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METEOROLOGICAL AND CLIMATOLOGICAL DATA FOR SEPTEMBER 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 September 1947*

STATIONS AND MEAN SURFACE PRESSURES

Standard pressure surface (mb.)	Albany, N. Y. (1,010.2 mb.)				Albuquerque, N. Mex. (840.4 mb.)				Apalachicola, Fla. (1,016.2 mb.)				Atlanta, Ga. (984.2 mb.)				Auburn, Calif. (955.5 mb.)				Big Spring, Tex. (928.6 mb.)				Bismarck, N. Dak. (956.3 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	30	86	15.5	82	30	1,620	23.7	32	29	5	24.7	81	30	300	22.3	75	29	501	24.0	29	30	774	25.9	39	30	505	14.6	61
1,000	30	171	16.1	79	30	64	(*)	----	29	146	24.6	78	30	160	(*)	----	29	98	(*)	----	30	114	(*)	----	30	121	(*)	----
950	30	612	14.9	72	30	537	(*)	----	29	598	22.0	75	30	613	22.5	68	29	556	25.2	28	30	575	(*)	----	30	564	(*)	----
900	30	1,064	12.3	74	30	1,022	(*)	----	29	1,064	19.4	74	30	1,078	19.5	72	29	1,025	23.3	24	30	1,050	25.5	38	30	1,618	13.8	52
850	30	1,541	9.7	71	30	1,519	(*)	----	29	1,554	16.8	68	30	1,569	16.8	69	29	1,519	19.7	24	30	1,549	21.7	42	30	1,497	11.2	53
800	30	2,043	7.2	64	30	2,049	21.9	29	29	2,070	14.1	63	30	2,084	13.9	65	29	2,037	16.0	23	30	2,072	17.4	48	30	2,002	8.9	54
750	30	2,579	5.0	54	30	2,609	17.7	32	29	2,616	11.1	59	30	2,630	10.9	56	29	2,584	12.0	23	30	2,622	13.3	48	30	2,538	5.7	56
700	30	3,134	2.6	41	30	3,189	12.6	39	29	3.185	8.0	56	30	3,198	7.4	55	29	3,153	8.1	27	30	3,196	9.4	46	30	3,095	2.7	57
650	30	3,732	−.8	42	30	3,807	7.0	48	29	3,798	4.7	53	30	3,810	4.4	46	29	3,763	4.2	----	30	3,812	5.8	35	30	3,694	−.5	50
600	29	4,365	−4.1	----	30	4,457	1.6	52	29	4,442	1.2	49	29	4,453	.6	43	29	4,406	.2	----	30	4,458	2.1	----	30	4,327	−4.2	49
550	28	5,048	−7.9	----	30	5,151	−3.4	55	29	5,139	−2.7	46	29	5,148	−3.4	38	29	5,097	−4.1	----	30	5,153	−2.3	----	30	5,008	−8.5	47
500	28	5,779	−12.2	----	30	5,900	−8.4	47	29	5,886	−7.2	43	29	5,894	−7.9	----	29	5,842	−9.0	----	29	5,903	−7.0	----	30	5,740	−13.3	48
450	28	6,587	−17.2	----	30	6,718	−13.3	----	29	6,707	−12.3	44	29	6,715	−13.3	----	29	6,655	−14.9	----	28	6,725	−12.8	----	30	6,539	−18.6	43
400	28	7,451	−23.1	----	29	7,598	−19.2	----	29	7,591	−18.0	45	29	7,593	−19.3	----	29	7,529	−21.7	----	28	7,607	−19.2	----	30	7,403	−24.6	----
350	27	8,411	−30.1	----	29	8,577	−26.5	----	29	8,574	−25.2	----	29	8,571	−26.4	----	29	8,497	−29.3	----	27	8,588	−26.2	----	29	8,361	−31.5	----
300	25	9,498	−37.6	----	28	9,671	−35.1	----	29	9,675	−33.3	----	29	9,666	−34.5	----	29	9,579	−37.5	----	27	9,684	−34.4	----	29	9,434	−39.5	----
250	24	10,744	−46.4	----	28	10,917	−44.3	----	29	10,929	−43.0	----	29	10,914	−44.3	----	28	10,809	−46.8	----	26	10,939	−43.1	----	25	10,692	−47.2	----
200	22	12,208	−55.8	----	24	12,391	−53.8	----	29	12.305	−54.5	----	29	12.374	−55.0	----	27	12,254	−55.4	----	19	12,409	−53.0	----	8	12,216	−55.5	----
175	20	13,042	−59.2	----	9	13,224	−58.8	----	27	13,234	−60.6	----	27	13,214	−60.2	----	23	13,112	−58.7	----	13	13,259	−56.7	----	----	----	----	----
150	17	13,990	−61.3	----	----	----	----	----	23	14,189	−66.6	----	16	14,173	−65.1	----	14	14,066	−63.3	----	----	----	----	----	----	----	----	----
125	12	15,142	−63.7	----	----	----	----	----	10	15,274	−70.0	----	8	15,294	−69.7	----	9	15,181	−64.9	----	----	----	----	----	----	----	----	----
100	7	16,508	−64.9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Standard pressure surface (mb.)	Boise, Idaho (916.2 mb.)				Brownsville, Tex. (1,013.8 mb.)				Buffalo, N. Y. (994.0 mb.)				Caribou, Maine (996.3 mb.)				Charleston, S. C. (1,016.4 mb.)				Ciudad Victoria, Mexico (975.4 mb.)				Columbia, Mo. (988.9 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	868	18.8	42	30	6	26.4	78	30	221	15.9	79	30	191	10.6	83	30	13	22.3	91	29	335	26.9	65	29	239	21.9	59
1,000	30	106	(*)	----	30	127	26.2	76	30	167	(*)	----	30	159	(*)	----	30	155	23.0	87	29	113	(*)	----	29	141	(*)	----
950	30	558	(*)	----	30	586	23.7	71	30	611	15.6	70	30	590	11.4	69	30	604	21.4	77	29	571	25.3	62	29	594	22.1	51
900	30	1,021	20.5	33	30	1,051	20.9	63	30	1,063	13.2	71	30	1,039	8.7	67	30	1,071	18.6	78	29	1,041	21.7	61	29	1,056	19.3	53
850	30	1,512	17.3	34	30	1,543	17.7	59	30	1,542	10.4	69	30	1,510	6.4	66	30	1,560	16.2	72	29	1,534	17.6	66	29	1,545	16.4	52
800	30	2,026	13.5	37	30	2,059	14.8	53	30	2,045	7.8	64	30	2,005	4.3	61	30	2,073	13.6	63	29	2,049	13.8	72	29	2,059	13.9	44
750	30	2,568	9.5	40	30	2,609	11.7	50	30	2,581	5.5	54	30	2,528	1.8	61	30	2,618	10.8	59	29	2,597	10.2	69	29	2,605	11.4	41
700	30	3,133	5.3	42	30	3,177	8.6	46	30	3,137	2.8	49	30	3,082	.6	55	30	3,188	7.9	52	29	3,163	7.1	68	29	3,174	8.3	41
650	30	3,736	1.1	44	30	3,792	5.2	42	30	3,736	−.4	49	30	3,671	−3.2	50	30	3,803	4.6	48	29	3,773	3.8	65	28	3,783	4.5	40
600	30	4,372	−3.0	43	30	4,435	1.7	41	29	4,371	−3.3	45	30	4,300	−6.9	54	29	4,445	.8	44	28	4,417	.5	53	28	4,429	.4	41
550	30	5,056	−6.8	43	30	5,133	−2.1	37	28	5,061	−7.2	----	30	4,972	−11.0	54	28	5,138	−3.1	37	28	5,113	−2.9	48	27	5,119	−4.0	----
500	29	5,793	−11.6	38	30	5,883	−6.6	36	28	5,797	−11.5	----	30	5,701	−15.2	44	28	5,887	−7.4	34	28	5,861	−7.1	43	27	5,864	−8.9	----
450	29	6,597	−17.3	40	29	6,709	−11.8	41	28	6,608	−16.7	----	30	6,494	−20.0	42	28	6,710	−12.5	----	28	6,688	−12.1	44	26	6,679	−14.4	----
400	29	7,465	−23.5	----	29	7,591	−17.8	44	27	7,466	−23.2	----	30	7,353	−25.8	----	28	7,591	−18.4	----	28	7,567	−18.1	47	25	7,554	−20.5	----
350	29	8,426	−31.0	----	28	8,575	−24.9	----	27	8,430	−30.3	----	30	8,307	−32.0	----	27	8,574	−25.1	----	28	8,550	−24.9	----	24	8,529	−28.1	----
300	29	9,500	−39.3	----	27	9,676	−33.0	----	25	9,512	−38.3	----	30	9,380	−39.2	----	27	9,675	−33.4	----	28	9,651	−33.5	----	24	9,616	−36.6	----
250	29	10,724	−48.1	----	27	10,933	−42.1	----	24	10,751	−47.2	----	30	10,607	−47.3	----	27	10,929	−42.9	----	28	10,906	−43.3	----	24	10,854	−46.3	----
200	25	12,167	−54.5	----	26	12,407	−52.8	----	22	12,218	−55.9	----	29	12,057	−54.1	----	27	12,394	−54.1	----	24	12,365	−55.0	----	17	12,307	−54.8	----
175	19	13,019	−57.5	----	20	13,268	−57.9	----	21	13,072	−59.5	----	26	12,926	−57.0	----	22	13,245	−60.2	----	18	13,208	−61.2	----	8	13,194	−59.0	----
150	14	14,010	−59.3	----	11	14,226	−63.5	----	20	14,036	−62.7	----	23	13,910	−59.7	----	14	14,202	−65.6	----	17	14,170	−67.7	----	----	----	----	----
125	----	----	----	----	----	----	----	----	14	15,183	−64.3	----	16	15,069	−60.9	----	6	15,297	−69.2	----	----	----	----	----	----	----	----	----
100	----	----	----	----	----	----	----	----	8	16,552	−64.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

See footnotes at end of table.

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

Standard pressure surface (mb.)	Dodge City, Kans. (925.7 mb.)				El Paso, Tex. (883.1 mb.)				Ely, Nev. (811.3 mb.)				Fort Worth, Tex. (991.3 mb.)				Glasgow, Mont. (940.6 mb.)				Grand Junction, Colo. (853.8 mb.)				Great Falls, Mont. (889.2 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	30	787	22.9	39	30	1,195	25.1	29	30	1,908	16.9	33	30	211	26.3	58	30	648	14.2	59	30	1,474	22.1	31	30	1,128	13.6	53
1,000	30	103	(*)	----	30	82	(*)	----	30	71	(*)	----	30	134	(*)	----	30	124	(*)	----	30	72	(*)	----	30	128	(*)	----
950	30	561	(*)	----	30	548	(*)	----	30	533	(*)	----	30	591	25.5	52	30	563	(*)	----	30	535	(*)	----	30	573	(*)	----
900	30	1,032	24.0	38	30	1,032	(*)	----	30	1,008	(*)	----	30	1,060	22.2	52	30	1,021	14.2	51	30	1,012	(*)	----	30	1,035	(*)	----
850	30	1,530	21.3	39	30	1,530	24.9	26	30	1,504	(*)	----	30	1,555	18.7	53	30	1,501	11.3	52	30	1,512	(*)	----	30	1,512	12.3	52
800	30	2,052	18.1	38	30	2,057	20.6	30	30	2,029	19.6	30	30	2,072	15.4	52	30	2,004	8.2	56	30	2,039	20.5	28	30	2,018	9.2	54
750	30	2,603	14.2	40	30	2,613	15.9	34	30	2,584	15.9	29	30	2,621	12.0	45	30	2,540	5.1	59	30	2,590	16.0	32	30	2,552	5.6	57
700	30	3,179	10.2	42	30	3,191	11.0	40	30	3,161	11.0	32	30	3,191	8.6	38	30	3,095	1.6	60	30	3,172	10.9	38	30	3,110	1.9	59
650	30	3,792	6.0	42	30	3,806	5.8	45	30	3,775	6.1	35	30	3,806	5.0	36	30	3,689	−1.9	59	30	3,782	5.5	47	30	3,707	−1.6	56
600	29	4,443	1.3	43	30	4,453	1.2	40	30	4,424	.9	41	30	4,450	.8	35	30	4,321	−5.9	62	30	4,432	.1	52	30	4,337	−5.5	53
550	29	5,142	−3.3	38	30	5,150	−3.0	----	30	5,116	−4.5	49	30	5,146	−3.3	----	30	4,999	−9.5	56	30	5,124	−5.2	53	30	5,014	−10.0	56
500	29	5,885	−8.1	----	30	5,895	−7.9	----	30	5,861	−9.3	43	30	5,892	−8.0	----	30	5,729	−14.1	52	30	5,866	−10.1	49	30	5,743	−14.6	54
450	29	6,700	−14.1	----	30	6,717	−13.3	----	29	6,682	−14.6	----	30	6,714	−13.9	----	30	6,527	−19.4	53	30	6,679	−15.4	----	29	6,544	−19.7	53
400	29	7,577	−20.9	----	30	7,593	−19.9	----	29	7,555	−21.1	----	30	7,588	−20.4	----	30	7,387	−25.6	----	29	7,555	−21.8	----	28	7,399	−26.1	----
350	29	8,548	−28.5	----	30	8,569	−27.4	----	29	8,526	−28.7	----	30	8,562	−28.0	----	29	8,337	−32.7	----	29	8,523	−29.2	----	28	8,351	−32.9	----
300	29	9,633	−36.7	----	30	9,659	−35.6	----	29	9,610	−37.2	----	30	9,649	−36.6	----	26	9,396	−40.5	----	27	9,606	−37.8	----	27	9,423	−40.9	----
250	27	10,873	−46.4	----	28	10,900	−45.2	----	27	10,848	−46.7	----	30	10,887	−46.0	----	25	10,608	−48.5	----	27	10,836	−47.3	----	27	10,638	−49.8	----
200	26	12,326	−56.1	----	26	12,350	−55.7	----	25	12,307	−55.6	----	30	12,339	−55.6	----	23	12,049	−54.0	----	16	12,257	−56.1	----	24	12,089	−56.3	----
175	22	13,176	−60.3	----	20	13,186	−60.6	----	23	13,153	−59.6	----	23	13,191	−60.0	----	21	12,902	−55.0	----	6	13,140	−57.7	----	22	12,937	−57.0	----
150	15	14,121	−63.4	----	12	14,133	−65.4	----	17	14,126	−63.2	----	13	14,159	−65.4	----	13	13,891	−55.8	----	----	------	------	----	20	13,905	−57.8	----
125	----	------	------	----	5	15,226	−68.3	----	11	15,234	−66.9	----	----	------	------	----	6	14,973	−55.6	----	----	------	------	----	8	15,078	−59.2	----
100	----	------	------	----	----	------	------	----	5	16,577	−66.5	----	----	------	------	----	----	------	------	----	----	------	------	----	----	------	------	----

Standard pressure surface (mb.)	Greensboro, N. C. (988.9 mb.)				Hatteras, N. C. (1,018.6 mb.)				Havana, Cuba [1] (.... mb.)				Honolulu, T. H. (1,014.3 mb.)				Huntington, W. Va. (999.7 mb.)				International Falls, Minn. (974.9 mb.)				Joliet, Ill. (996.9 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	19.6	82	30	3	23.8	85	----	------	------	----	30	3	27.9	63	30	172	17.9	87	29	360	10.7	81	29	178	16.9	80
1,000	30	176	(*)	----	30	165	22.9	83	----	------	------	----	30	129	26.2	65	30	168	(*)	----	29	139	(*)	----	29	150	(*)	----
950	30	622	19.2	75	30	614	20.2	79	----	------	------	----	30	582	22.3	71	30	615	19.1	69	29	573	11.9	70	29	597	17.7	63
900	30	1,084	16.8	76	30	1,077	17.6	75	----	------	------	----	30	1,048	18.7	76	30	1,074	16.4	70	29	1,026	9.7	69	29	1,051	15.1	61
850	30	1,570	14.1	76	30	1,564	14.9	71	----	------	------	----	30	1,537	15.7	75	30	1,559	13.8	64	29	1,499	7.4	70	29	1,533	12.8	55
800	30	2,080	11.6	70	30	2,076	12.4	66	----	------	------	----	30	2,050	14.1	53	30	2,069	11.4	57	29	1,997	4.9	68	29	2,041	11.0	48
750	30	2,621	9.1	64	30	2,619	10.0	55	----	------	------	----	30	2,598	12.3	35	30	2,609	9.0	47	29	2,523	2.3	65	29	2,583	8.5	47
700	30	3,187	6.3	58	30	3,187	7.0	53	----	------	------	----	30	3,169	9.0	35	30	3,175	6.2	45	29	3,076	−.7	62	29	3,145	5.5	49
650	30	3,797	3.1	55	30	3,794	3.7	53	----	------	------	----	30	3,781	5.6	33	30	3,777	2.5	42	29	3,665	−3.8	60	29	3,751	2.1	47
600	30	4,437	−.6	50	29	4,441	.1	54	----	------	------	----	29	4,432	2.5	30	30	4,421	−1.1	----	29	4,293	−7.3	55	29	4,390	−1.6	47
550	30	5,129	−4.7	42	27	5,133	−3.6	48	----	------	------	----	29	5,132	−1.5	----	30	5,109	−5.1	----	29	4,963	−11.2	51	29	5,079	−5.6	44
500	30	5,872	−9.2	39	27	5,879	−8.1	48	----	------	------	----	29	5,883	−6.0	----	29	5,854	−9.7	----	28	5,686	−15.7	54	29	5,819	−10.0	----
450	30	6,688	−14.4	----	27	6,696	−13.2	----	----	------	------	----	29	6,709	−11.6	----	28	6,666	−15.5	----	28	6,476	−20.8	----	29	6,633	−15.5	----
400	30	7,563	−20.5	----	27	7,577	−19.1	----	----	------	------	----	28	7,593	−18.1	----	27	7,542	−22.1	----	28	7,334	−27.1	----	29	7,502	−21.7	----
350	30	8,537	−28.0	----	27	8,557	−26.0	----	----	------	------	----	27	8,574	−25.4	----	27	8,510	−29.5	----	26	8,274	−34.3	----	29	8,472	−28.7	----
300	30	9,624	−36.2	----	27	9,653	−34.2	----	----	------	------	----	26	9,676	−33.9	----	27	9,592	−37.7	----	24	9,332	−42.3	----	29	9,557	−36.8	----
250	29	10,864	−45.9	----	26	10,909	−43.8	----	----	------	------	----	25	10,926	−43.4	----	27	10,824	−47.2	----	22	10,547	−49.1	----	29	10,794	−45.9	----
200	25	12,302	−56.8	----	25	12,369	−55.0	----	----	------	------	----	24	12,396	−54.1	----	27	12,268	−56.6	----	14	11,978	−53.5	----	28	12,252	−54.3	----
175	25	13,137	−61.9	----	22	13,208	−60.0	----	----	------	------	----	19	13,247	−59.5	----	25	13,107	−60.9	----	9	12,875	−55.3	----	26	13,116	−57.7	----
150	18	14,069	−66.1	----	13	14,148	−64.3	----	----	------	------	----	6	14,179	−64.4	----	19	14,061	−64.0	----	----	------	------	----	18	14,054	−59.8	----
125	7	15,211	−69.1	----	----	------	------	----	----	------	------	----	----	------	------	----	11	15,165	−65.8	----	----	------	------	----	8	15,137	−60.0	----

Standard pressure surface (mb.)	Lake Charles, La. (1,015.1 mb.)				Lander, Wyo. (831.0 mb.)				Las Vegas, Nev. (944.2 mb.)				Little Rock, Ark. (1,007.0 mb.)				Mazatlan, Mexico (1,008.6 mb.)				Medford, Oreg. (968.6 mb.)				Merida, Mexico (1,010.1 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	29	5	24.2	80	30	1,696	16.6	40	30	574	31.1	17	30	79	23.3	69	30	14	28.9	76	30	401	22.3	41	30	27	26.1	84
1,000	29	137	25.4	71	30	80	(*)	----	30	53	(*)	----	30	140	24.3	63	30	91	28.1	77	30	122	(*)	----	30	116	25.5	84
950	29	590	22.7	66	30	539	(*)	----	30	518	(*)	----	30	598	23.7	55	30	549	24.4	75	30	575	22.9	38	30	571	23.3	80
900	29	1,057	20.0	63	30	1,010	(*)	----	30	1,003	30.5	16	30	1,060	20.4	57	30	1,019	22.2	69	30	1,037	19.3	40	30	1,039	20.5	79
850	29	1,548	17.0	61	30	1,501	(*)	----	30	1,509	26.0	19	30	1,552	17.4	55	30	1,515	19.5	64	30	1,525	15.3	45	30	1,532	17.6	75
800	29	2,063	14.0	59	30	2,020	16.8	36	30	2,037	21.1	23	30	2,067	14.5	55	30	2,035	16.5	61	30	2,035	11.4	48	30	2,049	14.6	73
750	29	2,610	11.0	54	30	2,570	12.7	38	30	2,592	16.1	28	30	2,616	11.6	50	30	2,587	13.2	61	30	2,574	8.0	46	30	2,595	11.6	71
700	29	3,178	8.1	44	30	3,140	8.4	40	30	3,171	11.0	34	30	3,184	8.3	48	30	3,160	9.2	66	30	3,136	4.3	42	30	3,168	8.6	66
650	29	3,790	4.8	36	30	3,750	3.6	47	30	3,784	5.6	39	30	3,799	4.8	43	30	3,773	5.1	68	30	3,738	1.1	37	30	3,781	5.2	63
600	29	4,435	1.2	30	30	4,392	−1.0	47	30	4,432	.6	41	29	4,441	1.2	38	30	4,422	1.2	70	30	4,374	−2.8	33	29	4,429	1.6	61
550	29	5,130	−3.2	----	30	5,082	−5.8	45	30	5,126	−3.8	36	28	5,138	−2.8	----	30	5,116	−3.1	67	30	5,058	−6.8	26	28	5,122	−2.6	60
500	29	5,878	−7.9	----	30	5,820	−10.9	43	30	5,872	−8.3	----	27	5,881	−7.6	----	30	5,868	−7.3	60	30	5,794	−11.8	----	28	5,876	−7.1	61
450	29	6,698	−13.5	----	30	6,628	−16.6	----	30	6,688	−14.2	----	27	6,705	−13.1	----	29	6,693	−12.0	58	30	6,599	−17.3	----	26	6,698	−12.0	61
400	29	7,575	−20.0	----	30	7,495	−23.2	----	30	7,564	−21.2	----	27	7,580	−19.8	----	28	7,575	−17.9	53	30	7,465	−23.4	----	26	7,583	−17.6	55
350	29	8,552	−27.3	----	30	8,457	−30.7	----	30	8,534	−29.0	----	27	8,556	−27.0	----	26	8,558	−25.1	----	30	8,427	−30.9	----	24	8,568	−24.9	----
300	29	9,643	−35.5	----	30	9,533	−38.9	----	30	9,616	−37.5	----	27	9,649	−35.1	----	26	9,661	−33.0	----	30	9,503	−38.9	----	24	9,670	−33.3	----
250	29	10,888	−44.5	----	30	10,757	−48.5	----	29	10,850	−46.9	----	24	10,904	−44.0	----	25	10,917	−42.7	----	30	10,730	−47.5	----	23	10,921	−43.5	----
200	28	12,354	−54.3	----	29	12,192	−56.0	----	29	12,297	−55.9	----	23	12,367	−53.6	----	24	12,385	−54.3	----	29	12,182	−55.2	----	12	12,394	−55.0	----
175	26	13,203	−60.1	----	27	13,041	−58.4	----	28	13,136	−60.0	----	16	13,217	−57.8	----	23	13,226	−60.8	----	29	13,028	−57.8	----	----	------	------	----
150	21	14,166	−66.0	----	22	14,007	−60.9	----	22	14,085	−64.3	----	7	14,210	−61.7	----	12	14,172	−66.6	----	23	13,977	−59.5	----	----	------	------	----
125	13	15,263	−69.8	----	9	15,082	−62.3	----	6	15,165	−66.4	----	----	------	------	----	5	15,266	−72.7	----	9	15,048	−60.2	----	----	------	------	----

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 September 1947*—Continued

Standard pressure surface (mb.)	Miami, Fla. (1,014.7 mb.)				Nantucket, Mass. (1,019.6 mb.)				Nashville, Tenn. (997.4 mb.)				New Orleans, La. (1,015.9 mb.)				North Platte, Nebr. (918.3 mb.)				Oakland, Calif. (1,013.0 mb.)				Ogden, Utah (866.1 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	29	4	25.7	87	28	14	16.5	86	30	180	22.4	68	27	2	25.3	83	30	849	17.6	65	30	6	17.5	72	30	1,355	17.6	46
1,000	29	133	25.1	85	28	179	17.5	79	30	156	(*)	----	27	141	25.0	78	30	106	(*)	----	30	116	16.8	70	30	97	(*)	----
950	29	589	22.3	85	28	619	15.8	74	30	608	21.8	62	27	595	22.7	74	30	558	(*)	----	30	570	20.7	43	30	555	(*)	----
900	29	1,052	19.6	82	28	1,074	13.3	68	30	1,072	18.8	65	27	1,062	19.7	76	30	1,021	21.1	51	30	1,023	20.9	27	30	1,025	(*)	----
850	29	1,544	16.9	77	28	1,554	11.3	58	30	1,561	15.9	62	27	1,553	16.9	70	30	1,515	19.6	42	30	1,515	18.4	23	30	1,517	20.1	33
800	29	2,060	14.2	73	28	2,059	9.1	54	30	2,074	13.5	52	26	2,069	14.3	63	30	2,034	16.3	44	30	2,031	15.4	----	30	2,036	17.0	30
750	29	2,606	11.6	70	28	2,595	6.9	44	30	2,617	10.9	48	26	2,617	11.4	56	30	2,582	12.3	46	30	2,582	12.6	----	30	2,586	12.9	32
700	28	3,178	8.4	68	28	3,157	4.6	40	30	3,188	7.5	46	26	3,187	8.3	54	30	3,154	8.2	49	30	3,150	9.2	----	30	3,157	8.5	34
650	28	3,786	4.9	66	88	3,757	1.4	33	30	3,796	4.0	41	26	3,800	4.9	51	30	3,764	3.9	50	30	3,767	5.5	----	30	3,768	4.2	37
600	27	4,437	1.2	64	28	4,398	−1.7	----	30	4,441	.3	38	25	4,444	1.2	47	30	4,407	−.6	50	30	4,410	1.5	----	30	4,411	−.5	44
550	26	5,132	−2.6	62	28	5,079	−5.5	----	30	5,136	−3.7	----	25	5,140	−2.7	41	30	5,098	−5.3	51	30	5,109	−3.1	----	30	5,102	−5.6	47
500	26	5,884	−6.9	60	28	5,826	−10.0	----	30	5,880	−8.4	----	25	5,889	−7.3	38	29	5,841	−10.0	47	30	5,842	−8.2	----	30	5,841	−10.9	50
450	26	6,708	−11.7	61	28	6,631	−15.7	----	30	6,696	−13.8	----	25	6,712	−12.7	43	29	6,652	−15.8	46	30	6,672	−13.9	----	30	6,653	−16.1	----
400	25	7,593	−17.4	61	28	7,507	−21.9	----	29	7,573	−20.1	----	25	7,591	−19.0	----	29	7,523	−22.1	----	30	7,547	−20.7	----	30	7,520	−22.4	----
350	25	8,581	−24.0	----	26	8,480	−28.6	----	29	8,549	−27.5	----	24	8,569	−26.1	----	29	8,490	−29.6	----	30	8,520	−28.2	----	30	8,486	−30.1	----
300	23	9,688	−32.1	----	26	9,566	−36.3	----	29	9,640	−35.7	----	23	9,667	−34.0	----	27	9,583	−38.0	----	30	9,608	−36.5	----	30	9,564	−38.6	----
250	23	10,949	−42.1	----	25	10,802	−45.3	----	27	10,879	−44.8	----	20	10,918	−43.4	----	25	10,814	−47.6	----	28	10,851	−45.6	----	30	10,791	−47.7	----
200	23	12,420	−53.7	----	22	12,273	−54.9	----	26	12,340	−54.2	----	15	12,394	−54.0	----	24	12,250	−57.0	----	23	12,309	−54.1	----	29	12,238	−55.6	----
175	17	13,271	−60.1	----	19	13,142	−59.5	----	22	13,172	−58.9	----	12	13,238	−59.8	----	23	13,082	−60.6	----	18	13,178	−57.7	----	26	13,088	−58.7	----
150	9	14,252	−64.1	----	14	14,110	−62.7	----	18	14,126	−62.9	----	----	----	----	----	16	14,027	−62.2	----	9	14,156	−60.7	----	20	14,071	−62.6	----
125	----	----	----	----	6	15,220	−63.0	----	9	15,256	−64.7	----	----	----	----	----	9	15,152	−65.1	----	----	----	----	----	----	----	----	----

Standard pressure surface (mb.)	Oklahoma City, Okla. (970.2 mb.)				Omaha, Neb. (979.6 mb.)				Phoenix, Ariz. (970.3 mb.)				Pittsburgh, Pa. (976.0 mb.)				Portland, Maine (1,018.2 mb.)				Rapid City, S. Dak. (904.2 mb.)				St. Cloud, Minn. (978.1 mb.)			
Surface	30	391	24.3	57	29	308	21.0	64	30	339	31.0	36	30	382	18.0	75	30	20	13.6	85	30	980	15.4	50	30	317	15.1	75
1,000	30	123	(*)	----	29	127	(*)	----	30	66	(*)	----	30	170	(*)	----	30	172	15.7	78	30	109	(*)	----	30	126	(*)	----
950	30	577	25.4	49	29	577	21.2	54	30	533	33.8	26	30	621	17.6	70	30	611	14.3	68	30	556	(*)	----	30	570	15.8	64
900	30	1,050	23.0	48	29	1,040	18.9	51	30	1,016	30.0	27	30	1,074	15.4	68	30	1,063	11.9	66	30	1,019	(*)	----	30	1,022	13.8	62
850	30	1,545	19.7	50	29	1,529	16.6	52	30	1,522	25.7	30	30	1,557	12.6	69	30	1,540	9.3	63	30	1,506	15.7	45	30	1,502	11.5	59
800	30	2,064	16.2	49	29	2,043	14.0	50	30	2,051	21.1	34	30	2,064	10.1	62	30	2,041	7.2	53	30	2,018	12.5	50	30	2,007	9.0	54
750	30	2,614	12.6	48	29	2,588	10.9	47	30	2,611	16.4	39	30	2,606	7.8	53	30	2,574	4.9	49	30	2,562	9.7	53	30	2,545	6.2	49
700	30	3,186	9.2	43	29	3,157	7.2	46	30	3,186	11.5	41	30	3,166	5.0	45	30	3,130	2.1	46	30	3,126	6.0	54	30	3,102	3.3	47
650	30	3,799	5.7	39	29	3,766	3.0	39	30	3,805	6.4	46	30	3,772	1.8	45	30	3,724	−1.0	40	30	3,732	2.1	54	30	3,704	−.2	44
600	28	4,448	1.5	----	29	4,405	−1.1	40	30	4,451	1.9	45	30	4,408	−1.4	38	30	4,360	−3.9	----	30	4,371	−2.2	55	30	4,336	−3.9	47
550	28	5,141	−2.7	----	29	5,094	−5.5	44	30	5,152	−2.7	40	30	5,099	−5.4	----	30	5,042	−7.9	----	29	5,057	−6.5	52	29	5,015	−8.3	49
500	28	5,892	−7.7	----	29	5,836	−10.1	42	30	5,896	−7.4	----	30	5,839	−9.8	----	29	5,776	−12.2	----	29	5,796	−11.5	52	29	5,749	−12.9	48
450	27	6,712	−13.4	----	29	6,645	−15.6	40	30	6,722	−13.0	----	30	6,651	−15.2	----	29	6,582	−17.4	----	29	6,598	−17.2	49	29	6,554	−18.1	47
400	27	7,592	−20.1	----	29	7,519	−22.3	----	30	7,597	−19.7	----	30	7,523	−21.7	----	29	7,447	−23.2	----	29	7,469	−23.5	----	29	7,416	−24.1	----
350	27	8,566	−27.7	----	29	8,486	−29.6	----	30	8,573	−27.2	----	30	8,492	−28.6	----	28	8,411	−30.5	----	29	8,432	−30.5	----	29	8,375	−31.0	----
300	27	9,656	−35.9	----	29	9,567	−38.2	----	30	9,665	−35.8	----	30	9,578	−36.7	----	28	9,488	−38.5	----	29	9,511	−38.4	----	29	9,451	−38.7	----
250	25	10,900	−45.1	----	29	10,798	−47.5	----	30	10,907	−45.1	----	29	10,823	−46.0	----	28	10,717	−47.4	----	28	10,754	−47.3	----	29	10,680	−47.1	----
200	22	12,364	−54.6	----	28	12,240	−56.5	----	30	12,366	−54.6	----	29	12,276	−55.3	----	25	12,173	−56.3	----	22	12,212	−55.6	----	26	12,141	−54.0	----
175	14	13,198	−58.1	----	23	13,089	−59.2	----	24	13,221	−59.3	----	26	13,127	−59.1	----	25	13,014	−59.3	----	9	13,008	−58.7	----	22	13,005	−55.8	----
150	5	14,162	−60.3	----	16	14,041	−62.0	----	7	14,186	−64.0	----	20	14,125	−62.8	----	22	13,982	−61.2	----	----	----	----	----	15	13,979	−57.4	----
125	----	----	----	----	----	----	----	----	----	----	----	----	16	15,255	−65.2	----	13	15,139	−61.6	----	----	----	----	----	6	15,191	−58.9	----
100	----	----	----	----	----	----	----	----	----	----	----	----	5	16,585	−65.6	----	----	----	----	----	----	----	----	----	----	----	----	----

Standard pressure surface (mb.)	San Antonio, Tex. (987.6 mb.)				San Juan, P. R. (1,013.7 mb.)				Santa Maria, Calif. (1,005.6 mb.)				Sault Ste. Marie, Mich. (991.7 mb.)				Spokane, Wash. (947.0 mb.)				Swan Island, W. I. (1,012.5 mb.)				Tacubaya, Mexico (775.3 mb.)			
Surface	30	240	26.4	56	30	15	26.2	84	30	71	15.2	83	30	221	12.6	85	30	598	16.8	57	30	10	27.0	83	27	2,306	15.1	72
1,000	30	129	(*)	----	30	135	25.3	84	30	119	14.8	82	30	149	(*)	----	30	129	(*)	----	30	120	26.5	83	27	84	(*)	----
950	30	588	25.9	54	30	590	22.1	86	30	567	19.0	52	30	588	13.1	76	30	571	(*)	----	30	574	23.1	84	27	546	(*)	----
900	30	1,057	22.5	58	30	1,055	19.1	85	30	1,022	21.6	29	30	1,035	10.7	76	30	1,032	15.2	51	30	1,043	20.2	81	27	1,021	(*)	----
850	30	1,552	18.8	63	30	1,545	16.1	81	30	1,516	19.9	27	30	1,510	8.2	74	30	1,513	11.7	53	30	1,535	17.4	76	27	1,513	(*)	----
800	30	2,070	15.3	61	30	2,059	13.4	77	30	2,034	16.8	26	30	2,009	5.8	66	30	2,017	8.1	56	30	2,051	14.4	72	27	2,040	(*)	----
750	30	2,617	12.0	53	30	2,602	10.5	69	30	2,583	13.1	27	30	2,541	3.4	58	30	2,552	4.7	58	30	2,599	11.3	67	27	2,590	12.9	74
700	30	3,190	8.7	46	30	3,173	7.6	61	30	3,156	9.5	33	30	3,093	.6	56	30	3,106	1.2	57	30	3,169	8.1	63	27	3,163	8.5	82
650	30	3,801	5.5	37	30	3,785	4.4	58	30	3,771	6.0	----	30	3,689	−2.8	58	30	3,701	−2.3	56	29	3,779	4.5	58	27	3,777	4.5	86
600	30	4,450	2.4	----	30	4,429	.8	55	30	4,417	2.4	----	29	4,312	−6.3	53	30	4,329	−6.6	62	29	4,424	.6	58	27	4,423	.8	88
550	30	5,150	−2.0	----	30	5,123	−3.2	50	30	5,117	−1.8	----	29	4,990	−9.9	49	30	5,003	−10.8	61	29	5,117	−3.6	55	27	5,118	−3.1	82
500	30	5,898	−6.7	----	30	5,872	−7.5	44	30	5,865	−6.9	----	29	5,717	−14.4	48	29	5,735	−15.1	56	29	5,866	−7.7	54	27	5,869	−7.2	74
450	30	6,721	−12.2	----	29	6,697	−12.6	----	30	6,686	−12.7	----	29	6,518	−19.6	45	29	6,531	−20.2	54	29	6,684	−12.5	53	27	6,693	−12.0	66
400	29	7,602	−18.7	----	28	7,576	−18.6	----	26	7,567	−19.2	----	27	7,365	−25.6	----	28	7,396	−26.0	----	29	7,569	−18.1	54	27	7,578	−17.4	58
350	29	8,583	−25.7	----	27	8,558	−25.8	----	25	8,546	−26.9	----	26	8,316	−32.4	----	28	8,348	−33.1	----	29	8,553	−25.0	----	26	8,563	−24.7	----
300	29	9,682	−33.5	----	27	9,656	−34.2	----	23	9,640	−35.3	----	17	9,453	−37.7	----	27	9,413	−40.9	----	29	9,654	−33.4	----	26	9,666	−33.1	----
250	29	10,938	−42.1	----	27	10,906	−44.2	----	16	10,915	−43.8	----	----	----	----	----	27	10,631	−48.7	----	29	10,908	−43.6	----	20	10,923	−43.2	----
200	28	12,415	−52.0	----	24	12,360	−55.8	----	6	12,422	−53.0	----	----	----	----	----	23	12,108	−55.5	----	27	12,368	−55.7	----	7	12,373	−55.7	----
175	23	13,276	−57.4	----	19	13,208	−61.4	----	----	----	----	----	----	----	----	----	19	12,960	−56.8	----	26	13,203	−62.4	----	----	----	----	----
150	12	14,220	−62.7	----	14	14,158	−66.5	----	----	----	----	----	----	----	----	----	13	13,922	−57.4	----	17	14,144	−68.9	----	----	----	----	----
125	----	----	----	----	5	15,242	−70.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

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 September 1947*—Continued

Standard pressure surface (mb.	Tampa, Fla. (1,014.7 mb.)				Tatoosh Island, Wash. (1,015.2 mb.)				Toledo, Ohio (996.5 mb.)				Washington, D. C. (1,018.7 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
Surface	30	9	24.2	87	30	31	12.2	88	30	191	16.8	83	30	25	20.4	79
1,000	30	137	24.0	85	30	158	12.9	80	30	160	(*)	----	30	184	20.4	73
950	30	588	21.7	83	30	592	13.3	64	30	603	17.3	69	30	630	17.8	71
900	30	1,054	19.1	82	30	1,044	12.3	54	30	1,061	14.3	70	30	1,089	15.2	70
850	30	1,545	16.5	77	30	1,522	10.4	44	30	1,542	12.0	63	30	1,572	12.6	68
800	30	2,060	13.8	73	30	2,024	7.9	39	30	2,049	9.4	58	30	2,080	10.5	60
750	30	2,605	11.0	67	30	2,558	5.0	37	30	2,589	7.4	46	30	2,619	7.9	55
700	30	3,175	8.0	63	30	3,113	1.8	36	30	3,148	4.6	47	30	3,182	5.0	50
650	30	3,787	4.6	59	30	3,709	−1.4	35	30	3,753	1.7	38	30	3,786	1.8	49
600	28	4,437	1.0	56	30	4,341	−4.8	39	30	4,391	−1.8	----	30	4,426	−1.7	46
550	28	5,134	−3.0	54	30	5,024	−8.6	36	29	5,079	−5.9	----	30	5,115	−5.4	42
500	28	5,881	−7.1	49	30	5,753	−12.7	36	29	5,817	−10.5	----	30	5,857	−10.0	37
450	28	6,704	−11.8	51	30	6,556	−17.8	39	29	6,626	−16.0	----	30	6,667	−15.5	----
400	27	7,593	−17.7	54	30	7,420	−23.9	----	29	7,497	−22.5	----	30	7,541	−21.7	----
350	27	8,578	−24.5	----	29	8,373	−31.1	----	29	8,463	−29.8	----	30	8,504	−29.0	----
300	27	9,681	−32.8	----	29	9,448	−38.9	----	29	9,542	−38.1	----	30	9,593	−37.2	----
250	26	10,938	−42.6	----	27	10,673	−46.9	----	29	10,772	−47.3	----	30	10,827	−46.5	----
200	26	12,404	−54.4	----	25	12,126	−53.0	----	28	12,219	−56.4	----	30	12,276	−56.0	----
175	25	13,248	−60.4	----	21	12,966	−54.0	----	25	13,070	−59.7	----	26	13,120	−60.1	----
150	22	14,199	−66.7	----	15	13,928	−54.2	----	17	14,050	−61.7	----	21	14,074	−64.1	----
125	9	15,313	−71.5	----	6	15,152	−56.7	----	7	15,219	−63.5	----	19	15,183	−66.4	----
100	----	------	------	----	----	------	------	----	----	------	------	----	6	16,524	−66.0	----

[1] Data not yet received.

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

NOTE.—All observations scheduled between 0300 and 0500, G. C. T., except at Ciudad Victoria, Mazatlan, and Merida, where they are taken near 0200, G. C. T.

"Number of observations" refers to those of dynamic height only. (In a few cases temperature or humidity data may be missing for one or more standard pressure surfaces of some observations.) Relative humidity data are not published for standard pressure surfaces having a corresponding mean temperature below −20° C.

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

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

TABLE 2.—*Free-air resultant winds based on pilot balloon observations made near 5 p. m., E. S. T. (2200 G. C. T.) during September 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	30	160	2.2	30	219	3.3	30	54	0.8	28	310	1.4	29	313	0.8	30	344	3.6	30	98	4.1	28	240	3.0	29	204	1.7	29	80	1.5	30	157	0.8	30	167	0.4	30	169	1.5
500	---	---	---	---	---	---	30	51	1.0	---	---	---	---	---	---	---	---	---	30	99	4.9	28	233	4.0	29	200	4.0	29	105	2.4	30	198	.8	---	---	---	---	---	---
1,000	30	162	3.0	---	---	---	30	55	1.7	---	---	---	29	297	1.4	30	338	3.3	30	111	3.4	26	232	5.2	28	229	4.2	28	69	2.3	29	224	2.0	---	---	---	---	---	---
1,500	30	163	2.7	---	---	---	28	120	.9	28	293	3.6	27	274	2.1	30	314	2.5	30	109	1.7	26	234	6.4	27	253	5.1	26	71	1.4	29	214	2.5	---	---	---	30	158	2.2
2,000	30	158	2.7	30	230	3.4	27	122	.2	26	287	4.8	22	266	6.4	30	282	2.9	28	102	1.6	23	244	7.5	22	254	8.2	23	43	2.8	27	234	3.4	30	189	.3	30	137	1.9
2,500	30	165	2.1	30	226	2.8	23	344	1.0	25	276	6.3	20	266	9.0	30	270	4.2	28	88	1.6	19	262	7.6	18	260	10.4	22	36	2.7	22	278	3.4	30	249	.7	30	122	1.9
3,000	27	134	1.8	30	228	2.5	22	339	1.3	22	271	7.9	19	273	10.3	30	272	5.1	28	81	1.9	16	268	9.8	16	268	11.8	22	35	2.3	21	284	5.1	30	257	2.1	30	122	2.0
4,000	26	54	1.9	30	238	1.9	19	305	2.1	19	267	11.1	16	281	15.7	28	260	7.4	27	85	2.8	15	275	11.3	12	276	14.1	19	359	1.1	19	291	7.2	29	270	6.1	30	116	1.7
5,000	24	8	1.3	30	258	3.4	16	297	2.1	17	269	14.0	12	280	16.1	24	265	9.8	23	86	2.3	11	286	13.0	11	272	16.9	18	282	1.5	15	295	8.4	26	269	8.8	29	112	1.3
6,000	25	26	1.9	29	264	4.1	15	326	3.2	14	269	14.7	10	285	18.8	23	277	12.6	22	90	1.0	---	---	---	---	---	---	18	289	2.1	13	297	9.7	21	272	10.8	29	134	.8
8,000	21	19	3.2	28	255	6.4	12	318	3.3	10	277	15.9	---	---	---	19	292	14.0	16	254	2.3	---	---	---	---	---	---	15	250	3.8	---	---	---	17	279	14.0	27	156	.8
10,000	15	344	3.3	26	283	6.3	---	---	---	---	---	---	---	---	---	13	283	16.8	---	---	---	---	---	---	---	---	---	13	253	7.8	---	---	---	11	289	10.9	22	305	.7
12,000	10	298	11.0	22	278	11.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	10	296	12.5	21	276	6.2
14,000	---	---	---	15	276	7.9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	16	282	8.9

Altitude (meters) m. s. l.	Ely, Nev. (1,910 m.)			Grand Junction, Colo. (1,475 m.)			Greensboro, N. C. (271 m.)			Havre, Mont. (767 m.)			Jacksonville, Fla. (16 m.)			Joliet, Ill. (178 m.)			Las Vegas, Nev. (575 m.)			Little Rock, Ark. (88 m.)			Medford, Oreg. (416 m.)			Miami, Fla. (12 m.)			Mobile, Ala. (66 m.)			Nashville, Tenn. (194 m.)			New York, N. Y. (15 m.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	29	226	3.8	30	225	1.9	29	46	1.9	28	287	2.4	28	80	3.7	29	199	2.2	30	187	2.3	30	128	1.3	30	316	2.3	29	101	3.2	27	82	1.0	30	12	0.5	30	190	0.6
500	---	---	---	---	---	---	29	56	2.5	---	---	---	28	77	5.0	29	200	2.3	---	---	---	30	134	1.4	30	319	2.3	29	102	4.7	27	72	1.5	30	343	.2	30	214	2.2
1,000	---	---	---	---	---	---	29	66	2.0	28	303	2.4	23	60	3.0	29	220	3.0	30	189	3.2	30	142	.6	30	315	2.3	29	103	4.0	25	58	1.8	30	158	.2	29	258	3.2
1,500	---	---	---	30	227	1.9	27	21	.7	28	287	3.4	23	49	2.1	29	247	4.2	30	193	3.5	27	64	.7	30	300	1.3	25	65	2.3	22	58	3.8	29	170	1.2	29	280	4.7
2,000	29	223	4.2	30	243	2.8	23	310	.7	24	273	6.3	22	42	.8	26	254	6.1	30	201	4.1	27	7	1.2	30	206	1.1	25	53	2.0	18	29	4.1	25	224	1.3	29	269	5.4
2,500	29	214	6.0	30	253	3.5	19	317	.7	20	268	7.3	22	52	1.2	23	265	7.2	30	210	4.8	26	8	2.0	27	207	1.1	23	39	3.0	16	34	5.5	25	245	1.9	28	272	7.0
3,000	29	221	6.6	30	250	4.5	16	318	3.8	15	278	8.8	21	43	1.9	20	281	8.5	30	224	6.0	26	244	2.3	27	228	1.8	23	52	2.4	15	46	5.1	24	265	3.4	25	269	7.0
4,000	29	219	6.7	29	250	6.3	11	310	6.1	10	278	10.0	21	59	1.8	16	291	11.7	29	225	6.5	23	326	3.5	25	254	3.0	16	33	1.7	12	45	5.3	18	300	4.3	19	266	8.4
5,000	28	239	6.6	27	259	7.0	10	290	8.0	---	---	---	15	25	.5	10	303	10.2	27	226	5.9	21	337	4.5	23	264	5.2	10	245	2.0	---	---	---	13	326	4.9	10	280	4.0
6,000	26	254	7.9	23	266	9.0	---	---	---	---	---	---	14	194	.4	---	---	---	27	231	5.3	18	314	5.9	19	280	5.9	---	---	---	---	---	---	11	323	5.4	---	---	---
8,000	21	252	11.1	21	273	10.2	---	---	---	---	---	---	11	276	1.9	---	---	---	25	252	6.3	---	---	---	13	291	8.0	---	---	---	---	---	---	10	332	7.6	---	---	---
10,000	15	237	11.1	16	277	10.4	---	---	---	---	---	---	10	251	2.1	---	---	---	22	262	8.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
12,000	12	237	17.0	14	274	12.1	---	---	---	---	---	---	---	---	---	---	---	---	19	267	12.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
14,000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	10	272	16.1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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	275	5.2	29	181	2.0	29	177	2.1	30	157	0.9	30	3	2.2	29	119	1.5	29	192	0.8	30	97	2.6	30	274	3.4	27	305	2.4	28	290	1.8	29	252	0.7	28	352	0.4
500	30	290	3.5	29	177	2.5	29	185	3.1	30	183	1.2	---	---	---	29	124	1.8	29	190	.9	30	101	3.0	30	282	4.5	27	276	2.8	28	270	1.4	---	---	---	28	223	.6
1,000	28	290	2.0	29	188	3.5	29	189	3.6	30	202	1.4	30	2	2.1	29	186	2.0	28	210	1.8	30	100	3.1	29	280	2.5	25	255	4.7	28	234	1.5	29	215	1.2	27	250	1.5
1,500	28	255	1.6	29	197	3.4	29	216	5.6	30	197	1.5	30	317	1.8	29	223	2.5	26	206	4.9	30	97	2.8	29	247	1.4	22	251	8.4	26	234	1.5	29	243	2.3	26	259	2.0
2,000	28	223	2.1	28	211	4.3	28	242	6.3	30	193	1.9	29	282	3.1	26	252	3.1	23	232	6.6	30	104	2.7	29	194	1.4	20	265	9.3	25	242	2.8	27	256	3.4	24	276	2.9
2,500	28	223	2.6	27	212	3.8	28	261	8.6	30	190	2.2	28	268	5.4	26	279	4.8	22	254	8.4	29	100	2.8	29	171	2.1	16	274	10.2	23	258	2.2	24	276	4.6	22	275	5.3
3,000	28	228	3.3	24	224	4.2	28	268	10.4	30	178	2.9	28	270	8.3	24	287	6.7	22	262	9.9	29	100	2.8	29	161	3.3	13	286	11.9	22	272	3.0	22	269	5.3	22	277	7.4
4,000	28	226	3.4	22	272	4.4	27	272	13.8	30	172	3.1	24	265	12.0	22	298	7.8	20	283	12.5	25	102	3.8	26	172	5.0	10	299	16.7	19	296	4.2	21	271	8.3	20	276	10.6
5,000	28	251	4.7	21	303	4.8	26	276	14.6	29	169	4.0	23	265	13.8	22	297	9.2	17	284	16.5	21	92	3.8	26	182	5.9	---	---	---	18	309	4.6	17	278	11.4	19	268	12.2
6,000	28	261	5.6	17	309	5.9	24	288	15.8	22	168	2.4	23	269	15.8	20	304	9.5	15	286	20.5	18	106	3.5	24	202	4.3	---	---	---	15	290	5.6	17	285	14.5	14	265	11.7
8,000	26	274	8.2	12	308	5.3	18	290	17.1	15	227	3.2	13	286	18.8	15	295	11.6	---	---	---	15	58	2.6	23	218	4.8	---	---	---	11	282	10.5	12	288	16.1	---	---	---
10,000	15	272	10.1	---	---	---	11	285	14.2	13	244	3.8	---	---	---	12	292	12.6	---	---	---	---	---	---	16	241	2.8	---	---	---	---	---	---	---	---	---	---	---	---
12,000	---	---	---	---	---	---	10	291	12.9	10	270	13.3	---	---	---	---	---	---	---	---	---	---	---	---	11	239	5.5	---	---	---	---	---	---	---	---	---	---	---	---

TABLE 3.—*Maximum free-air wind velocities (m. p. s.) for different sections of the United States based on pilot balloon observations during September 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]	35.6	sw.	1,017	22	Portland, Maine	46.2	sw.	4,902	16	Caribou, Maine	104.0	nw.	18,345	28	Harrisburg, Pa.
East-Central [2]	28.3	wsw.	2,312	22	Elkins, W. Va.	42.0	wsw.	4,969	22	Washington, D. C.	60.0	wsw.	18,529	17	Lynchburg, Va.
Southeast [3]	35.6	se.	1,736	19	Tallahassee, Fla.	27.8	ne.	3,245	17	Tampa, Fla.	46.5	se.	9,282	21	Miami, Fla.
North-Central [4]	40.7	nw.	1,199	14	Huron, S. Dak.	51.6	wsw.	4,181	18	Sault Ste. Marie, Mich.	71.0	wnw.	7,388	24	Fargo, N. Dak.
Central [5]	47.0	sw.	1,591	18	Omaha, Nebr.	44.5	nw.	5,000	22	Joliet, Ill.	60.0	sw.	8,533	19	Lander, Wyo.
South-Central [6]	31.6	nne.	1,556	21	Tulsa, Okla.	34.4	ne.	3,140	18	New Orleans, La.	50.0	sw.	11,154	11	Big Spring, Tex.
Northwest [7]	32.9	w.	2,117	19	Havre, Mont.	51.6	wnw.	3,321	12	Ellensburg, Wash.	79.0	nnw.	10,541	14	Missoula, Mont.
West-Central [8]	33.4	sw.	2,500	16	Elko, Nev.	49.4	w.	4,713	16	Sheridan, Wyo.	73.6	wsw.	8,900	18	Bishop, Calif.
Southwest [9]	32.7	sw.	2,285	17	Las Vegas, Nev.	35.9	sw.	4,430	18	Las Vegas, Nev.	49.8	sw.	9,030	17	Las Vegas, Nev.

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