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METEOROLOGICAL AND CLIMATOLOGICAL DATA FOR APRIL 1946

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 meter, temperature in degrees centigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during April 1946*

STATIONS AND MEAN SURFACE PRESSURES

Standard pressure surface (mb.)	Albany, N. Y. (1,003.2 mb.)				Albuquerque, N. Mex. (837.7 mb.)				Apalachicola, Fla. (1,017.9 mb.)				Atlanta, Ga. (983.4 mb.)				Big Spring, Tex. (926.6 mb.)				Bismarck, N. Dak. (954.7 mb.)				Boise, Idaho (915.4 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	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	93	5.6	66	30	1,620	16.9	32	30	5	19.5	83	30	300	16.3	72	30	774	20.5	41	30	505	9.8	58	30	868	12.4	52
1,000	30	118	(*)	--	30	72	(*)	----	30	158	19.6	75	30	156	(*)	----	30	106	(*)	----	30	114	(*)	----	30	115	(*)	----
950	30	536	3.6	65	30	527	(*)	----	30	599	17.8	61	30	598	16.9	61	30	553	(*)	----	30	544	(*)	----	30	558	(*)	----
900	30	974	0.8	68	30	1,000	(*)	----	30	1,059	15.0	58	30	1,054	14.0	60	30	1,025	20.5	39	30	996	9.4	44	30	1,010	13.6	45
850	30	1,430	−2.1	70	30	1,493	(*)	----	30	1,541	12.5	54	30	1,534	11.3	55	30	1,516	17.6	40	30	1,467	6.7	46	30	1,489	10.2	44
800	30	1,910	−4.4	70	30	2,011	15.4	31	30	2,018	10.3	43	30	2,038	8.8	51	30	2,031	14.7	38	30	1,962	3.4	48	30	1,990	6.3	49
750	30	2,420	−6.6	66	30	2,552	10.9	33	30	2,586	8.1	34	30	2,575	6.1	44	30	2,575	10.8	39	30	2,487	−0.2	52	30	2,517	1.9	52
700	30	2,953	−8.8	62	30	3,124	6.2	38	30	3,148	5.3	----	30	3,131	2.8	41	30	3,144	6.6	35	30	3,031	−3.6	57	30	3,067	−2.3	56
650	28	3,526	−11.1	61	30	3,721	1.0	45	30	3,749	2.0	----	28	3,732	−0.9	40	30	3,747	2.3	33	30	3,619	−7.3	56	30	3,653	−6.7	60
600	28	4,133	−14.4	56	30	4,364	−4.3	54	30	4,390	−1.9	----	27	4,366	−4.8	38	30	4,389	−2.0	36	30	4,232	−11.1	54	30	4,271	−11.0	63
550	28	4,789	−18.2	55	30	5,036	−9.7	59	30	5,071	−6.3	----	27	5,046	−9.0	37	29	5,072	−6.9	38	29	4,901	−15.7	60	30	4,934	−15.7	61
500	28	5,492	−22.9	----	30	5,772	−15.2	57	30	5,813	−11.6	----	27	5,777	−13.4	----	29	5,813	−11.9	----	29	5,608	−20.9	64	30	5,646	−21.0	----
450	28	6,260	−27.9	----	30	6,561	−20.6	49	29	6,614	−17.0	----	27	6,579	−18.8	----	29	6,618	−17.4	----	29	6,389	−26.5	----	30	6,420	−26.6	----
400	28	7,093	−33.6	----	30	7,422	−26.9	----	29	7,489	−23.2	----	27	7,437	−25.1	----	29	7,484	−24.0	----	29	7,220	−32.8	----	30	7,256	−32.8	----
350	27	8,016	−40.3	----	30	8,371	−33.8	----	29	8,452	−30.4	----	27	8,392	−32.4	----	29	8,444	−31.1	----	29	8,147	−39.5	----	29	8,191	−39.4	----
300	27	9,051	−47.1	----	30	9,434	−41.9	----	29	9,529	−38.8	----	27	9,460	−40.5	----	29	9,519	−39.1	----	27	9,196	−47.0	----	29	9,229	−46.6	----
250	27	10,243	−52.1	----	30	10,644	−50.9	----	28	10,754	−48.6	----	27	10,677	−49.8	----	28	10,739	−48.2	----	26	10,387	−54.4	----	28	10,429	−53.8	----
200	26	11,674	−53.6	----	29	12,070	−58.7	----	27	12,189	−58.6	----	26	12,106	−58.4	----	25	12,188	−55.6	----	21	11,800	−57.5	----	24	11,825	−57.5	----
175	26	12,533	−53.4	----	26	12,904	−60.3	----	27	13,021	−61.5	----	25	12,934	−60.4	----	19	13,046	−58.5	----	17	12,623	−55.4	----	19	12,664	−56.0	----
150	20	13,525	−52.5	----	19	13,870	−58.8	----	26	13,973	−62.6	----	22	13,888	−61.0	----	15	14,007	−60.1	----	16	13,615	−55.0	----	15	13,631	−55.4	----
125	17	14,702	−54.1	----	9	14,985	−61.3	----	20	15,080	−65.5	----	15	15,097	−63.2	----	5	15,121	−63.4	----	12	14,784	−55.7	----	9	14,783	−56.2	----
100	15	16,126	−56.4	----	----	------	------	----	9	16,410	−69.1	----	9	16,366	−66.2	----	----	------	------	----	6	16,160	−54.9	----	----	------	------	----
80	6	17,540	−57.4	----	----	------	------	----	----	------	------	----	----	------	------	----	----	------	------	----	----	------	------	----	----	------	------	----

Standard pressure surface (mb.)	Brownsville, Tex. (1,014.4 mb.)				Buffalo, N. Y. (989.3 mb.)				Burrwood, La. (1,018.2 mb.)				Caribou, Maine (989.2 mb.)				Charleston, S. C. (1,016.5 mb.)				Ciudad Victoria, Mexico (974.1 mb.)				Clovis, N. Mex. (870.0 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	6	22.4	86	30	221	5.5	66	30	2	20.1	87	30	191	0.0	80	30	14	15.8	82	30	335	25.7	63	30	1,306	17.1	34
1,000	30	129	21.8	86	30	132	(*)	----	30	158	19.6	81	30	103	(*)	----	30	153	16.9	70	30	101	(*)	----	30	91	(*)	----
950	30	582	19.8	74	30	555	4.9	59	30	607	17.4	67	30	516	−0.3	71	30	594	16.1	58	30	556	24.6	61	30	549	(*)	----
900	30	1,041	18.3	59	30	991	2.2	62	30	1,060	15.0	53	30	946	−2.6	73	30	1,049	13.8	55	30	1,027	21.1	64	30	1,018	(*)	----
850	30	1,530	16.5	47	30	1,450	−0.2	62	30	1,543	13.3	44	30	1,397	−5.1	75	30	1,529	11.6	52	30	1,519	17.7	67	30	1,504	18.0	32
800	30	2,044	14.8	40	30	1,933	−2.8	65	30	2,052	11.4	38	30	1,872	−7.0	70	30	2,033	8.9	48	30	2,036	14.4	68	30	2,019	14.4	34
750	30	2,592	12.2	40	30	2,449	−5.1	60	30	2,594	9.3	----	30	2,380	−9.1	66	30	2,571	6.4	42	30	2,583	11.8	62	30	2,564	10.3	36
700	30	3,162	8.7	36	30	2,981	−7.6	53	30	3,159	6.4	----	30	2,905	−11.4	63	30	3,127	2.8	39	30	3,153	8.8	54	30	3,130	5.8	38
650	30	3,774	4.6	37	30	3,564	−10.2	51	30	3,766	2.6	----	30	3,477	−14.1	61	29	3,724	−0.8	42	29	3,763	4.8	53	30	3,732	1.1	41
600	30	4,418	−0.1	39	28	4,165	−14.3	45	30	4,406	−1.3	----	30	4,074	−17.4	58	29	4,361	−4.7	44	29	4,412	0.4	52	30	4,369	−3.8	41
550	30	5,107	−5.0	41	28	4,822	−18.5	----	30	5,091	−5.7	----	30	4,723	−21.1	----	28	5,036	−9.1	44	29	5,101	−4.3	54	30	5,047	−8.9	40
500	30	5,851	−10.1	42	28	5,525	−22.9	----	30	5,835	−10.8	----	30	5,419	−25.6	----	27	5,769	−13.9	----	28	5,850	−9.3	50	30	5,780	−14.1	----
450	30	6,662	−15.2	46	27	6,299	−27.9	----	30	6,641	−16.1	----	30	6,179	−30.8	----	26	6,565	−19.3	----	28	6,661	−14.4	42	30	6,576	−19.9	----
400	30	7,535	−21.4	----	26	7,134	−33.5	----	30	7,516	−22.4	----	30	7,001	−36.6	----	26	7,427	−25.5	----	28	7,537	−20.8	----	30	7,434	−26.3	----
350	30	8,504	−28.7	----	26	8,058	−40.1	----	30	8,481	−29.8	----	30	7,912	−43.4	----	26	8,380	−32.8	----	27	8,512	−28.1	----	30	8,384	−33.6	----
300	30	9,588	−37.0	----	23	9,099	−47.5	----	29	9,566	−38.1	----	30	8,933	−49.7	----	26	9,447	−40.7	----	26	9,600	−36.5	----	30	9,446	−42.0	----
250	28	10,822	−46.8	----	22	10,281	−52.2	----	29	10,795	−47.4	----	30	10,117	−52.4	----	25	10,660	−50.0	----	25	10,839	−46.5	----	30	10,653	−51.5	----
200	27	12,267	−57.1	----	19	11,711	−54.0	----	26	12,239	−56.8	----	28	11,565	−52.2	----	23	12,092	−58.7	----	23	12,286	−57.2	----	30	12,074	−58.4	----
175	26	13,104	−60.8	----	17	12,568	−53.2	----	22	13,083	−59.7	----	28	12,429	−51.6	----	21	12,925	−60.4	----	21	13,126	−61.3	----	28	12,906	−60.4	----
150	25	14,062	−62.9	----	14	13,561	−52.6	----	19	14,039	−60.5	----	28	13,427	−52.2	----	19	13,875	−61.6	----	18	14,079	−64.1	----	25	13,861	−61.2	----
125	19	15,181	−66.1	----	10	14,807	−52.4	----	12	15,172	−63.6	----	22	14,590	−52.9	----	16	14,982	−64.4	----	14	15,198	−67.9	----	11	14,990	−63.3	----
100	8	16,544	−72.5	----	----	------	------	----	----	------	------	----	13	16,036	−54.0	----	11	16,362	−67.7	----	5	16,490	−72.4	----	6	16,338	−64.6	----
80	----	------	------	----	----	------	------	----	----	------	------	----	5	17,468	−55.5	----	----	------	------	----	----	------	------	----	----	------	------	----

See footnotes at end of table.

TABLE 1.—*Mean dynamic height (geopotential) in units of 0.98 dynamic meter, temperature in degrees centigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during April 1946*—Continued

Standard pressure surface (mb.)	Columbia, Mo. (988.8 mb.)				Dodge City, Kans. (924.5 mb.)				El Paso, Tex. (880.9 mb.)				Ely, Nev. (808.5 mb.)				Fort Worth, Tex. (991.0 mb.)				Glasgow, Mont. (937.9 mb.)				Grand Junction, Colo. (852.3 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	234	14.6	63	30	787	14.8	53	30	1,195	21.6	23	30	1,908	8.3	56	30	211	20.0	62	28	648	11.6	38	30	1,474	14.3	41
1,000	30	136	(*)	----	30	111	(*)	----	30	77	(*)	----	30	107	(*)	----	30	133	(*)	----	28	104	(*)	----	30	94	(*)	----
950	30	574	14.1	55	30	556	(*)	----	30	539	(*)	----	30	553	(*)	----	30	581	19.3	57	28	541	(*)	----	30	549	(*)	----
900	30	1,026	11.8	53	30	1,014	15.9	47	30	1,012	(*)	----	30	1,012	(*)	----	30	1,040	16.8	53	28	992	11.3	34	30	1,014	(*)	----
850	30	1,502	9.3	50	30	1,498	13.8	44	30	1,504	20.6	22	30	1,489	(*)	----	30	1,526	14.6	47	27	1,467	7.9	39	30	1,497	14.8	40
800	30	2,002	6.7	64	30	2,007	11.6	39	30	2,023	16.7	24	30	1,996	9.9	49	30	2,037	12.9	33	27	1,964	4.0	46	30	2,008	12.0	38
750	30	2,538	4.6	45	30	2,548	8.4	37	30	2,571	12.1	27	30	2,535	6.3	46	30	2,580	10.1	33	27	2,487	0.0	53	30	2,547	7.7	42
700	30	3,089	1.2	44	30	3,110	4.4	39	30	3,140	7.2	31	30	3,090	1.6	51	30	3,146	6.4	35	27	3,033	−4.0	56	30	3,107	+2.9	47
650	30	3,681	−2.3	47	30	3,710	0.2	42	30	3,742	2.2	36	30	3,684	−3.4	58	30	3,750	2.3	35	27	3,617	−8.5	62	30	3,702	−2.1	52
600	29	4,312	−6.1	48	30	4,345	−4.4	45	30	4,385	−3.0	42	30	4,310	−8.2	59	30	4,391	−2.0	34	25	4,229	−12.6	59	30	4,332	−6.8	54
550	29	4,987	−10.7	47	29	5,026	−9.3	44	30	5,066	−8.2	39	30	4,980	−13.1	54	29	5,075	−6.5	----	25	4,890	−16.6	58	30	5,003	−12.0	56
500	29	5,715	−15.4	42	29	5,756	−14.4	40	30	5,801	−13.1	35	30	5,698	−18.3	48	29	5,814	−11.5	----	23	5,603	−21.6	----	30	5,730	−17.2	55
450	29	6,507	−20.5	----	29	6,552	−20.1	----	30	6,599	−18.7	41	30	6,484	−23.8	----	28	6,617	−17.0	----	23	6,374	−27.1	----	30	6,510	−22.9	----
400	29	7,364	−26.7	----	29	7,408	−26.7	----	30	7,463	−25.1	----	30	7,327	−30.0	----	28	7,486	−23.5	----	22	7,218	−32.6	----	30	7,360	−29.5	----
350	29	8,314	−33.8	----	29	8,357	−34.0	----	30	8,418	−32.1	----	30	8,263	−37.3	----	25	8,446	−30.6	----	21	8,140	−39.8	----	30	8,298	−36.7	----
300	28	9,376	−41.9	----	29	9,418	−42.3	----	28	9,488	−40.7	----	30	9,309	−45.2	----	24	9,520	−39.0	----	20	9,171	−47.8	----	30	9,347	−44.8	----
250	23	10,582	−51.0	----	28	10,632	−51.4	----	28	10,704	−50.1	----	30	10,502	−53.7	----	22	10,744	−48.4	----	16	10,345	−54.5	----	27	10,538	−53.3	----
200	11	12,038	−58.3	----	26	12,056	−59.2	----	27	12,136	−58.0	----	22	11,901	−58.4	----	19	12,183	−57.6	----	14	11,767	−55.8	----	23	11,945	−59.0	----
175	8	12,876	−59.2	----	25	12,893	−59.7	----	24	12,972	−60.0	----	13	12,726	−57.5	----	18	13,023	−59.6	----	11	12,604	−55.3	----	20	12,804	−58.0	----
150	5	13,834	−58.7	----	20	13,867	−59.2	----	22	13,923	−60.6	----	11	13,704	−56.7	----	12	13,987	−58.6	----	6	13,596	−53.2	----	17	13,775	−57.5	----
125	----	----	----	----	12	15,015	−61.4	----	14	15,046	−63.2	----	7	14,824	−59.4	----	5	15,082	−62.2	----	----	----	----	----	12	14,946	−60.6	----
100	----	----	----	----	6	16,411	−63.1	----	5	16,427	−68.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Standard pressure surface (mb.)	Great Falls, Mont. (885.4 mb.)				Green Bay, Wis. (994.6 mb.)				Greensboro, N. C. (984.9 mb.)				Hatteras, N. C. (1,017.4 mb.)				Havana, Cuba [1] (---- mb.)				Huntington, W. Va. (996.7 mb.)				International Falls, Minn. (974.6 mb.)			
Surface	30	1,128	9.7	41	27	182	6.9	62	30	273	13.1	66	30	3	12.9	80	----	----	----	----	30	172	11.5	68	30	343	4.4	65
1,000	30	100	(*)	----	27	135	(*)	----	30	145	(*)	----	30	148	13.3	71	----	----	----	----	30	143	(*)	----	30	132	(*)	----
950	30	540	(*)	----	27	556	6.2	49	30	580	14.2	53	30	582	12.3	58	----	----	----	----	30	576	11.6	57	30	549	5.2	60
900	30	996	(*)	----	27	998	3.7	49	30	1,032	11.7	54	30	1,032	11.0	51	----	----	----	----	30	1,024	9.1	60	30	991	2.3	62
850	30	1,467	8.5	39	27	1,460	0.9	51	30	1,508	9.1	49	30	1,507	8.9	65	----	----	----	----	30	1,495	6.8	60	30	1,450	−0.4	62
800	30	1,964	4.6	43	27	1,945	−0.8	48	30	2,007	5.8	56	30	2,007	6.2	66	----	----	----	----	30	1,991	3.9	53	30	1,933	−3.1	60
750	30	2,489	0.2	52	27	2,467	−2.4	44	29	2,540	2.6	56	30	2,535	3.9	62	----	----	----	----	30	2,518	1.2	53	30	2,449	−5.5	57
700	30	3,035	−4.2	60	27	3,004	−5.8	----	29	3,088	−0.4	48	30	3,089	0.2	57	----	----	----	----	30	3,066	−2.1	52	30	2,980	−7.9	56
650	30	3,617	−8.0	59	26	3,584	−9.0	----	29	3,681	−3.7	46	30	3,683	−3.2	49	----	----	----	----	30	3,653	−5.3	51	30	3,560	−11.3	56
600	30	4,233	−11.9	58	26	4,195	−12.5	----	28	4,302	−7.3	45	30	4,309	−6.7	48	----	----	----	----	30	4,275	−8.9	50	30	4,162	−15.1	58
550	30	4,895	−16.5	54	26	4,857	−16.7	----	28	4,974	−11.7	47	30	4,980	−10.9	----	----	----	----	----	30	4,943	−13.0	50	29	4,819	−18.7	58
500	30	5,603	−21.5	----	25	5,565	−21.6	----	27	5,700	−16.5	49	29	5,703	−15.9	----	----	----	----	----	29	5,663	−17.8	52	28	5,518	−23.5	----
450	30	6,377	−27.3	----	25	6,341	−26.8	----	27	6,486	−21.8	----	28	6,495	−21.2	----	----	----	----	----	29	6,445	−23.1	----	27	6,283	−29.0	----
400	28	7,209	−33.7	----	25	7,173	−32.8	----	27	7,340	−27.9	----	27	7,345	−27.4	----	----	----	----	----	29	7,296	−28.9	----	26	7,110	−34.7	----
350	28	8,131	−40.8	----	23	8,098	−39.7	----	26	8,292	−34.5	----	27	8,295	−34.1	----	----	----	----	----	29	8,238	−35.5	----	25	8,019	−41.4	----
300	26	9,166	−48.4	----	22	9,140	−47.1	----	25	9,358	−42.2	----	27	9,330	−41.6	----	----	----	----	----	28	9,286	−42.9	----	25	9,050	−48.4	----
250	24	10,353	−54.6	----	20	10,334	−53.0	----	25	10,567	−50.8	----	27	10,571	−49.9	----	----	----	----	----	27	10,495	−50.4	----	25	10,234	−53.6	----
200	17	11,749	−56.2	----	20	11,758	−55.1	----	22	11,973	−58.9	----	16	12,052	−57.2	----	----	----	----	----	26	11,925	−57.1	----	23	11,664	−53.4	----
175	10	12,563	−52.5	----	19	12,598	−55.0	----	21	12,805	−60.4	----	12	12,875	−59.9	----	----	----	----	----	24	12,771	−57.8	----	23	12,524	−52.4	----
150	10	13,559	−52.5	----	16	13,579	−55.5	----	17	13,761	−59.4	----	5	13,846	−61.5	----	----	----	----	----	19	13,755	−57.1	----	22	13,525	−52.2	----
125	5	14,696	−50.1	----	15	14,737	−55.7	----	12	14,911	−60.3	----	----	----	----	----	----	----	----	----	14	14,874	−58.1	----	20	14,705	−53.0	----
100	----	----	----	----	10	16,100	−57.5	----	5	16,275	−64.1	----	----	----	----	----	----	----	----	----	6	16,256	−59.4	----	16	16,140	−54.4	----
80	----	----	----	----	5	17,582	−59.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	7	17,542	−56.5	----

Standard pressure surface (mb.)	Joliet, Ill. (996.0 mb.)				Lake Charles, La. (1,017.0 mb.)				Lander, Wyo. (835.5 mb.)				Las Vegas, Nev. (945.7 mb.)				Little Rock, Ark. (1,007.3 mb.)				Mazatlan, Mexico (1,003.6 mb.)				Medford, Oreg. (970.1 mb.)			
Surface	30	178	8.9	67	30	5	19.3	84	30	1,632	10.7	41	30	574	22.1	22	29	79	18.0	70	30	79	23.4	78	30	401	13.2	59
1,000	30	144	(*)	----	30	150	19.6	79	30	99	(*)	----	30	82	(*)	----	29	141	18.8	65	30	110	22.9	74	30	143	(*)	----
950	30	571	9.9	54	30	596	17.4	68	30	546	(*)	----	30	537	(*)	----	29	587	17.5	57	30	568	24.1	34	30	579	12.9	54
900	30	1,017	7.7	53	30	1,052	15.0	64	30	1,005	(*)	----	30	1,002	20.8	22	29	1,042	14.7	59	30	1,030	23.2	28	30	1,029	9.7	58
850	30	1,486	5.3	50	30	1,535	13.6	49	30	1,486	(*)	----	30	1,492	16.6	25	29	1,523	12.5	53	30	1,525	20.6	27	30	1,500	5.9	64
800	30	1,980	3.2	47	30	2,044	11.9	37	30	1,994	10.2	37	30	2,003	12.2	28	29	2,029	9.9	53	30	2,046	17.5	27	30	1,993	2.2	68
750	30	2,502	0.5	49	30	2,590	9.7	33	30	2,531	5.8	42	30	2,542	7.4	32	29	2,571	8.0	41	30	2,596	13.8	25	30	2,515	−1.3	68
700	30	3,051	−2.4	48	30	3,151	6.4	32	30	3,086	1.0	49	30	3,100	2.5	37	29	3,128	4.1	42	30	3,170	9.5	27	30	3,058	−4.5	62
650	30	3,634	−5.6	48	30	3,758	2.6	30	30	3,680	−3.8	53	30	3,696	−2.1	38	29	3,729	0.1	43	30	3,784	4.9	33	30	3,639	−8.0	53
600	30	4,259	−9.5	52	30	4,397	−1.7	30	30	4,304	−8.4	54	30	4,325	−6.7	39	29	4,363	−3.7	45	30	4,427	0.2	35	30	4,255	−11.8	55
550	30	4,924	−13.6	53	30	5,085	−6.4	----	30	4,974	−13.2	51	30	5,001	−11.2	35	29	5,045	−7.8	38	30	5,117	−4.7	39	30	4,916	−15.9	53
500	30	5,645	−18.2	50	30	5,822	−11.5	----	30	5,691	−18.5	52	30	5,722	−16.3	----	29	5,779	−12.9	40	29	5,862	−9.5	41	30	5,628	−20.6	51
450	30	6,428	−23.5	----	30	6,630	−17.2	----	30	6,474	−24.5	----	29	6,510	−22.3	----	29	6,581	−18.4	42	29	6,674	−15.3	41	30	6,403	−26.1	----
400	29	7,278	−29.4	----	30	7,494	−23.6	----	30	7,314	−30.9	----	29	7,359	−28.9	----	29	7,443	−24.6	----	29	7,548	−21.6	----	30	7,241	−32.7	----
350	28	8,215	−36.7	----	30	8,456	−30.8	----	30	8,246	−37.9	----	28	8,299	−36.0	----	29	8,401	−31.9	----	29	8,517	−29.5	----	30	8,167	−39.9	----
300	28	9,265	−44.1	----	30	9,531	−39.1	----	30	9,290	−46.0	----	28	9,352	−43.8	----	29	9,472	−40.0	----	29	9,596	−38.1	----	30	9,201	−47.7	----
250	28	10,466	−52.0	----	30	10,755	−48.8	----	30	10,480	−54.0	----	26	10,563	−52.0	----	28	10,684	−49.6	----	27	10,822	−47.8	----	30	10,384	−54.7	----
200	25	11,877	−57.2	----	28	12,190	−58.6	----	27	11,888	−59.6	----	25	11,990	−58.6	----	28	12,113	−59.0	----	23	12,258	−58.1	----	27	11,802	−59.2	----
175	25	12,720	−57.3	----	26	13,027	−61.7	----	26	12,725	−57.6	----	25	12,829	−58.2	----	25	12,953	−61.8	----	14	13,100	−61.6	----	25	12,647	−57.9	----
150	20	13,711	−57.1	----	24	13,978	−62.3	----	22	13,699	−56.9	----	23	13,803	−58.0	----	19	13,900	−60.4	----	6	14,029	−64.1	----	21	13,630	−55.7	----
125	19	14,863	−58.1	----	18	15,115	−65.7	----	16	14,857	−57.8	----	14	14,961	−60.1	----	15	15,040	−62.0	----	----	----	----	----	15	14,774	−56.8	----
100	10	16,285	−59.9	----	8	16,487	−68.4	----	9	16,230	−59.9	----	10	16,358	−63.2	----	----	----	----	----	----	----	----	----	----	----	----	----

See footnotes at end of table.

TABLE 1.—*Mean dynamic height (geopotential) in units of 0.98 dynamic meter, temperature in degrees centigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during April 1946*—Continued

Standard pressure surface (mb.)	Merida, Mexico (1,010.9 mb.)				Miami, Fla. (1,018.0 mb.)				Nantucket, Mass.[2] (------ mb.)				Nashville, Tenn. (996.1 mb.)				North Platte, Nebr. (917.0 mb.)				Oakland, Calif. (1,017.6 mb.)				Ogden, Utah (864.0 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	28	27	27.1	66	30	4	22.2	76	----	----	----	----	30	180	16.4	63	30	849	12.7	56	30	2	13.8	68	30	1,355	12.3	51
1,000	28	123	26.1	67	30	159	21.8	75	----	----	----	----	30	146	(*)	----	30	108	(*)	----	30	149	12.6	69	30	105	(*)	----
950	28	575	22.8	65	30	603	18.8	73	----	----	----	----	30	583	15.8	56	30	552	(*)	----	30	582	11.7	62	30	552	(*)	----
900	28	1,044	20.2	62	30	1,065	15.9	70	----	----	----	----	30	1,041	13.2	59	30	1,007	15.0	46	30	1,030	10.7	47	30	1,010	(*)	----
850	28	1,535	17.2	65	30	1,549	13.6	57	----	----	----	----	30	1,519	10.4	58	30	1,488	12.3	43	30	1,504	8.7	40	30	1,492	13.1	43
800	28	2,050	13.5	67	30	2,058	11.5	44	----	----	----	----	30	2,022	8.3	50	30	1,993	8.9	46	30	2,003	6.5	32	30	1,999	9.6	43
750	27	2,594	10.0	62	30	2,597	8.9	31	----	----	----	----	30	2,559	5.4	49	30	2,529	5.4	47	30	2,535	3.8	25	30	2,532	5.3	47
700	27	3,162	7.2	46	30	3,163	5.8	28	----	----	----	----	29	3,116	2.5	45	30	3,084	1.6	49	30	3,087	0.3	----	30	3,089	0.7	52
650	26	3,771	4.3	38	30	3,767	2.5	----	----	----	----	----	29	3,714	−1.5	46	30	3,680	−2.5	47	30	3,681	−3.6	----	30	3,679	−3.9	56
600	26	4,416	0.5	35	30	4,408	−1.6	----	----	----	----	----	28	4,346	−5.4	43	30	4,307	−6.8	47	30	4,305	−7.6	----	30	4,306	−8.6	58
550	25	5,108	−3.7	----	29	5,093	−5.9	----	----	----	----	----	28	5,023	−9.6	41	30	4,982	−11.7	52	30	4,977	−12.1	----	30	4,972	−13.4	60
500	25	5,856	−8.3	----	29	5,835	−10.5	----	----	----	----	----	28	5,752	−14.3	----	30	5,703	−16.9	50	28	5,697	−17.5	----	30	5,693	−18.7	57
450	25	6,672	−13.9	----	28	6,641	−15.7	----	----	----	----	----	28	6,549	−19.5	----	30	6,494	−22.2	----	28	6,487	−23.3	----	30	6,473	−24.6	----
400	25	7,552	−20.4	----	28	7,518	−21.8	----	----	----	----	----	28	7,409	−25.6	----	30	7,340	−28.2	----	28	7,333	−29.7	----	30	7,317	−30.7	----
350	25	8,525	−28.0	----	28	8,485	−29.7	----	----	----	----	----	28	8,362	−32.5	----	30	8,284	−35.4	----	28	8,271	−36.6	----	30	8,251	−37.9	----
300	23	9,612	−36.7	----	28	9,564	−38.3	----	----	----	----	----	28	9,431	−40.3	----	30	9,339	−43.3	----	28	9,322	−44.2	----	30	9,295	−45.7	----
250	21	10,848	−46.5	----	28	10,792	−48.2	----	----	----	----	----	27	10,649	−49.2	----	28	10,542	−52.5	----	28	10,524	−51.8	----	29	10,494	−53.5	----
200	18	12,289	−56.8	----	28	12,226	−58.5	----	----	----	----	----	24	12,085	−56.7	----	22	11,947	−59.4	----	26	11,945	−56.6	----	28	11,908	−59.0	----
175	7	13,120	−61.9	----	25	13,060	−61.6	----	----	----	----	----	20	12,926	−58.2	----	18	12,761	−59.4	----	23	12,788	−56.0	----	25	12,749	−56.9	----
150	----	----	----	----	24	14,006	−64.5	----	----	----	----	----	14	13,872	−58.3	----	14	13,733	−58.4	----	17	13,774	−55.5	----	24	13,725	−57.0	----
125	----	----	----	----	13	15,119	−67.5	----	----	----	----	----	10	14,980	−59.2	----	9	14,898	−59.0	----	11	14,952	−56.3	----	19	14,856	−57.2	----
100	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	11	16,254	−58.7	----

Standard pressure surface (mb.)	Oklahoma City, Okla. (969.7 mb.)				Omaha, Nebr. (979.8 mb.)				Phoenix, Ariz. (971.6 mb.)				Pittsburgh, Pa. (971.9 mb.)				Portland, Maine (1,011.2 mb.)				Rapid City, S. Dak. (902.5 mb.)				St. Paul, Minn. (989.0 mb.)			
Surface	30	391	17.5	62	30	308	14.9	55	30	339	23.4	32	29	382	9.2	53	30	20	3.0	77	30	981	10.6	52	30	225	10.4	55
1,000	30	125	(*)	----	30	133	(*)	----	30	85	(*)	----	29	143	(*)	----	30	111	(*)	----	30	109	(*)	----	30	132	(*)	----
950	30	566	18.1	58	30	573	14.3	54	30	536	25.8	24	29	574	8.7	51	30	526	2.2	71	30	550	(*)	----	30	564	9.6	49
900	30	1,028	15.9	53	30	1,023	11.8	54	30	1,008	22.1	25	29	1,015	6.3	51	30	961	−0.2	73	30	1,004	11.6	50	30	1,006	6.8	50
850	30	1,512	13.9	49	30	1,499	8.7	54	30	1,500	17.9	28	29	1,481	3.4	53	30	1,416	−2.8	74	30	1,482	10.6	45	30	1,473	4.1	49
800	30	2,021	11.5	43	30	1,998	6.1	50	30	2,014	13.4	31	29	1,971	1.4	45	30	1,895	−5.1	72	30	1,983	6.7	50	30	1,964	1.0	47
750	30	2,559	8.5	41	30	2,529	3.4	47	20	2,555	8.9	34	29	2,493	−1.1	47	30	2,403	−7.1	62	30	2,516	2.8	54	30	2,487	−1.7	49
700	30	3,124	5.0	39	30	3,082	0.2	51	30	3,118	4.3	39	29	3,037	−3.6	44	30	2,936	−9.6	59	30	3,064	−1.0	50	30	3,026	−4.6	51
650	30	3,727	1.1	37	30	3,673	−3.7	55	30	3,719	−0.3	39	28	3,618	−6.9	40	29	3,513	−12.1	59	30	3,656	−5.1	54	30	3,611	−7.7	45
600	30	4,364	−3.4	39	30	4,300	−7.7	49	30	4,351	−5.0	40	28	4,236	−10.8	46	29	4,115	−15.4	62	30	4,275	−9.4	56	29	4,226	−11.1	----
550	28	5,046	−8.1	35	30	4,972	−12.0	47	30	5,028	−9.7	----	28	4,901	−15.3	55	29	4,767	−19.0	58	30	4,945	−14.0	53	29	4,892	−15.2	----
500	28	5,780	−13.2	----	30	5,694	−16.9	42	30	5,758	−14.8	----	28	5,613	−20.0	58	29	5,470	−23.8	----	30	5,658	−18.9	53	29	5,603	−19.9	----
450	26	6,578	−18.9	----	29	6,483	−22.4	----	29	6,551	−20.7	----	26	6,395	−25.0	----	28	6,233	−29.3	----	30	6,441	−24.4	----	28	6,395	−25.1	----
400	26	7,438	−25.0	----	29	7,334	−28.5	----	29	7,406	−27.5	----	26	7,235	−30.8	----	27	7,059	−35.3	----	30	7,281	−30.8	----	27	7,237	−31.3	----
350	25	8,396	−32.1	----	28	8,278	−35.6	----	29	8,352	−34.6	----	26	8,169	−37.4	----	27	7,976	−41.5	----	30	8,215	−38.0	----	27	8,170	−38.0	----
300	25	9,466	−40.2	----	28	9,333	−43.1	----	29	9,411	−42.6	----	26	9,216	−44.9	----	27	9,008	−47.7	----	30	9,258	−46.0	----	27	9,214	−45.8	----
250	23	10,684	−49.7	----	27	10,550	−51.6	----	29	10,617	−51.7	----	24	10,428	−51.3	----	26	10,197	−52.2	----	30	10,447	−53.9	----	26	10,414	−53.7	----
200	22	12,118	−57.8	----	25	11,965	−58.6	----	24	12,041	−58.8	----	21	11,848	−56.3	----	25	11,637	−53.2	----	28	11,855	−59.3	----	23	11,823	−57.2	----
175	21	12,960	−59.7	----	21	12,803	−59.0	----	20	12,877	−59.4	----	19	12,696	−55.8	----	22	12,485	−51.5	----	24	12,698	−58.5	----	21	12,666	−55.5	----
150	16	13,911	−59.6	----	15	13,790	−57.9	----	15	13,853	−58.9	----	16	13,673	−55.4	----	20	13,482	−51.8	----	16	13,660	−57.1	----	17	13,645	−54.6	----
125	12	15,049	−60.7	----	13	14,952	−58.8	----	10	14,991	−60.3	----	11	14,805	−55.8	----	16	14,652	−52.5	----	8	14,772	−56.6	----	16	14,797	−55.6	----
100	6	16,446	−63.9	----	----	----	----	----	5	16,344	−64.4	----	8	16,232	−57.9	----	9	16,094	−54.0	----	----	----	----	----	10	16,219	−56.8	----
80	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	6	17,632	58.2	----

Standard pressure surface (mb.)	San Antonio, Tex. (987.9 mb.)				San Juan, P. R. (1,015.6 mb.)				Santa Maria, Calif. (1,008.4 mb.)				Sault Ste. Marie, Mich. (989.2 mb.)				Spokane, Wash. (945.7 mb.)				Swan Island, W. I. (1,013.9 mb.)				Tacubaya, Mexico (774.4 mb.)			
Surface	29	240	21.0	69	29	15	24.4	79	30	71	12.1	79	30	221	1.8	77	30	598	10.3	63	30	10	25.3	80	30	2,306	16.9	53
1,000	29	133	(*)	----	29	150	23.4	79	30	141	11.3	79	30	133	(*)	----	30	128	(*)	----	30	131	24.3	81	30	59	(*)	----
950	29	578	19.8	66	29	596	19.9	82	30	581	12.2	66	30	552	1.5	70	30	563	(*)	----	30	582	20.8	81	30	520	(*)	----
900	29	1,043	17.6	65	29	1,061	16.7	79	30	1,025	12.7	46	30	981	−0.2	66	30	1,009	8.4	55	30	1,047	18.2	73	30	1,001	(*)	----
850	29	1,531	15.7	57	29	1,547	14.2	69	30	1,503	10.2	41	30	1,437	−2.3	64	30	1,478	4.7	59	30	1,534	15.4	66	30	1,498	(*)	----
800	29	2,044	13.8	47	29	2,057	11.7	63	30	2,004	7.1	38	30	1,917	−4.1	62	30	1,968	0.6	66	30	2,046	12.5	60	30	2,028	(*)	----
750	29	2,589	11.2	42	29	2,598	9.8	37	30	2,537	4.2	28	30	2,429	−6.3	58	30	2,484	−3.3	69	30	2,589	9.4	55	30	2,582	14.7	51
700	29	3,158	8.1	34	29	3,165	7.2	----	30	3,089	0.9	----	30	2,961	−9.0	58	30	3,025	−6.9	68	30	3,154	6.4	48	30	3,158	10.3	54
650	29	3,765	4.0	36	28	3,772	4.2	----	30	3,683	−3.0	----	30	3,540	−11.6	51	30	3,602	−10.4	65	30	3,764	3.5	37	30	3,774	5.4	62
600	29	4,410	−0.8	41	27	4,418	0.8	----	30	4,309	−7.3	----	30	4,140	−15.0	48	30	4,212	−14.2	63	30	4,405	0.7	29	30	4,419	0.3	69
550	29	5,094	−5.6	40	27	5,110	−3.3	----	30	4,978	−11.9	----	30	4,799	−18.8	48	30	4,869	−18.2	67	30	5,099	−3.1	25	30	5,111	−4.8	73
500	29	5,839	−10.5	33	27	5,859	−7.6	----	30	5,701	−17.0	----	30	5,497	−23.5	----	30	5,571	−23.0	----	30	5,848	−7.5	----	30	5,855	−9.3	68
450	28	6,649	−15.8	----	27	6,680	−12.6	----	30	6,487	−22.8	----	30	6,266	−29.0	----	30	6,342	−28.6	----	30	6,673	−12.7	----	29	6,673	−14.2	56
400	27	7,521	−21.8	----	27	7,560	−18.8	----	30	7,337	−29.1	----	30	7,094	−34.8	----	30	7,168	−34.6	----	30	7,550	−19.2	----	29	7,550	−20.1	43
350	27	8,489	−29.1	----	27	8,541	−25.9	----	30	8,277	−36.4	----	30	8,012	−41.4	----	30	8,088	−40.9	----	30	8,528	−26.9	----	29	8,525	−27.7	----
300	26	9,570	−37.5	----	27	9,638	−34.2	----	30	9,328	−43.8	----	30	9,043	−47.8	----	30	9,119	−48.1	----	30	9,621	−35.1	----	28	9,614	−36.4	----
250	24	10,803	−46.5	----	27	10,888	−44.1	----	29	10,535	−52.0	----	28	10,235	−52.1	----	29	10,296	−54.9	----	29	10,867	−44.7	----	28	10,852	−46.2	----
200	24	12,252	−55.7	----	27	12,347	−55.5	----	25	11,967	−57.4	----	25	11,669	−52.9	----	23	11,684	−56.0	----	28	12,325	−56.1	----	23	12,300	−57.0	----
175	21	13,091	−58.4	----	26	13,185	−62.0	----	21	12,807	−58.0	----	25	12,531	−52.2	----	21	12,534	−54.1	----	24	13,170	−61.5	----	12	13,140	−61.7	----
150	18	14,044	−60.4	----	20	14,127	−67.9	----	17	13,788	−57.4	----	24	13,533	−51.8	----	17	13,532	−52.4	----	19	14,109	−67.1	----	----	----	----	----
125	14	15,176	−62.8	----	8	15,203	−71.8	----	12	14,956	−59.8	----	19	14,715	−53.0	----	13	14,709	−53.5	----	7	15,202	−71.4	----	----	----	----	----
100	6	16,524	−67.7	----	----	----	----	----	8	16,360	−62.0	----	14	16,151	−54.9	----	9	16,130	−53.9	----	----	----	----	----	----	----	----	----

See footnotes at end of table.

TABLE 1.—*Mean dynamic height (geopotential) in units of 0.98 dynamic meter, temperature in degrees centigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during April 1946*—Continued

Standard pressure surface (mb.)	Tampa, Fla. (1,018.7 mb.)				Tatoosh Island, Wash. (1,014.6 mb.)				Toledo, Ohio (994.0 mb.)				Washington, D. C. (1,013.7 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	3	20.5	79	30	31	7.5	85	30	191	7.8	65	30	25	12.6	57
1,000	30	163	20.1	72	30	150	6.6	86	30	140	(*)	----	30	138	12.1	52
950	30	607	17.9	61	30	573	3.8	86	30	564	8.0	54	30	567	9.9	51
900	30	1,055	15.7	56	30	1,007	1.2	83	30	1,009	5.7	53	30	1,014	7.1	54
850	30	1,549	13.7	43	30	1,466	−1.4	80	30	1,474	3.3	54	30	1,482	4.6	55
800	30	2,057	11.4	39	30	1,946	−3.8	70	30	1,964	1.2	47	30	1,974	2.4	54
750	30	2,597	8.7	34	30	2,458	−6.7	66	30	2,487	−1.2	46	30	2,497	−0.4	55
700	30	3,165	5.5	----	30	2,988	−9.8	64	30	3,028	−3.9	44	30	3,042	−3.5	57
650	30	3,763	2.3	----	30	3,563	−12.5	55	30	3,613	−7.0	36	29	3,628	−6.6	52
600	30	4,403	−1.7	----	30	4,164	−15.9	59	30	4,230	−10.3	37	29	4,245	−10.2	49
550	30	5,087	−6.1	----	30	4,817	−19.9	65	30	4,899	−14.5	42	28	4,912	−14.2	49
500	30	5,829	−11.0	----	30	5,516	−24.3	----	30	5,611	−19.4	48	27	5,618	−19.2	51
450	30	6,635	−16.6	----	30	6,282	−28.9	----	30	6,391	−25.0	----	27	6,399	−24.5	----
400	30	7,503	−23.1	----	28	7,116	−34.5	----	30	7,233	−31.1	----	27	7,241	−30.6	----
350	30	8,468	−30.4	----	28	8,036	−40.9	----	28	8,163	−37.8	----	27	8,176	−37.6	----
300	29	9,519	−38.9	----	25	9,059	−47.7	----	28	9,207	−45.4	----	27	9,224	−44.8	----
250	29	10,767	−48.7	----	24	10,242	−54.2	----	26	10,421	−52.3	----	27	10,422	−51.9	----
200	28	12,200	−59.0	----	19	11,655	−56.0	----	23	11,850	−57.4	----	25	11,843	−56.9	----
175	27	13,028	−62.3	----	15	12,490	−53.1	----	22	12,691	−56.6	----	21	12,671	−56.9	----
150	23	13,972	−63.7	----	12	13,503	−52.5	----	15	13,671	−55.0	----	17	13,626	−55.5	----
125	11	15,081	−67.2	----	8	14,712	−53.2	----	11	14,858	−56.6	----	14	14,810	−57.0	----
100	----	------	------	----	----	------	------	----	----	------	------	----	10	16,206	−60.3	----

[1] Data not yet received.
[2] Insufficient observations.
*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 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 April 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.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	30	156	3.1	30	222	2.7	29	255	1.8	30	272	2.6	30	253	2.6	30	346	1.9
500	----	----	----	----	----	----	29	266	2.1	----	----	----	----	----	----	----	----	----
1,000	30	161	2.8	----	----	----	29	268	3.4	----	----	----	30	285	2.9	30	345	2.0
1,500	28	192	2.4	----	----	----	29	269	4.6	30	277	3.7	29	275	3.9	30	310	1.8
2,000	28	245	3.0	30	239	3.3	27	285	5.4	30	270	5.6	29	275	6.2	30	277	2.4
2,500	28	243	4.5	30	245	3.1	21	292	6.7	30	257	4.8	27	277	7.9	29	243	4.4
3,000	28	249	6.0	30	242	3.6	18	292	6.2	28	262	7.5	25	279	9.8	26	243	5.4
4,000	26	254	8.5	28	257	4.8	14	293	8.1	26	268	11.0	18	297	11.5	24	253	8.0
5,000	23	258	9.0	22	270	7.4	12	301	10.9	21	273	13.2	15	293	12.9	21	257	9.5
6,000	20	262	11.0	21	256	10.8	12	299	14.3	17	271	13.3	14	290	15.2	19	261	11.4
8,000	13	262	13.2	20	253	12.0	----	----	----	11	277	16.5	13	281	21.7	13	258	15.8
10,000	----	----	----	18	250	15.5	----	----	----	----	----	----	----	----	----	----	----	----

Altitude (meters) m. s. l.	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
Surface	30	125	5.7	30	257	4.3	28	277	1.5	29	229	1.5	29	259	1.0	30	103	0.4	30	23	1.4
500	30	137	6.9	30	264	5.8	28	272	3.1	29	230	3.4	29	257	2.1	----	----	----	----	----	----
1,000	24	151	6.6	29	267	7.4	28	280	4.5	29	263	4.9	29	258	3.4	----	----	----	----	----	----
1,500	20	174	3.5	23	270	8.4	24	286	6.7	26	275	7.2	25	265	5.7	----	----	----	30	205	2.5
2,000	18	184	2.0	19	284	8.1	17	278	7.7	24	292	8.6	21	290	7.5	30	153	0.4	30	210	2.8
2,500	16	231	2.7	14	303	9.1	13	292	9.5	22	293	9.0	19	292	8.1	30	217	0.9	30	301	3.2
3,000	15	276	2.4	12	303	9.8	12	297	12.1	22	292	9.2	18	297	9.6	26	261	1.8	30	222	3.8
4,000	14	255	4.1	----	----	----	----	----	----	17	300	10.8	----	----	----	26	247	6.2	30	246	5.7
5,000	13	259	4.1	----	----	----	----	----	----	15	298	12.9	----	----	----	21	272	10.3	25	254	6.5
6,000	11	263	5.4	----	----	----	----	----	----	14	300	15.9	----	----	----	17	278	15.4	18	254	10.5
8,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	11	295	14.4	----	----	----
10,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Altitude (meters) m. s. l.	Ely, Nev. (1,910 m.)			Grand Junction, Colo. (1,413 m.)			Greensboro, N. C. (271 m.)			Havre, Mont. (767 m.)			Jacksonville, Fla. (16 m.)			Joliet, Ill. (178 m.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	30	217	2.2	29	242	2.5	28	251	2.5	29	266	3.1	29	100	1.1	30	237	0.9
500	----	----	----	----	----	----	28	248	3.4	----	----	----	29	245	0.9	30	263	1.9
1,000	----	----	----	----	----	----	28	246	4.9	29	267	4.6	27	258	2.2	29	248	3.3
1,500	----	----	----	29	242	2.3	27	256	4.1	29	266	5.0	27	263	3.1	29	267	6.3
2,000	30	216	2.5	29	260	1.9	25	276	7.4	29	261	6.4	27	276	4.0	27	279	7.3
2,500	30	215	2.8	29	231	2.4	24	287	9.9	26	257	8.8	27	282	6.1	25	288	8.5
3,000	27	214	2.8	28	227	3.4	22	290	11.9	20	259	10.3	24	278	6.8	22	296	11.0
4,000	24	232	4.2	22	256	5.0	19	302	14.2	16	259	12.5	21	290	7.9	16	313	12.6
5,000	22	248	6.1	17	258	7.3	17	299	16.2	----	----	----	19	294	10.3	13	304	16.0
6,000	18	251	9.0	16	266	10.2	13	312	16.3	----	----	----	18	295	12.7	----	----	----
8,000	14	269	9.5	----	----	----	----	----	----	----	----	----	15	301	15.7	----	----	----
10,000	12	263	15.6	----	----	----	----	----	----	----	----	----	12	298	18.5	----	----	----

Altitude (meters) m. s. l.	Las Vegas, Nev. (573 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
Surface	30	178	1.3	27	192	2.1	30	317	1.7	30	119	3.7	30	199	2.4	29	247	1.4	28	289	2.4
500	----	----	----	27	205	2.7	30	311	2.0	30	111	3.6	30	205	3.0	29	234	2.5	28	278	5.8
1,000	30	189	2.3	27	215	3.1	30	294	2.1	29	90	0.9	27	236	1.6	29	245	3.9	26	289	8.9
1,500	30	194	2.2	24	240	3.5	30	234	2.7	29	294	0.5	24	246	1.9	29	262	5.8	25	292	9.4
2,000	30	203	2.7	22	253	4.7	28	211	3.6	27	276	2.0	24	243	2.1	28	270	6.8	20	310	10.9
2,500	30	218	3.4	20	262	6.6	27	207	4.4	25	276	3.0	22	246	2.3	28	277	8.3	17	314	15.8
3,000	30	221	4.0	20	263	7.1	26	215	4.9	24	262	2.8	20	253	4.3	26	274	9.5	15	316	18.1
4,000	27	225	6.1	20	269	9.5	20	238	8.1	18	296	3.4	15	277	5.5	24	279	11.9	11	317	19.6
5,000	26	236	7.7	18	285	11.9	19	247	9.7	17	281	4.4	----	----	----	22	285	15.6	----	----	----
6,000	23	246	8.9	15	298	12.8	16	261	11.3	17	289	7.5	----	----	----	15	294	14.7	----	----	----
8,000	21	242	12.7	15	296	17.4	13	261	13.2	14	286	14.4	----	----	----	----	----	----	----	----	----
10,000	14	251	15.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

TABLE 2.—*Free-air resultant winds based on pilot balloon observations made near 5 p. m., E. S. T. (2200 G. C. T.) during April 1946. Directions given in degrees from north (N=360°, E=90°, S=180°, W=270°). Velocities in meters per second*—Continued

	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. (15 m.)			Sault Ste. Marie, Mich. (225 m.)			Seattle, Wash. (116 m.)			Spokane, Wash. (603 m.)			Washington, D. C. (24 m.)		
Surface	30	262	5.4	29	180	2.5	29	223	1.0	30	235	0.8	30	10	1.7	29	7	0.4	30	299	1.7	30	124	2.7	29	263	3.9	26	280	3.1	29	225	2.8	29	229	2.8	28	272	3.1
500	30	288	3.4	29	184	2.6	29	206	1.2	30	240	1.1				29	290	1.2	30	290	1.7	30	138	3.5	29	281	2.8	26	278	4.2	29	224	4.6				28	282	5.0
1,000	27	304	2.4	27	183	3.0	29	213	1.4	30	234	1.5	30	9	1.7	28	257	2.6	28	311	2.9	30	141	3.2	25	268	1.7	25	278	4.2	27	218	5.2	29	227	4.7	27	280	5.9
1,500	26	235	1.6	26	214	3.8	27	237	2.4	30	214	1.9	30	317	2.9	27	256	4.1	27	291	4.2	28	154	3.0	25	261	1.4	23	294	6.1	26	216	5.4	29	230	5.7	26	287	9.0
2,000	26	237	2.2	23	247	5.2	25	271	2.3	30	202	3.0	30	284	3.4	26	268	6.9	25	292	5.6	25	187	3.7	25	251	1.6	22	298	6.7	21	220	6.6	26	236	6.2	26	296	11.9
2,500	25	244	2.9	23	257	7.0	25	277	5.3	30	200	4.0	28	262	4.9	23	284	9.2	23	304	9.7	22	207	3.2	23	276	2.1	18	294	7.7	18	238	7.6	20	228	9.0	25	302	15.0
3,000	24	242	3.8	21	272	8.0	25	287	8.4	29	207	4.4	26	267	7.0	20	291	10.8	21	306	12.0	21	220	2.5	21	274	3.9	14	301	8.9	16	246	8.2	16	234	7.8	21	302	16.8
4,000	22	240	4.0	20	276	9.5	21	289	13.1	27	228	5.1	25	278	11.7	19	288	14.2	19	307	15.6	19	248	4.1	21	258	5.6	10	319	13.5							16	301	22.0
5,000	20	253	6.3	20	278	10.8	19	296	15.3	26	245	5.5	20	282	17.7	15	296	16.5	15	306	17.1	17	288	5.9	18	249	8.4										13	301	23.9
6,000	19	257	6.7	16	284	10.7	17	295	16.8	23	247	6.0	17	281	20.0	10	308	20.4	11	307	18.6	16	265	7.1	18	244	10.7										13	300	27.6
8,000	17	260	12.1	11	292	10.8				22	256	9.1										13	261	11.8	12	251	16.3												
10,000	11	242	13.1							13	265	8.4																											
12,000										10	262	11.3																											

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

Section	Surface to 2,500 meters (m. s. l.)					Above 2,500 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]	40.0	NNW.	2,164	17	Albany, N. Y.	42.4	NNW.	4,816	7	Philipsburg, Pa.	64.8	NW.	9,477	19	Caribou, Maine.
East-Central [2]	43.3	NW.	2,500	5	Lynchburg, Va.	49.2	WNW.	4,705	4	Knoxville, Tenn.	68.4	W.	15,204	17	Richmond, Va.
Southeast [3]	33.3	W.	2,266	12	Jacksonville, Fla.	47.2	NW.	4,657	27	Spartanburg, S. C.	65.0	WNW.	16,001	29	Charleston, S. C.
North-Central [4]	59.4	SW.	1,362	19	Alpena, Mich.	58.8	WNW.	4,892	2	Milwaukee, Wis.	68.7	NW.	8,407	18	Marquette, Mich.
Central [5]	46.0	WSW.	1,405	1	Kansas City, Mo.	44.0	NNW.	5,000	26	Columbia, Mo.	80.0	WSW.	11,170	4	Columbia, Mo.
South-Central [6]	37.4	SW.	1,068	1	Oklahoma City, Okla.	40.6	WNW.	4,680	30	San Antonio, Tex.	75.2	WNW.	17,824	1	Waco, Tex.
Northwest [7]	37.0	W.	1,474	26	Great Falls, Mont.	57.5	WSW.	2,900	17	Glasgow, Mont.	69.9	SW.	11,733	25	Tatoosh Island, Wash.
						46.7	NW.	2,867	3	Cheyenne, Wyo.					
West-Central [8]	43.2	WNW.	2,500	3	Cheyenne, Wyo.	46.7	SW.	3,619	29	Elko, Nev.	67.2	W.	10,196	9	Pueblo, Colo.
Southwest [9]	42.2	W.	2,500	7	Raton, N. Mex.	51.5	WSW.	5,000	1	Raton, N. Mex.	80.6	WSW.	7,437	1	Raton, N. Mex.

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

RIVER STAGES AND FLOODS FOR APRIL 1946

By C. R. JORDAN

Precipitation during April was below normal over most of the country, with large areas receiving less than one-half of the usual amount. Many stations had less than one-fourth of their normal rainfall. The exceptions to the below-normal precipitation were the Carolinas; southern Texas; Arkansas, southern Missouri, and western Tennessee; northern New England; the coastal area of Washington; and a few scattered areas in Nevada, Arizona, and Colorado.

There was no extensive flooding during the month. High stages in some streams were carried over from March, and there was some overflow in Idaho due to early snow melt.

Atlantic Slope and East Gulf of Mexico drainage.—Several stations in the Southeastern States were a little above flood stage during the first days of the month, but precipitation was light during April, and practically all of the streams fell below flood stage during the first week. Heavy rains fell in southern Alabama on the 24th and 25th, resulting in very light overflow of the lower Choctawhatchee River. The lower Tombigbee and Pearl Rivers fell below flood stage for the first time since January.

Mississippi System.—The Mississippi River was in moderate flood at the beginning of April from Gordons Ferry, Iowa, to Grafton, Ill., but fell steadily and was within its banks in a few days. Flood stages were reached at numerous stations scattered throughout the Mississippi Basin.

Rivers in the Yazoo Basin fell below flood stage for the first time since January. They were at moderate stages at the beginning of January; as a result of general rains averaging about 8 inches from January 3–11, there were rapid rises, with flood stage reached at Swan Lake, Miss., on the 7th, at Greenwood on the 14th, and at Yazoo City on the 15th. For the 3 months, January, February, and March, rainfall over the Yazoo Basin averaged more than 25 inches and was fairly well distributed throughout the period, so that flood stage or above was maintained for 102 consecutive days at Swan Lake, 54 days at Greenwood, and 104 days at Yazoo City. Following the heavy rains of February 9–10, the stage at Greenwood reached a peak of 39.8 feet on February 17, the second highest gage reading of record for that place.

The total area overflowed in the Yazoo and Big Black Basins amounted to approximately one and one-fourth million acres, of which an estimated 300,000 acres was cultivable land. As there was little agricultural activity at the time of this flood, the loss of growing or of prospective crops was not large. While much land was still under water at the close of April, a considerable area