AEROLOGICAL OBSERVATIONS FOR THE YEAR 1946

TABLE 1A.—*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 year 1946*

STATIONS AND MEAN SURFACE PRESSURES

Standard pressure surface (mb.)	Albany, N. Y. (1,006.0 mb.)				Albuquerque, N. Mex. (837.4 mb.)				Apalachicola, Fla. (1,017.6 mb.)				Atlanta, Ga. (983.9 mb.)				Big Spring, Tex. (926.7 mb.)				Bismarck, N. Dak. (954.7 mb.)				Boise, Idaho (915.7 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	360	86	7.6	76	363	1,620	14.7	39	357	5	19.9	84	365	300	15.7	75	362	774	18.1	52	360	505	5.7	70	358	868	11.5	56
1,000	360	141	7.5	73	363	85	(*)	----	357	156	20.1	78	365	161	(*)	----	362	112	(*)	----	360	120	(*)	----	358	121	(*)	----
950	360	566	6.8	71	363	537	(*)	----	357	599	18.1	71	365	602	16.1	66	362	558	(*)	----	360	545	5.1	68	358	561	(*)	----
900	360	1,007	4.7	70	363	1,004	(*)	----	357	1,061	15.6	67	365	1,057	13.8	65	362	1,024	18.8	48	360	988	6.0	62	358	1,012	12.7	49
850	360	1,471	2.5	69	363	1,492	(*)	----	357	1,543	13.2	62	365	1,538	11.4	61	361	1,511	15.5	46	360	1,455	4.4	60	358	1,489	9.8	47
800	360	1,960	.3	66	363	2,005	13.1	37	357	2,051	11.0	54	365	2,042	9.2	57	361	2,023	12.8	45	359	1,947	2.3	58	358	1,989	6.2	50
750	360	2,481	−1.8	61	363	2,545	9.2	40	357	2,590	8.4	----	365	2,580	6.6	50	360	2,564	9.5	45	359	2,472	−.5	57	358	2,519	2.5	52
700	360	3,022	−4.2	56	363	3,112	5.0	44	357	3,154	5.4	----	364	3,138	3.6	48	360	3,131	5.9	45	359	3,015	−3.6	55	358	3,069	−1.2	53
650	357	3,608	−7.0	54	362	3,712	.5	47	355	3,757	2.1	----	360	3,739	.3	----	360	3,735	2.1	----	357	3,601	−7.0	55	358	3,660	−5.2	55
600	349	4,224	−10.3	----	362	4,349	−4.2	52	354	4,389	−1.6	----	358	4,373	−3.4	----	358	4,375	−2.2	----	354	4,218	−10.6	55	357	4,280	−9.3	55
550	345	4,890	−14.1	----	362	5,028	−8.9	55	352	5,085	−5.7	----	357	5,058	−7.4	----	351	5,059	−6.7	----	352	4,884	−14.8	54	355	4,950	−13.7	54
500	341	5,607	−18.6	----	361	5,762	−14.0	58	350	5,826	−10.3	----	355	5,793	−12.0	----	347	5,799	−11.5	----	352	5,597	−19.6	54	352	5,666	−18.6	52
450	339	6,390	−23.7	----	360	6,559	−19.3	----	345	6,634	−15.5	----	355	6,599	−17.3	----	339	6,605	−16.9	----	351	6,381	−24.9	49	348	6,449	−24.0	----
400	337	7,236	−29.4	----	356	7,421	−25.3	----	340	7,506	−21.7	----	354	7,463	−23.5	----	336	7,474	−23.1	----	344	7,221	−30.6	----	345	7,294	−30.2	----
350	335	8,174	−36.3	----	356	8,377	−32.3	----	338	8,477	−28.8	----	351	8,428	−30.7	----	324	8,439	−30.1	----	335	8,159	−37.6	----	337	8,229	−37.3	----
300	333	9,227	−43.6	----	356	9,446	−40.2	----	337	9,560	−37.1	----	349	9,500	−38.7	----	312	9,517	−37.9	----	331	9,207	−44.8	----	332	9,276	−45.0	----
250	327	10,434	−50.9	----	348	10,667	−48.7	----	332	10,794	−46.8	----	347	10,726	−47.9	----	282	10,752	−46.5	----	288	10,414	−51.5	----	294	10,474	−52.5	----
200	292	11,871	−56.3	----	313	12,108	−55.8	----	326	12,239	−56.9	----	334	12,168	−56.8	----	248	12,206	−54.5	----	220	11,844	−54.7	----	276	11,895	−56.7	----
175	264	12,715	−57.2	----	256	12,952	−58.1	----	308	13,075	−61.5	----	311	13,008	−60.2	----	188	13,067	−57.9	----	185	12,718	−55.0	----	229	12,732	−56.1	----
150	226	13,681	−57.6	----	176	13,923	−61.0	----	270	14,020	−65.3	----	270	13,960	−62.9	----	128	14,036	−61.4	----	148	13,701	−55.0	----	175	13,703	−56.4	----
125	172	14,849	−58.6	----	----	----	----	----	174	15,122	−68.5	----	173	15,071	−65.2	----	----	----	----	----	----	----	----	----	94	14,894	−57.6	----

Standard pressure surface (mb.)	Brownsville, Tex. (1,014.0 mb.)				Buffalo, N. Y. (990.2 mb.)				Burrwood, La. (1,017.5 mb.)				Caribou, Maine (991.8 mb.)				Charleston, S. C. (1,017.3 mb.)				Ciudad Victoria, Mexico (974.3 mb.)				Columbia, Mo.[1] (988.9 mb.)			
Surface	364	6	22.3	84	362	221	8.3	75	337	2	20.7	86	364	191	2.5	82	363	14	16.7	86	357	335	24.4	62	362	239	13.4	70
1,000	364	126	22.0	82	362	142	(*)	----	337	152	20.4	82	364	123	(*)	----	363	160	17.9	79	357	104	(*)	----	362	136	(*)	----
950	364	577	19.9	78	362	571	8.0	68	337	598	17.9	76	364	542	2.7	73	363	602	16.5	70	357	556	23.3	62	362	574	13.1	62
900	364	1,038	18.2	66	362	1,012	5.8	69	337	1,050	15.8	66	364	976	.7	73	363	1,059	14.2	66	356	1,025	20.1	64	362	1,022	11.1	61
850	364	1,526	16.5	55	362	1,478	3.2	68	337	1,540	13.8	57	364	1,433	−1.2	73	363	1,540	12.0	61	353	1,516	16.9	67	362	1,498	9.0	58
800	363	2,041	14.3	48	362	1,968	.9	64	337	2,050	11.7	51	364	1,916	−3.1	68	363	2,046	9.7	55	352	2,032	14.1	66	362	1,999	6.7	55
750	363	2,587	11.7	44	362	2,491	−1.5	58	337	2,592	9.1	46	364	2,429	−5.2	65	363	2,584	7.2	51	351	2,578	11.4	62	362	2,532	4.3	49
700	363	3,158	8.4	41	362	3,032	−3.9	52	336	3,157	6.1	43	362	2,964	−7.6	62	363	3,145	4.1	48	351	3,149	8.5	53	361	3,085	1.3	47
650	357	3,768	4.7	40	361	3,620	−6.8	50	335	3,764	2.6	----	361	3,542	−10.2	58	354	3,745	.8	----	343	3,759	4.8	50	361	3,680	−1.9	45
600	353	4,414	.4	41	359	4,234	−10.3	47	333	4,405	−1.3	----	359	4,141	−13.4	56	352	4,383	−2.9	----	339	4,406	.7	49	358	4,311	−5.6	42
550	352	5,107	−4.1	41	355	4,904	−14.2	----	333	5,097	−5.4	----	358	4,809	−17.1	54	345	5,066	−6.9	----	332	5,098	−3.5	49	356	4,990	−9.8	41
500	349	5,852	−8.7	----	353	5,618	−18.7	----	332	5,835	−10.1	----	354	5,518	−21.5	----	339	5,804	−11.5	----	327	5,847	−8.2	----	355	5,717	−14.5	----
450	345	6,667	−14.0	----	343	6,403	−23.8	----	330	6,647	−15.4	----	350	6,295	−26.6	----	329	6,610	−16.8	----	316	6,663	−13.3	----	352	6,514	−19.8	----
400	339	7,546	−20.0	----	335	7,248	−29.6	----	327	7,521	−21.5	----	348	7,128	−32.2	----	323	7,479	−22.8	----	311	7,546	−19.2	----	350	7,372	−25.9	----
350	333	8,521	−27.1	----	327	8,188	−36.3	----	320	8,490	−28.7	----	345	8,056	−38.8	----	318	8,445	−29.9	----	298	8,525	−26.5	----	347	8,326	−32.8	----
300	329	9,614	−35.4	----	307	9,241	−43.6	----	312	9,574	−36.8	----	335	9,097	−45.4	----	311	9,524	−38.0	----	289	9,618	−34.9	----	339	9,394	−40.6	----
250	317	10,857	−44.8	----	284	10,452	−50.5	----	303	10,809	−46.1	----	322	10,297	−50.9	----	299	10,755	−47.4	----	285	10,865	−44.6	----	318	10,611	−49.2	----
200	308	12,315	−55.0	----	244	11,885	−55.1	----	279	12,263	−55.6	----	288	11,741	−53.8	----	283	12,199	−57.0	----	278	12,321	−55.7	----	263	12,052	−55.7	----
175	284	13,159	−59.9	----	213	12,732	−56.0	----	246	13,104	−60.0	----	254	12,595	−54.1	----	263	13,037	−60.8	----	267	13,160	−61.1	----	223	12,899	−57.4	----
150	230	14,112	−64.2	----	176	13,731	−57.0	----	168	14,054	−63.7	----	212	13,574	−54.4	----	232	13,988	−63.8	----	235	14,116	−65.5	----	155	13,970	−59.0	----
125	----	----	----	----	----	----	----	----	----	----	----	----	151	14,734	−54.8	----	171	15,094	−66.3	----	134	15,220	−69.8	----	----	----	----	----

Standard pressure surface (mb.)	Dodge City, Kans. (924.1 mb.)				El Paso, Tex. (880.8 mb.)				Ely, Nev. (808.6 mb.)				Fort Worth, Tex. (991.2 mb.)				Glasgow, Mont. (938.2 mb.)				Grand Junction, Colo.[2] (853.7 mb.)				Great Falls, Mont. (885.4 mb.)			
Surface	360	787	13.1	61	364	1,195	18.9	35	365	1,908	7.4	55	360	211	19.0	64	360	648	6.7	63	360	1,474	12.0	46	364	1,128	8.0	54
1,000	360	112	(*)	----	364	87	(*)	----	365	112	(*)	----	360	133	(*)	----	360	116	(*)	----	360	106	(*)	----	364	109	(*)	----
950	360	553	(*)	----	364	545	(*)	----	365	557	(*)	----	360	580	18.1	59	360	546	(*)	----	360	556	(*)	----	364	545	(*)	----
900	360	1,010	14.1	54	364	1,014	(*)	----	365	1,015	(*)	----	359	1,036	15.9	58	360	990	7.3	58	360	1,017	(*)	----	364	997	(*)	----
850	360	1,491	12.4	49	364	1,502	18.4	32	365	1,491	(*)	----	359	1,520	13.5	56	359	1,458	5.0	56	360	1,495	12.0	46	364	1,466	7.3	49
800	360	1,997	10.1	46	364	2,018	14.6	34	365	1,997	9.2	49	359	2,029	11.2	51	359	1,950	2.2	58	360	2,002	10.4	40	364	1,962	4.0	52
750	359	2,535	7.1	43	364	2,563	10.6	36	365	2,534	6.4	44	359	2,569	8.5	48	359	2,472	−1.1	59	360	2,540	6.7	43	364	2,487	0.4	56
700	359	3,095	3.6	42	364	3,129	6.4	41	365	3,091	2.2	46	358	3,133	5.4	42	359	3,016	−4.5	60	360	3,098	2.4	47	364	3,034	−3.3	60
650	359	3,695	−.3	42	364	3,734	1.9	42	365	3,687	−2.1	50	353	3,737	1.8	----	359	3,599	−8.1	59	360	3,693	−2.0	51	363	3,620	−7.3	62
600	359	4,328	−4.6	42	364	4,373	−2.8	46	365	4,317	−6.5	54	351	4,376	−2.1	----	357	4,213	−11.8	58	360	4,323	−6.6	55	361	4,236	−11.3	60
550	355	5,008	−9.3	----	363	5,057	−7.6	47	364	4,991	−11.3	54	347	5,064	−6.5	----	356	4,874	−16.0	57	357	4,996	−11.5	56	361	4,899	−15.7	57
500	353	5,738	−14.2	----	361	5,792	−12.5	----	363	5,715	−16.4	50	342	5,801	−11.3	----	352	5,586	−20.6	55	355	5,720	−16.5	54	360	5,610	−20.6	55
450	353	6,536	−19.6	----	356	6,596	−17.8	----	361	6,507	−21.7	----	331	6,607	−16.6	----	349	6,362	−26.0	56	350	6,510	−22.0	----	357	6,388	−26.0	57
400	353	7,394	−25.7	----	354	7,460	−23.9	----	359	7,358	−27.8	----	324	7,478	−22.8	----	342	7,202	−31.9	----	348	7,360	−28.1	----	355	7,224	−32.1	----
350	349	8,347	−32.8	----	353	8,420	−31.0	----	358	8,302	−34.8	----	309	8,443	−29.9	----	331	8,131	−39.0	----	342	8,306	−35.1	----	353	8,154	−39.0	----
300	344	9,414	−40.6	----	348	9,495	−39.0	----	354	9,360	−42.6	----	302	9,523	−37.9	----	307	9,169	−46.2	----	338	9,361	−43.0	----	346	9,194	−46.6	----
250	339	10,633	−49.2	----	344	10,721	−47.9	----	348	10,570	−50.7	----	276	10,757	−46.7	----	277	10,363	−52.8	----	321	10,569	−50.7	----	324	10,390	−53.4	----
200	303	12,074	−56.3	----	326	12,166	−56.1	----	304	11,995	−56.6	----	241	12,210	−55.2	----	211	11,786	−54.5	----	273	11,995	−56.2	----	256	11,808	−55.7	----
175	270	12,915	−58.5	----	289	13,004	−59.5	----	258	12,836	−57.4	----	205	13,054	−58.9	----	159	12,674	−53.4	----	228	12,841	−57.3	----	205	12,673	−54.5	----
150	212	13,880	−60.1	----	228	13,976	−62.9	----	210	13,800	−58.7	----	136	14,023	−61.8	----	121	13,662	−53.9	----	171	13,826	−59.2	----	174	13,666	−54.3	----
125	104	15,027	−62.9	----	118	15,083	−66.2	----	123	14,957	−60.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

See footnotes at end of table.

TABLE 1A.—*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 year 1946*—Continued

Standard pressure surface (mb)	Greensboro, N. C. (987.1 mb.)				Hatteras, N. C. (1,018.6 mb.)				Havana, Cuba [3] (---- mb.)				Huntington, W. Va. (997.9 mb.)				International Falls,[4] Minn. (973.7 mb.)				Joliet, Ill. (995.6 mb.)				Lake Charles, La. (1,016.5 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	362	273	13.1	77	362	3	16.7	84	----	----	----	----	360	172	10.8	82	360	360	2.7	77	364	178	9.2	78	359	5	19.0	86
1,000	362	163	(*)	----	362	160	16.6	78	----	----	----	----	360	153	(*)	----	360	133	(*)	----	364	140	(*)	----	359	145	19.6	79
950	362	598	13.8	66	362	598	14.8	70	----	----	----	----	360	588	12.4	65	360	551	3.0	72	364	569	9.7	67	359	592	17.5	72
900	362	1,051	11.4	66	361	1,052	12.6	65	----	----	----	----	359	1,036	9.8	66	360	987	1.2	72	364	1,015	8.0	63	359	1,048	15.5	66
850	362	1,527	8.9	65	361	1,531	10.4	61	----	----	----	----	359	1,509	7.2	66	360	1,446	−.2	69	364	1,486	6.0	61	359	1,532	13.6	59
800	362	2,027	6.5	61	361	2,034	8.2	55	----	----	----	----	359	2,006	4.8	61	360	1,930	−1.9	66	364	1,981	3.8	56	359	2,042	11.6	53
750	360	2,560	4.1	56	359	2,574	6.0	50	----	----	----	----	358	2,534	2.5	56	360	2,448	−4.1	60	364	2,507	1.4	53	358	2,589	9.2	47
700	359	3,114	1.3	51	358	3,127	3.5	47	----	----	----	----	357	3,085	−.2	52	360	2,983	−6.7	55	363	3,056	−1.3	51	357	3,149	6.2	43
650	357	3,710	−1.9	49	355	3,726	−.2	----	----	----	----	----	351	3,678	−3.3	51	360	3,564	−9.7	53	359	3,646	−4.4	48	353	3,756	2.7	----
600	354	4,339	−5.4	46	354	4,360	−3.8	----	----	----	----	----	346	4,305	−6.7	----	356	4,173	−13.2	54	359	4,270	−8.1	49	352	4,396	−1.3	----
550	352	5,016	−9.6	----	349	5,042	−7.9	----	----	----	----	----	342	4,980	−10.7	----	354	4,831	−17.2	53	356	4,940	−12.1	47	351	5,086	−5.5	----
500	350	5,747	−14.2	----	347	5,777	−12.5	----	----	----	----	----	338	5,707	−15.2	----	349	5,540	−21.6	----	355	5,664	−16.6	----	350	5,825	−10.2	----
450	348	6,544	−19.5	----	343	6,580	−17.7	----	----	----	----	----	337	6,500	−20.5	----	348	6,317	−26.7	----	355	6,452	−21.9	----	349	6,638	−15.7	----
400	346	7,403	−25.7	----	336	7,446	−23.7	----	----	----	----	----	332	7,358	−26.5	----	345	7,149	−32.6	----	348	7,307	−27.8	----	347	7,508	−21.8	----
350	341	8,357	−32.7	----	330	8,408	−30.7	----	----	----	----	----	327	8,310	−33.3	----	337	8,075	−39.4	----	345	8,252	−34.8	----	341	8,478	−28.8	----
300	337	9,425	−40.6	----	321	9,485	−38.7	----	----	----	----	----	313	9,373	−41.1	----	325	9,118	−46.3	----	340	9,313	−42.3	----	338	9,563	−37.0	----
250	331	10,642	−49.5	----	306	10,712	−47.7	----	----	----	----	----	303	10,591	−49.1	----	297	10,316	−52.1	----	330	10,528	−50.2	----	332	10,800	−46.3	----
200	307	12,075	−57.6	----	261	12,156	−56.0	----	----	----	----	----	267	12,033	−56.2	----	256	11,761	−54.1	----	302	11,961	−56.1	----	321	12,250	−56.0	----
175	270	12,915	−60.5	----	218	12,996	−59.5	----	----	----	----	----	232	12,876	−58.3	----	235	12,618	−53.8	----	278	12,806	−57.3	----	302	13,089	−60.4	----
150	208	13,867	−62.2	----	138	13,950	−61.4	----	----	----	----	----	159	13,860	−59.4	----	202	13,642	−54.5	----	246	13,776	−58.5	----	260	14,043	−64.3	----
125	124	15,004	−64.5	----	----	----	----	----	----	----	----	----	92	14,990	−61.0	----	----	----	----	----	181	14,911	−60.0	----	159	15,151	−68.2	----

Standard pressure surface (mb)	Lander, Wyo.[5] (831.2 mb.)				Las Vegas, Nev. (946.5 mb.)				Little Rock, Ark. (1,007.8 mb.)				Mazatlan, Mex.[6] (1,006.2 mb.)				Medford, Oreg. (969.2 mb.)				Merida, Mex. (1,010.8 mb.)				Miami, Fla. (1,017.6 mb.)			
Surface	362	1,696	7.4	55	364	574	20.5	31	361	79	16.2	76	351	14	24.9	76	363	401	14.0	60	359	27	26.3	74	365	4	22.7	84
1,000	362	110	(*)	----	364	92	(*)	----	361	146	16.8	71	351	104	24.4	72	363	136	(*)	----	359	121	25.4	74	365	156	22.8	81
950	362	552	(*)	----	364	542	(*)	----	361	586	15.7	66	351	559	23.4	54	363	575	13.8	57	359	574	22.8	72	365	604	19.9	80
900	362	1,007	(*)	----	364	1,007	19.7	28	361	1,040	13.3	65	351	1,025	21.4	51	363	1,024	10.9	58	359	1,042	20.0	72	365	1,067	17.0	77
850	362	1,482	(*)	----	364	1,495	15.9	29	361	1,520	11.2	60	351	1,518	18.8	49	363	1,498	7.5	62	359	1,533	16.9	72	365	1,553	14.4	70
800	362	1,985	8.3	46	364	2,006	11.9	32	361	2,024	9.0	55	350	2,036	15.8	46	363	1,994	4.1	64	357	2,048	13.8	69	365	2,064	11.9	63
750	362	2,518	4.6	47	364	2,544	7.7	34	361	2,561	6.6	49	350	2,586	12.4	45	362	2,529	1.1	61	355	2,593	11.1	60	364	2,606	9.3	54
700	362	3,073	.6	50	364	3,105	3.6	38	359	3,119	3.7	45	349	3,156	8.7	46	362	3,068	−2.0	54	355	3,164	8.1	53	362	3,171	6.4	52
650	362	3,666	−3.7	54	364	3,703	−.8	42	357	3,721	.4	42	330	3,770	4.6	----	361	3,656	−5.4	50	350	3,774	4.8	49	357	3,778	3.1	----
600	362	4,291	−8.1	56	363	4,337	−5.1	----	354	4,356	−3.4	----	317	4,414	.4	----	361	4,277	−9.1	48	345	4,422	1.1	----	355	4,420	−.6	----
550	362	4,962	−12.8	54	362	5,015	−9.6	----	350	5,040	−7.6	----	312	5,107	−4.2	----	361	4,946	−13.3	48	335	5,116	−3.0	----	351	5,111	−4.7	----
500	362	5,681	−17.8	54	360	5,745	−14.5	----	347	5,774	−12.4	----	305	5,852	−8.9	----	360	5,664	−18.1	50	331	5,865	−7.8	----	349	5,855	−9.4	----
450	360	6,468	−23.5	56	358	6,538	−20.1	----	344	6,578	−17.6	----	296	6,668	−14.3	----	358	6,447	−23.7	----	327	6,684	−13.1	----	345	6,668	−14.6	----
400	359	7,312	−29.8	56	354	7,396	−26.6	----	343	7,442	−23.7	----	296	7,544	−20.2	----	356	7,293	−29.7	----	326	7,566	−19.3	----	340	7,544	−20.7	----
350	352	8,251	−36.8	----	352	8,347	−33.7	----	342	8,403	−30.6	----	274	8,518	−27.6	----	354	8,230	−36.8	----	320	8,543	−26.8	----	336	8,516	−28.2	----
300	350	9,300	−44.7	----	348	9,410	−41.6	----	339	9,480	−38.6	----	260	9,608	−35.9	----	352	9,278	−44.6	----	313	9,636	−35.5	----	331	9,604	−36.7	----
250	342	10,500	−52.3	----	336	10,625	−49.9	----	332	10,708	−47.5	----	240	10,851	−45.3	----	346	10,476	−52.3	----	301	10,879	−45.4	----	326	10,839	−46.5	----
200	299	11,926	−57.3	----	314	12,060	−56.4	----	317	12,154	−56.4	----	196	12,304	−55.9	----	318	11,902	−57.2	----	281	12,332	−56.2	----	307	12,287	−57.0	----
175	256	12,768	−57.4	----	287	12,903	−58.2	----	292	12,996	−59.8	----	143	13,147	−61.1	----	275	12,742	−57.0	----	243	13,169	−61.7	----	290	13,124	−61.8	----
150	210	13,741	−57.9	----	237	13,867	−60.4	----	231	13,958	−62.3	----	----	----	----	----	207	13,718	−57.3	----	155	14,115	−66.9	----	235	14,067	−66.2	----
125	----	----	----	----	145	15,006	−62.7	----	137	15,096	−64.9	----	----	----	----	----	135	14,876	−58.3	----	----	----	----	----	119	15,164	−70.4	----

Standard pressure surface (mb)	Nashville, Tenn. (996.9 mb.)				North Platte, Nebr. (916.8 mb.)				Oakland, Calif.[7] (1,016.5 mb.)				Ogden, Utah (864.3 mb.)				Oklahoma City, Okla. (969.9 mb.)				Omaha, Nebr. (979.1 mb.)				Phoenix, Ariz. (972.3 mb.)			
Surface	362	180	15.4	71	365	849	9.7	70	356	6	13.7	72	365	1,355	10.6	55	364	391	15.8	69	364	308	12.0	71	365	339	23.1	44
1,000	362	152	(*)	----	365	115	(*)	----	356	140	13.1	71	365	116	(*)	----	364	128	(*)	----	364	129	(*)	----	365	91	(*)	----
950	362	590	14.6	65	365	553	(*)	----	356	578	12.4	61	365	559	(*)	----	364	569	16.4	62	364	563	11.5	66	365	544	24.3	32
900	362	1,044	12.2	65	365	1,003	11.6	61	356	1,024	12.4	44	365	1,017	(*)	----	364	1,026	14.5	59	364	1,011	10.1	63	365	1,010	21.0	31
850	362	1,521	9.7	63	365	1,480	10.2	53	356	1,501	10.8	38	365	1,494	11.5	48	364	1,507	12.5	55	364	1,485	8.1	60	365	1,501	17.0	34
800	362	2,023	7.5	58	365	1,982	7.7	51	356	2,004	8.4	----	365	1,998	8.4	45	363	2,014	10.1	50	364	1,984	6.0	55	365	2,014	12.9	36
750	362	2,557	5.1	51	364	2,517	4.6	50	356	2,539	5.7	----	365	2,531	4.4	49	363	2,552	7.4	46	364	2,514	3.4	51	365	2,556	8.8	39
700	361	3,113	2.3	----	364	3,071	1.1	50	356	3,095	2.5	----	365	3,086	.4	52	363	3,114	4.2	42	364	3,068	.3	50	365	3,119	4.7	41
650	357	3,711	−1.0	----	364	3,667	−2.9	49	355	3,693	−1.2	----	365	3,677	−3.7	54	362	3,716	.5	40	363	3,661	−3.2	49	365	3,723	.6	41
600	353	4,344	−4.6	----	364	4,292	−7.0	48	353	4,323	−5.2	----	365	4,303	−8.1	55	359	4,351	−3.6	41	362	4,288	−7.1	46	364	4,356	−3.6	----
550	349	5,025	−8.6	----	361	4,969	−11.5	50	350	5,002	−9.6	----	365	4,973	−12.7	56	357	5,034	−8.0	40	357	4,962	−11.3	44	361	5,040	−8.3	----
500	343	5,757	−13.3	----	358	5,689	−16.4	48	342	5,733	−14.5	----	361	5,694	−17.7	54	350	5,768	−12.8	----	351	5,685	−16.1	----	358	5,771	−13.4	----
450	339	6,557	−18.5	----	358	6,482	−21.8	----	335	6,530	−20.1	----	358	6,480	−23.2	52	347	6,572	−18.2	----	348	6,477	−21.4	----	354	6,574	−18.9	----
400	336	7,421	−24.5	----	357	7,330	−27.9	----	329	7,389	−26.3	----	354	7,327	−29.3	----	345	7,434	−24.3	----	347	7,330	−27.7	----	353	7,433	−25.2	----
350	330	8,380	−31.5	----	355	8,277	−34.7	----	324	8,342	−33.4	----	347	8,269	−36.2	----	338	8,393	−31.2	----	342	8,278	−34.5	----	351	8,388	−32.2	----
300	321	9,452	−39.5	----	352	9,335	−42.5	----	319	9,407	−41.2	----	340	9,320	−44.0	----	336	9,467	−39.2	----	339	9,339	−42.0	----	349	9,458	−40.0	----
250	305	10,674	−48.2	----	341	10,548	−50.4	----	304	10,624	−49.2	----	326	10,524	−51.5	----	327	10,692	−47.8	----	328	10,554	−49.8	----	337	10,680	−48.6	----
200	265	12,119	−55.8	----	312	11,981	−56.0	----	272	12,066	−55.5	----	309	11,950	−56.7	----	301	12,139	−55.6	----	301	11,990	−56.0	----	304	12,119	−56.2	----
175	229	12,972	−58.2	----	283	12,824	−57.3	----	229	12,910	−56.7	----	280	12,792	−57.1	----	267	12,978	−58.6	----	263	12,832	−57.1	----	268	12,957	−58.7	----
150	166	13,929	−60.4	----	222	13,795	−58.4	----	163	13,902	−58.0	----	246	13,765	−58.4	----	225	13,940	−61.4	----	209	13,803	−58.0	----	209	13,923	−61.7	----
125	----	----	----	----	140	14,934	−60.0	----	76	15,044	−59.2	----	158	14,910	−59.5	----	132	15,072	−64.6	----	136	14,940	−59.5	----	119	15,047	−64.3	----

See footnotes at end of table.

TABLE 1A.—*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 year 1946*—Continued

Standard pressure surface (mb.)	Pittsburgh, Pa. (973.0 mb.)				Portland, Maine (1,014.2 mb.)				Rapid City, S. Dak. (902.2 mb.)				St. Paul, Minn. (988.6 mb.)				San Antonio, Tex. (987.6 mb.)				San Juan, P. R. (1,015.2 mb.)				Santa Maria, Calif. (1,007.6 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	361	382	11.1	67	363	20	5.8	81	364	981	7.6	67	363	225	7.9	72	357	240	19.4	75	353	15	24.9	82	364	71	12.3	80
1,000	361	151	(*)	----	363	135	8.8	76	364	116	(*)	----	363	128	(*)	----	357	131	(*)	----	353	148	23.9	82	364	135	12.1	79
950	361	586	10.8	64	363	560	6.6	68	364	551	(*)	----	363	557	6.9	68	357	576	19.0	69	353	599	20.8	85	364	573	13.4	61
900	361	1,030	8.6	64	363	1,000	4.6	67	364	1,000	(*)	----	363	996	5.4	66	357	1,038	16.7	70	353	1,062	17.8	83	364	1,022	13.9	44
850	361	1,501	6.0	63	362	1,464	2.4	66	364	1,473	7.9	55	363	1,462	3.6	64	357	1,524	14.8	65	353	1,550	15.0	77	364	1,502	12.2	39
800	361	1,996	3.6	60	362	1,953	.4	62	364	1,971	5.1	56	363	1,953	1.6	59	357	2,036	12.7	56	352	2,062	12.6	67	364	2,007	9.3	35
750	361	2,523	1.2	55	362	2,474	−1.8	57	364	2,499	2.1	57	363	2,477	−.7	55	357	2,578	10.2	47	351	2,606	10.3	53	364	2,544	6.4	----
700	361	3,070	−1.3	50	362	3,016	−4.2	53	361	3,049	−1.2	55	363	3,020	−3.4	52	357	3,147	7.2	42	351	3,174	7.6	----	364	3,101	3.2	----
650	356	3,661	−4.4	48	359	3,602	−7.0	51	361	3,640	−5.0	55	358	3,608	−6.6	50	351	3,753	3.5	40	350	3,784	4.4	----	364	3,700	−.4	----
600	355	4,284	−7.9	48	355	4,218	−10.3	50	360	4,260	−9.0	56	357	4,225	−10.1	48	345	4,398	−.6	----	347	4,429	1.0	----	363	4,332	−4.4	----
550	353	4,957	−11.9	----	352	4,884	−14.2	52	353	4,930	−13.4	52	356	4,892	−14.2	48	342	5,087	−4.9	----	344	5,124	−3.0	----	362	5,012	−8.9	----
500	352	5,678	−16.6	----	347	5,600	−18.7	----	349	5,647	−18.2	----	356	5,607	−18.9	49	336	5,830	−9.7	----	339	5,871	−7.6	----	358	5,742	−14.0	----
450	345	6,471	−21.6	----	346	6,383	−24.0	----	346	6,433	−23.6	----	353	6,392	−24.2	----	332	6,643	−15.0	----	334	6,691	−12.9	----	355	6,539	−19.7	----
400	343	7,322	−27.5	----	342	7,226	−29.8	----	341	7,277	−29.7	----	350	7,236	−30.1	----	326	7,517	−21.0	----	334	7,572	−19.0	----	350	7,399	−26.0	----
350	340	8,268	−34.3	----	336	8,166	−36.4	----	336	8,214	−36.6	----	349	8,173	−36.9	----	313	8,489	−28.0	----	329	8,551	−26.2	----	345	8,351	−33.1	----
300	339	9,329	−41.7	----	329	9,217	−43.6	----	324	9,266	−44.2	----	343	9,222	−44.4	----	302	9,577	−36.0	----	324	9,647	−34.4	----	339	9,418	−41.0	----
250	328	10,543	−49.4	----	320	10,424	−50.8	----	300	10,474	−51.5	----	328	10,425	−51.4	----	288	10,818	−45.0	----	321	10,896	−44.0	----	318	10,636	−49.1	----
200	300	11,983	−55.7	----	299	11,858	−55.9	----	253	11,911	−56.3	----	297	11,860	−55.4	----	264	12,278	−54.4	----	301	12,359	−54.7	----	271	12,071	−55.7	----
175	259	12,821	−57.2	----	264	12,705	−56.4	----	209	12,760	−56.4	----	274	12,708	−55.6	----	239	13,124	−58.7	----	274	13,201	−60.3	----	221	12,915	−57.6	----
150	208	13,776	−58.0	----	222	13,669	−56.8	----	----	----	----	----	225	13,687	−56.0	----	177	14,077	−62.5	----	191	14,152	−65.5	----	174	13,883	−59.9	----
125	137	14,920	−58.8	----	161	14,824	−57.7	----	----	----	----	----	171	14,924	−57.4	----	85	15,198	−65.8	----	----	----	----	----	----	----	----	----

Standard pressure surface (mb.)	Sault Ste. Marie, Mich. (989.2 mb)				Spokane, Wash (945.1 mb.)				Swan Island, W. I. (1,013.0 mb.)				Tacubaya, Mexico (774.2 mb.)				Tampa, Fla.[5] (1,017.8 mb.)				Tatoosh Island, Wash. (1,013.0 mb.)				Toledo, Ohio (994.2 mb.)			
Surface	350	221	3.9	83	363	598	10.7	63	362	10	25.9	81	362	2,306	15.8	61	353	9	21.2	84	364	31	9.2	86	363	191	9.5	75
1,000	350	132	(*)	----	363	122	(*)	----	362	124	25.1	82	362	65	(*)	----	353	159	21.0	80	364	138	8.6	84	363	142	(*)	----
950	350	555	4.4	75	363	556	(*)	----	362	578	21.8	82	362	527	(*)	----	353	603	18.9	75	364	565	7.0	79	363	570	9.8	66
900	350	990	2.7	72	363	1,004	9.1	58	362	1,042	18.8	77	362	1,003	(*)	----	353	1,066	16.4	73	364	1,004	4.9	75	363	1,017	7.7	64
850	350	1,451	.6	69	363	1,475	5.7	60	362	1,532	16.0	73	362	1,499	(*)	----	353	1,551	13.8	68	364	1,469	2.5	71	363	1,487	5.5	61
800	350	1,936	−1.4	64	363	1,968	2.3	63	362	2,045	13.4	64	362	2,027	(*)	----	353	2,060	11.5	58	364	1,957	.1	65	363	1,981	3.2	58
750	350	2,454	−3.2	56	361	2,490	−1.3	64	362	2,591	10.7	56	362	2,578	13.9	61	353	2,600	8.9	56	364	2,477	−2.6	60	362	2,506	.9	54
700	349	2,991	−5.9	54	361	3,033	−4.8	63	362	3,159	7.7	52	362	3,153	9.6	65	353	3,166	5.9	----	364	3,015	−5.5	57	361	3,054	−1.8	50
650	346	3,575	−8.8	52	361	3,616	−8.2	58	362	3,770	4.4	----	362	3,768	5.1	72	353	3,771	2.6	----	363	3,597	−8.8	55	354	3,644	−4.8	46
600	343	4,184	−12.1	50	359	4,230	−11.9	56	353	4,414	1.0	----	360	4,414	.5	75	353	4,412	−1.2	----	362	4,209	−12.3	53	353	4,268	−8.2	44
550	341	4,848	−16.0	44	356	4,892	−16.0	54	350	5,107	−3.1	----	355	5,109	−3.7	70	351	5,099	−5.2	----	355	4,871	−16.4	53	352	4,938	−12.2	----
500	339	5,556	−20.5	----	354	5,602	−20.8	55	345	5,857	−7.7	----	354	5,856	−8.1	61	348	5,843	−9.8	----	352	5,579	−20.9	56	352	5,661	−16.7	----
450	337	6,334	−25.7	----	354	6,379	−26.2	56	343	6,678	−12.8	----	349	6,677	−13.0	----	346	6,654	−15.1	----	347	6,355	−26.0	----	350	6,450	−22.1	----
400	334	7,172	−31.6	----	352	7,215	−32.2	----	343	7,559	−18.9	----	348	7,556	−18.8	----	345	7,528	−21.3	----	343	7,195	−31.8	----	350	7,302	−28.1	----
350	328	8,105	−38.2	----	348	8,143	−39.0	----	342	8,539	−26.1	----	342	8,537	−26.1	----	339	8,498	−28.6	----	334	8,127	−38.4	----	342	8,245	−35.0	----
300	325	9,149	−45.2	----	341	9,185	−46.4	----	338	9,635	−34.6	----	334	9,634	−34.7	----	333	9,583	−37.0	----	318	9,174	−45.3	----	337	9,302	−42.6	----
250	311	10,348	−51.3	----	325	10,376	−53.4	----	334	10,882	−44.4	----	323	10,881	−44.7	----	329	10,818	−46.7	----	290	10,374	−51.7	----	318	10,515	−50.2	----
200	279	11,789	−54.0	----	269	11,793	−56.1	----	325	12,338	−55.8	----	281	12,338	−56.1	----	315	12,262	−57.3	----	232	11,796	−53.9	----	293	11,954	−56.0	----
175	249	12,646	−54.3	----	235	12,638	−54.6	----	292	13,177	−61.8	----	203	13,176	−61.9	----	304	13,095	−62.0	----	185	12,668	−52.6	----	264	12,802	−57.0	----
150	218	13,644	−55.0	----	184	13,621	−54.4	----	237	14,120	−67.7	----	----	----	----	----	255	14,041	−65.9	----	----	----	----	----	220	13,779	−58.4	----
125	162	14,833	−55.9	----	137	14,791	−55.3	----	98	15,239	−72.6	----	----	----	----	----	158	15,142	−69.5	----	----	----	----	----	147	14,944	−60.2	----

Standard pressure surface (mb.)	Washington, D. C. (1,015.8 mb.)			
	Number of observations	Height	Temperature	Relative humidity
Surface	362	25	13.5	70
1,000	362	156	13.4	66
950	362	590	11.6	63
900	362	1,038	9.2	63
850	362	1,511	7.0	61
800	362	2,008	4.9	57
750	362	2,537	2.4	54
700	362	3,087	−.4	50
650	357	3,680	−3.6	47
600	356	4,306	−7.0	----
550	354	4,981	−11.0	----

Standard pressure surface (mb.)	Washington, D. C. (1,015.8 mb.)			
	Number of observations	Height	Temperature	Relative humidity
500	349	5,705	−15.7	----
450	346	6,497	−21.0	----
400	343	7,353	−27.0	----
350	343	8,301	−34.0	----
300	340	9,363	−41.9	----
250	333	10,575	−50.1	----
200	295	12,011	−57.1	----
175	255	12,850	−58.8	----
150	223	13,814	−60.6	----
125	150	14,950	−62.0	----

NOTE.—All data for Table 1 and Table 2 are based on observations for 12 months. At some stations the data for higher levels were not available during 1 or 2 months. Data are not published for any level where observations were missing for more than 1 month in the same season or more than 2 months during the year.

(*) 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.

[1] January observations taken at St. Louis.

[2] Station elevation changed from 1,415 m. to 1,474 m., March 27, 1946.

[3] Insufficient observations.

[4] Station elevation changed from 343 m. to 360 m., July 20, 1946.

[5] Station elevation changed from 1,632 m. to 1,696 m., May 29, 1946.

[6] Station elevation changed from 79 m. to 14 m., July 21, 1946.

[7] Station elevation changed from 2 m. to 6 m., December 6, 1946.

[8] Station elevation changed from 3 m. to 9 m., June 8, 1946.

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TABLE 2A.—*Free-air resultant winds based on pilot balloon observations made near 5 p. m., E. S. T. (2200 G. C. T.) during the year 1946. 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	357	164	2.6	363	232	2.1	341	267	0.8	353	279	1.9	354	276	1.6	360	327	1.8	349	125	4.3	343	247	3.1	309	255	1.5	352	184	0.5	332	239	1.0	352	360	0.8	355	227	1.6
500	---	---	---	---	---	---	341	259	0.7	---	---	---	---	---	---	---	---	---	349	134	5.5	343	250	4.9	309	238	3.6	351	203	1.9	332	231	2.3	---	---	---	---	---	---
1,000	357	177	3.2	---	---	---	339	250	1.4	---	---	---	351	284	3.0	360	324	1.8	305	146	4.6	313	251	6.4	298	257	5.2	327	245	2.5	316	239	3.8	---	---	---	---	---	---
1,500	345	197	3.3	---	---	---	326	257	2.6	353	274	3.8	321	278	4.5	360	292	2.1	275	167	3.3	262	261	7.1	259	269	7.4	304	263	4.0	286	256	5.3	---	---	---	355	226	2.2
2,000	330	220	4.0	363	236	2.7	305	271	3.8	346	274	5.2	299	277	6.2	355	273	3.0	249	184	2.4	220	267	7.8	221	276	9.4	280	273	5.3	249	268	6.6	352	345	0.6	354	228	2.3
2,500	315	241	5.1	361	244	3.2	275	275	5.1	330	274	6.4	277	279	7.7	337	264	4.2	224	200	2.2	---	---	---	169	282	10.9	262	274	6.3	212	277	7.3	343	272	1.0	346	236	3.2
3,000	298	250	6.4	358	257	4.2	247	276	6.1	311	273	7.7	262	283	9.5	319	260	4.8	205	220	2.3	---	---	---	---	---	---	251	276	7.1	180	281	8.1	326	268	2.6	340	248	4.5
4,000	274	260	8.2	332	271	6.9	190	283	7.2	258	276	10.1	222	283	12.2	283	260	6.8	176	242	3.4	---	---	---	---	---	---	214	276	8.8	---	---	---	309	274	6.5	319	255	6.7
5,000	246	267	9.5	303	267	9.4	---	---	---	224	276	12.3	199	284	14.2	251	266	8.9	150	248	5.0	---	---	---	---	---	---	178	274	10.5	---	---	---	275	275	10.4	288	255	8.2
6,000	219	266	10.6	282	265	10.4	---	---	---	183	277	14.2	162	285	17.0	214	266	10.1	---	---	---	---	---	---	---	---	---	151	276	12.8	---	---	---	245	273	12.8	229	256	9.6
8,000	142	267	10.3	230	267	12.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	156	270	16.7	---	---	---
10,000	---	---	---	178	265	15.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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	360	219	1.5	361	270	2.4	335	233	0.7	348	270	2.2	351	83	1.7	342	225	2.0	365	160	0.9	341	164	1.1	351	307	1.4	362	117	2.8	334	143	0.5	350	237	1.2	344	257	1.5
500	---	---	---	---	---	---	335	240	1.4	---	---	---	351	123	1.1	342	231	2.8	---	---	---	341	191	1.6	351	303	1.4	362	110	4.0	334	183	0.9	350	225	2.0	342	261	3.5
1,000	---	---	---	---	---	---	333	245	2.5	348	266	4.0	321	219	1.5	313	237	4.6	365	181	1.5	318	216	2.2	351	283	1.3	359	111	2.7	297	254	1.0	333	235	2.8	320	276	5.5
1,500	---	---	---	361	271	2.4	321	262	3.6	347	274	5.7	302	245	3.1	289	258	6.1	365	199	1.9	302	243	3.1	345	235	1.9	348	117	1.4	271	287	1.7	321	252	3.7	296	285	7.3
2,000	360	222	1.7	361	269	2.4	300	275	5.3	332	275	6.6	284	254	4.1	261	268	7.7	359	217	2.7	274	265	4.1	326	231	2.9	327	144	0.4	250	285	3.0	301	264	4.7	258	290	8.4
2,500	360	230	2.7	356	247	2.8	274	286	7.2	285	272	8.0	258	267	5.1	231	275	8.8	354	231	3.2	250	270	5.7	288	226	3.1	296	214	0.8	217	287	3.7	284	275	5.8	222	289	9.3
3,000	342	240	3.3	347	243	4.1	257	287	8.7	240	273	8.9	241	267	5.8	197	286	9.7	345	243	3.5	232	275	6.7	264	231	3.5	286	225	1.1	198	285	4.7	270	277	6.8	---	---	---
4,000	302	260	5.0	316	259	6.3	223	286	11.4	176	278	9.2	201	270	7.5	---	---	---	319	258	5.2	194	278	9.8	232	250	5.1	244	256	1.8	---	---	---	231	278	9.8	---	---	---
5,000	258	267	7.6	266	264	7.9	191	283	12.7	---	---	---	167	274	8.6	---	---	---	306	263	7.0	166	284	11.1	---	---	---	211	267	2.8	---	---	---	193	283	12.3	---	---	---
6,000	232	272	9.9	230	266	10.0	155	284	13.9	---	---	---	---	---	---	---	---	---	286	265	8.9	---	---	---	---	---	---	191	267	4.5	---	---	---	160	283	13.5	---	---	---
8,000	172	280	12.9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	231	265	11.7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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	358	268	4.0	341	185	2.9	352	205	0.8	365	238	0.7	347	343	1.7	344	201	1.1	342	246	1.3	355	119	2.2	352	264	3.4	302	276	2.2	345	229	1.8	350	228	1.7	337	246	1.3
500	356	289	3.3	341	186	3.3	352	210	1.5	365	242	1.2	---	---	---	344	222	2.4	342	251	2.8	355	126	2.5	352	279	2.6	302	266	2.9	343	221	3.1	---	---	---	336	250	2.8
1,000	331	301	2.2	336	193	4.1	335	220	3.1	364	239	1.7	347	341	1.7	324	230	3.9	321	242	3.6	344	146	2.8	325	280	1.2	267	268	4.4	308	218	3.7	350	224	3.1	321	261	4.2
2,000	311	300	2.1	323	216	4.5	302	241	5.0	362	221	1.9	346	312	2.9	306	251	5.1	295	258	5.4	306	173	2.6	311	290	0.7	---	---	---	270	217	3.5	318	233	3.9	306	272	6.2
2,500	306	295	2.3	298	236	5.4	280	257	6.8	357	218	2.2	330	289	3.9	285	262	6.6	265	268	7.5	276	200	2.8	298	288	0.9	---	---	---	232	222	3.8	288	243	4.2	288	281	8.1
2,500	298	290	2.7	287	248	6.6	266	267	8.3	355	225	2.7	308	280	5.8	267	270	7.9	242	277	8.9	242	227	3.5	284	279	1.6	---	---	---	206	236	3.9	242	245	5.1	270	284	9.9
3,000	295	289	3.3	268	258	7.6	251	274	10.0	349	234	3.4	281	280	8.0	247	277	9.1	210	282	10.5	228	242	4.1	273	284	2.5	---	---	---	182	247	4.4	201	253	5.2	255	284	11.0
4,000	275	282	5.1	233	268	10.0	222	280	13.0	331	250	5.2	259	280	10.9	205	283	11.8	183	286	13.8	202	258	5.8	242	282	4.3	---	---	---	---	---	---	---	---	---	225	285	13.2
5,000	249	284	6.6	200	275	12.1	193	284	14.8	317	255	6.7	217	279	13.6	182	288	12.5	154	284	14.9	---	---	---	221	277	5.7	---	---	---	---	---	---	---	---	---	188	285	14.8
6,000	232	284	7.9	166	278	13.4	148	286	17.2	286	261	7.9	181	278	15.6	143	295	14.4	---	---	---	---	---	---	192	272	7.0	---	---	---	---	---	---	---	---	---	142	286	17.0
8,000	---	---	---	---	---	---	---	---	---	218	267	9.6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

See footnote at end of table 1A.

TABLE 3A.—*Maximum free-air wind velocities (m. p. s.) for different sections of the United States based on pilot balloon observations during the year 1946*

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]	63.2	nw.	1,542	Jan. 26	Caribou, Maine	64.8	wsw.	4,912	Dec. 31	Caribou, Maine	116.1	w.	19,837	Sept. 5	Caribou, Maine.
	63.2	wnw.	1,917	Jan. 14	Portland, Maine										
East-Central [2]	53.8	sw.	1,489	Feb. 14	Raleigh, N. C.	77.0	sw.	5,000	Feb. 14	Huntington, W. Va.	118.0	w.	7,782	Mar. 9	Huntington, W. Va.
Southeast [3]	50.0	n.	2,476	Dec. 21	Charleston, S. C.	61.0	wsw.	4,961	Feb. 10	Charleston, S. C.	65.0	wnw.	16,001	Apr. 29	Charleston, S. C.
North-Central [4]	59.4	sw.	1,362	Apr. 19	Alpena, Mich.	59.0	nnw.	4,702	Feb. 14	International Falls, Minn.	92.1	n.	10,033	Oct. 31	Green Bay, Wis.
Central [5]	53.5	wsw.	2,500	Oct. 26	Sioux City, Iowa	64.0	wsw.	3,552	Dec. 8	Indianapolis, Ind.	88.0	sw.	10,963	Dec. 31	Goodland, Kans.
South-Central [6]	44.5	wnw.	2,200	Feb. 9	Del Rio, Tex.	57.1	wnw.	4,020	Mar. 29	Little Rock, Ark.	104.0	wnw.	14,063	Nov. 12	Little Rock, Ark.
Northwest [7]	46.5	sw.	1,884	May 7	Burns, Oreg.	60.0	wsw.	5,000	Dec. 15	Tatoosh Is., Wash.	124.0	wsw.	12,883	July 22	Tatoosh Is., Wash.
West-Central [8]	56.4	wnw.	2,489	Dec. 23	Cheyenne, Wyo.	66.0	w.	3,587	Feb. 25	Cheyenne, Wyo.	82.0	n.	8,942	Oct. 10	Salt Lake City, Utah.
											82.0	s.	11,600	Dec. 24	Oakland, Calif.
Southwest [9]	45.2	wnw.	2,500	Dec. 29	El Paso, Tex.	60.0	wsw.	4,557	Mar. 31	Raton, N. Mex.	82.5	sw.	7,789	Nov. 8	Winslow, Ariz.

[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.

NOTE: Due to questionable evaluations from low-angle rawin readings, the values shown for maximum winds are in some cases subject to error.