	2.0	29	265	2.1	---	---	---	---	---	---
1,000	25	221	2.8	---	---	---	21	301	3.9	---	---	---	29	321	5.4	29	320	3.1	25	132	1.1	25	245	4.4	27	263	4.0	22	287	3.7	24	243	2.9	---	---	---	---	---	---
1,500	23	240	4.7	---	---	---	20	296	5.9	29	273	4.8	19	314	6.9	29	309	4.4	25	271	1.3	18	234	5.5	19	297	4.2	22	280	7.2	21	249	3.2	---	---	---	30	264	3.1
2,000	23	248	6.6	30	275	3.3	20	298	8.7	26	291	7.3	14	318	8.5	26	306	4.9	21	277	4.2	13	245	6.8	13	311	3.7	20	276	9.8	17	268	4.8	29	322	2.6	30	255	3.4
2,500	22	263	7.7	30	271	4.3	19	286	13.0	24	299	8.7	12	297	10.2	21	311	6.9	21	263	6.2	12	254	8.0	11	302	5.9	19	273	13.6	15	279	7.8	28	288	3.5	29	256	6.6
3,000	21	273	10.1	30	269	6.8	19	282	15.6	18	302	8.6	10	300	13.8	19	312	6.3	21	260	7.8	10	258	5.7	---	---	---	18	276	16.2	13	285	12.1	26	281	5.6	27	262	10.4
4,000	21	275	14.3	24	269	9.7	14	274	19.6	14	289	9.8	---	---	---	12	315	4.9	18	260	10.0	---	---	---	---	---	---	15	275	15.5	13	279	16.4	26	299	9.1	25	265	13.4
5,000	19	279	18.3	20	278	12.9	11	267	24.5	13	294	9.8	---	---	---	---	---	---	16	262	11.6	---	---	---	---	---	---	13	270	20.7	10	284	22.0	23	300	12.3	24	265	18.0
6,000	18	270	20.4	19	266	20.1	---	---	---	11	292	10.8	---	---	---	---	---	---	16	263	14.6	---	---	---	---	---	---	10	266	22.4	---	---	---	21	294	13.3	20	269	18.6
8,000	---	---	---	13	278	23.3	---	---	---	---	---	---	---	---	---	---	---	---	10	254	18.2	---	---	---	---	---	---	---	---	---	---	---	---	13	284	16.5	16	266	23.2
10,000	---	---	---	11	287	31.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	10	258	26.0

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	30	352	2.4	29	295	1.8	25	319	1.4	23	286	2.2	25	337	0.7	27	260	2.3	30	8	1.2	24	314	1.2	28	338	1.1	29	125	0.7	26	3	1.9	25	278	2.0	29	312	3.6
500	---	---	---	---	---	---	25	316	2.0	---	---	---	25	265	2.1	27	265	3.4	---	---	---	24	300	1.7	28	344	1.2	29	119	1.0	26	355	1.9	25	270	4.2	29	309	3.7
1,000	---	---	---	---	---	---	23	290	3.8	23	278	4.0	24	259	4.3	22	247	4.3	30	22	1.9	22	278	2.7	27	313	1.2	29	179	1.1	21	333	2.4	25	264	4.2	28	305	4.2
1,500	---	---	---	29	295	1.9	22	289	6.9	23	296	5.6	23	272	6.7	18	248	4.5	30	345	2.1	21	279	4.9	24	321	1.6	29	239	2.3	20	311	4.9	24	279	7.2	23	310	5.7
2,000	30	353	2.4	29	292	1.7	22	293	10.3	21	304	7.8	20	277	9.9	14	280	4.9	30	326	3.0	20	279	8.8	22	341	3.3	26	255	3.7	19	294	7.9	18	279	10.5	19	312	7.8
2,500	30	332	2.5	29	245	2.1	19	293	14.2	18	306	9.2	19	275	11.1	12	299	6.4	30	324	3.8	17	277	10.3	16	6	6.1	24	252	4.8	18	285	9.5	15	289	11.7	18	296	8.3
3,000	28	321	2.9	28	251	3.2	18	290	17.3	16	303	10.5	18	275	12.4	11	297	11.2	29	329	4.3	17	279	12.5	12	8	8.3	23	255	5.2	18	276	12.8	14	289	14.0	14	296	8.8
4,000	24	311	6.4	22	280	5.3	17	278	19.0	11	281	9.1	16	272	15.6	---	---	---	26	313	8.4	15	280	17.1	12	352	13.6	16	257	9.2	16	263	16.1	11	283	17.6	---	---	---
5,000	19	310	7.9	19	302	8.2	13	276	28.1	---	---	---	15	269	20.5	---	---	---	25	305	11.1	11	283	22.4	---	---	---	16	253	10.4	14	263	18.2	11	278	22.6	---	---	---
6,000	16	319	8.8	15	292	11.2	---	---	---	---	---	---	13	264	22.6	---	---	---	21	303	15.2	---	---	---	---	---	---	13	252	12.3	---	---	---	---	---	---	---	---	---
8,000	11	311	14.2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	13	288	19.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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. Cloud, Minn. (318 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	298	2.4	28	205	1.0	28	276	1.5	30	257	0.7	26	328	4.6	28	287	1.4	23	265	2.0	27	358	1.0	30	282	3.2	20	235	1.5	23	172	0.5	24	247	0.6	25	312	2.2
500	30	344	3.6	28	211	1.3	28	273	2.4	30	259	.8	---	---	---	28	255	2.2	23	272	2.8	27	3	.3	30	285	3.1	20	194	2.4	23	235	1.2	---	---	---	25	308	4.2
1,000	29	360	5.2	26	252	1.5	26	277	4.7	30	221	1.0	26	325	4.9	27	246	3.6	22	277	4.7	26	214	1.2	29	303	1.5	18	214	3.4	20	212	2.2	24	226	1.8	25	305	5.7
1,500	28	357	6.6	21	259	4.8	21	283	8.8	30	181	1.1	26	317	7.6	19	268	7.4	18	283	6.5	24	235	2.5	27	353	1.4	13	211	3.7	16	258	2.8	20	262	3.6	25	295	6.3
2,000	27	357	7.2	19	261	6.6	19	288	11.7	29	229	1.1	23	308	10.0	17	272	9.6	13	288	9.5	24	250	4.6	26	359	2.6	---	---	---	12	289	2.4	13	286	3.9	22	287	9.0
2,500	27	350	7.7	19	265	8.4	15	294	14.2	26	283	2.1	23	306	12.4	16	281	12.0	10	287	11.2	24	265	6.7	25	343	4.3	---	---	---	---	---	---	10	300	4.8	19	284	13.1
3,000	26	354	9.7	16	283	10.4	14	296	16.7	26	288	4.7	21	309	14.1	11	289	14.6	---	---	---	24	267	11.2	25	328	6.2	---	---	---	---	---	---	---	---	---	16	281	14.8
4,000	24	348	14.5	14	283	14.9	12	282	19.8	25	287	8.1	15	306	13.8	---	---	---	---	---	---	20	268	14.1	24	320	7.8	---	---	---	---	---	---	---	---	---	14	276	19.0
5,000	21	344	13.2	13	272	17.8	10	281	23.1	24	290	11.1	12	286	9.6	---	---	---	---	---	---	17	271	19.1	23	321	11.2	---	---	---	---	---	---	---	---	---	10	284	24.2
6,000	21	336	14.2	12	278	21.6	10	280	24.1	19	295	13.7	12	284	10.2	---	---	---	---	---	---	16	268	22.8	22	310	13.4	---	---	---	---	---	---	---	---	---	---	---	---
8,000	10	321	16.5	---	---	---	---	---	---	14	296	13.8	---	---	---	---	---	---	---	---	---	13	264	26.8	19	301	15.0	---	---	---	---	---	---	---	---	---	---	---	---
10,000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	11	301	15.0	---	---	---	---	---	---	---	---	---	---	---	---

TABLE 3.—*Maximum free-air wind velocities (m. p. s.) for different sections of the United States based on pilot balloon observations during November 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]	41.8	ssw.	1,903	7	Akron, Ohio	51.0	wnw.	4,795	9	Pittsburgh, Pa	82.5	wnw.	9,644	18	Albany, N. Y.
East-Central [2]	38.1	wnw.	2,500	9	Lynchburg, Va	56.0	wnw.	4,063	8	Chattanooga, Tenn	80.0	w.	10,024	12	Huntington, W. Va.
Southeast [3]	42.0	w.	2,500	25	Charleston, S. C	47.1	wsw.	5,000	8	Atlanta, Ga	79.0	w.	12,670	9	Charleston, S. C.
North-Central [4]	41.4	wsw.	1,273	30	Fargo, N. Dak	50.0	wnw.	4,030	11	International Falls, Minn.	73.0	wsw.	9,273	23	Madison, Wis.
Central [5]	42.5	nnw.	2,500	24	Dodge City, Kans	46.4	wsw.	4,998	23	Joliet, Ill	90.0	wnw.	8,578	9	Joliet, Ill.
						46.4	nw.	4,963	26	Goodland, Kans					
South-Central [6]	38.6	wsw.	2,096	6	Tulsa, Okla	65.0	wnw.	4,920	14	San Antonio, Tex	82.0	wsw.	9,938	7	Fort Worth, Tex.
Northwest [7]	33.4	nw.	2,000	24	Glasgow, Mont	46.4	n.	5,000	23	Glasgow, Mont	67.0	wnw.	18,765	29	Billings, Mont.
	33.4	nw.	2,500	11	Burns, Oreg										
West-Central [8]	38.5	wnw.	2,489	15	Cheyenne, Wyo	46.0	nnw.	3,587	26	Cheyenne, Wyo	89.0	wsw.	20,599	25	Red Bluff, Calif.
Southwest [9]	35.8	wsw.	2,474	5	Winslow, Ariz	47.3	w.	5,000	6	El Paso, Tex	98.0	wsw.	11,618	21	El Paso, Tex.

[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.