METEOROLOGICAL AND CLIMATOLOGICAL DATA FOR MAY 1944

[Climate and Crop Weather Division, J. B. KINCER, in charge]

AEROLOGICAL OBSERVATIONS

TABLE 1.—*Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during May 1944*

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL

Altitude (meters) m. s. l.	Albany, N. Y. (86 m.)				Albuquerque, N. Mex. (1,620 m.)				Apalachicola, Fla. (5 m.)				Atlanta, Ga. (300 m.)				Big Spring, Tex. (774 m.)				Bismarck, N. Dak. (505 m.)				Boise, Idaho (868 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	1,007	15.5	71	31	836	18.7	28	31	1,018	21.8	84	31	984	20.9	70	31	925	21.9	48	30	953	15.1	66	31	913	16.1	45
500	31	960	15.8	62					31	962	20.4	62	31	962	21.0	59												
1,000	31	905	13.5	61					31	908	17.8	56	31	908	17.9	60	31	901	21.6	44	30	899	14.1	57	31	899	16.5	37
1,500	31	853	10.9	61					31	856	14.4	59	31	856	14.2	63	31	850	18.0	44	30	847	10.9	60	31	848	13.2	36
2,000	31	802	7.8	61	31	799	16.8	26	31	806	11.3	55	31	807	11.1	64	31	801	14.8	44	30	798	7.3	61	31	798	9.1	40
2,500	31	755	4.9	60	31	753	12.7	29	31	759	8.4	47	31	759	7.5	62	31	755	11.2	45	30	750	4.0	59	31	751	4.9	45
3,000	31	710	2.3	54	31	709	8.4	34	31	714	5.7	36	31	714	4.7	55	31	711	7.4	45	30	705	.9	55	31	706	.9	51
4,000	31	626	−3.4	49	31	627	−.5	48	31	631	.1	29	30	631	−1.3	48	31	629	−.1	48	29	622	−5.6	55	30	622	−6.5	58
5,000	31	551	−9.1	40	31	553	−9.0	63	31	557	−5.8	31	30	556	−6.9	40	31	554	−7.5	46	28	547	−11.3	47	29	547	−12.9	61
6,000	31	484	−15.4	39	29	485	−16.1	69	31	489	−12.2	29	29	488	−12.9	36	31	486	−14.2	39	28	480	−17.7		29	479	−19.8	52
7,000	31	423	−22.1	41	29	424	−22.9	49	31	428	−19.4	32	29	428	−20.4	42	31	426	−21.4	46	28	419	−25.3		28	418	−27.2	45
8,000	31	368	−29.6	46	29	369	−30.3		31	374	−27.1	36	27	373	−27.8	41	31	370	−28.9	49	28	364	−32.8		28	363	−34.5	
9,000	31	319	−37.0		27	320	−37.9		31	324	−34.8	43	27	324	−35.4		31	321	−36.8	51	27	314	−40.4		28	314	−41.8	
10,000	31	276	−44.7		27	276	−45.4		31	280	−42.5		26	280	−43.0		30	278	−44.4		26	271	−47.3		27	270	−48.7	
11,000	31	237	−52.2		26	237	−52.7		30	241	−49.5		25	241	−50.1		30	239	−51.9		25	233	−53.5		23	232	−53.2	
12,000	27	203	−58.5		24	202	−57.8		26	207	−55.5		22	207	−56.7		30	204	−58.7		22	199	−57.3		22	199	−56.7	
13,000	18	174	−63.6		12	172	−59.8		21	177	−60.1		14	177	−62.3		28	174	−61.5		17	170	−58.3		18	170	−56.3	
14,000	12	147	−64.1		6	147	−57.8		15	151	−62.7		11	151	−65.0		19	148	−62.0		17	145	−56.4		11	144	−53.9	
15,000	6	125	−61.7						7	129	−64.9						10	125	−62.6		14	123	−55.8		5	123	−54.9	
16,000																	6	107	−63.6		12	106	−57.1		5	106	−56.2	

Altitude (meters) m. s. l.	Brownsville, Tex. (6 m.)				Buffalo, N. Y. (221 m.)				Caribou, Maine (191 m.)				Charleston, S. C.[2] (14 m.)				Denver, Colo. (1616 m.)				Dodge City, Kans. (787 m.)				El Paso, Tex. (1195 m.)			
Surface	31	1,013	23.8	85	31	992	15.3	76	29	994	10.4	66	31	1,018	20.0	91	31	836	14.3	53	27	922	17.2	78	31	879	23.1	23
500	31	957	20.6	81	31	960	15.3	67	29	958	11.2	53	31	963	19.9	72												
1,000	31	904	19.1	62	31	905	13.2	62	29	903	9.0	54	31	908	17.2	64					27	900	18.4	64				
1,500	31	852	17.7	44	31	852	10.5	61	29	850	5.9	58	31	856	14.0	61					27	849	16.1	54	31	850	22.2	33
2,000	31	803	14.9	40	31	802	7.9	59	29	798	2.5	65	31	806	11.2	59	31	798	13.0	45	27	800	12.9	53	31	801	18.1	24
2,500	31	757	12.2	34	31	754	4.5	63	29	750	−.4	64	31	759	8.3	57	31	752	9.4	45	27	753	9.2	54	31	755	13.8	27
3,000	31	713	9.1	32	31	710	2.1	58	29	704	−2.9	59	31	715	5.8	52	31	708	5.3	50	27	709	5.4	52	31	711	9.5	31
4,000	31	631	1.9	33	31	626	−3.4	55	29	620	−8.0	49	30	632	−.1	49	31	625	−2.5	62	26	626	−1.9	49	31	629	.8	43
5,000	31	557	−5.1	38	31	551	−9.1	51	29	545	−13.8	40	29	557	−6.1	46	31	550	−10.0	69	26	551	−8.8	45	31	555	−6.9	45
6,000	31	490	−11.9	41	30	484	−15.0	44	29	477	−21.0	36	28	489	−12.4	40	31	483	−17.0	65	26	484	−15.4	45	30	487	−14.0	38
7,000	30	429	−19.0	42	30	423	−22.1	48	29	416	−28.2	44	28	429	−19.4	36	30	422	−24.4	55	26	423	−22.6	41	30	426	−21.1	
8,000	30	374	−26.3	43	30	368	−29.3	51	29	361	−35.2		26	375	−26.4	39	29	366	−32.2	52	26	368	−29.8	41	30	372	−28.9	
9,000	30	325	−33.7	50	30	319	−36.9		29	312	−42.1		24	325	−34.1	41	27	316	−40.2		24	319	−37.3	45	30	322	−36.7	
10,000	30	282	−41.2		30	276	−44.6		29	268	−49.0		23	282	−41.7		26	274	−47.3		24	276	−44.6		29	278	−44.0	
11,000	30	242	−48.8		29	237	−52.4		26	230	−55.0		19	242	−49.3		23	235	−53.5		24	237	−51.1		27	240	−51.4	
12,000	30	207	−55.7		27	202	−58.6		19	196	−57.7		17	208	−55.9		17	200	−57.8		24	202	−57.3		20	206	−57.2	
13,000	29	177	−60.8		20	173	−62.7		10	166	−56.9		15	177	−60.9		16	171	−59.4		23	172	−60.2		9	176	−61.4	
14,000	25	152	−64.5		12	148	−64.0		6	142	−56.2		9	152	−63.4		9	146	−57.2		20	147	−58.2					
15,000	22	128	−66.1		6	126	−62.1						5	129	−62.2		7	125	−58.9		17	126	−58.6					
16,000	12	108	−67.6														6	107	−60.5		8	108	−60.6					
17,000																	5	91	−61.4									

Altitude (meters) m. s. l.	Ely, Nev.[2] (1,908 m.)				Glasgow, Mont. (648 m.)				Great Falls, Mont. (1,128 m.)				Greensboro, N. C. (273 m.)				Hatteras, N. C. (3 m.)				Huntington, W. Va. (172 m.)				Int'l Falls, Minn. (343 m.)			
Surface	30	807	11.7	46	31	937	16.0	60	31	885	14.0	51	30	988	18.8	78	31	1,019	20.5	89	30	998	17.5	86	31	974	12.4	71
500													30	961	20.4	61	31	962	18.8	73	30	960	19.3	66	31	956	12.7	63
1,000					31	899	14.6	54					30	908	17.2	59	31	908	16.2	61	30	906	16.8	58	31	900	9.8	64
1,500					31	847	11.1	55	31	847	11.9	47	30	856	13.4	67	31	856	13.3	56	30	854	13.0	63	31	848	7.2	70
2,000	30	799	11.7	46	31	797	7.7	60	31	797	8.7	48	30	806	10.2	60	31	806	10.2	55	30	804	9.8	63	31	797	4.7	68
2,500	30	752	9.5	45	31	750	3.9	66	31	750	4.7	54	30	759	7.4	53	31	759	7.1	48	30	757	6.6	58	31	749	2.0	63
3,000	30	708	5.5	46	31	705	.1	71	31	705	.9	62	30	714	4.2	51	31	714	4.6	39	29	712	3.2	54	31	704	−.8	61
4,000	30	625	−2.5	49	31	622	−6.6	72	31	622	−6.4	68	30	630	−2.3	43	30	630	−1.5	36	28	629	−3.1	46	31	621	−6.3	57
5,000	30	550	−10.5	52	31	546	−12.9	62	30	546	−13.4	63	30	555	−8.1	43	30	555	−7.7	38	26	554	−9.3	42	31	546	−12.5	48
6,000	29	482	−16.7	50	31	478	−19.5	54	30	478	−20.4	57	30	488	−14.2	40	29	487	−14.3	34	26	486	−15.3	46	30	478	−19.0	47
7,000	28	422	−24.3	50	31	417	−26.9	47	30	416	−27.7	51	30	427	−21.3	43	29	427	−21.2	33	26	425	−22.3	45	30	418	−26.2	
8,000	27	367	−31.6	43	31	362	−34.2	50	30	362	−25.0		30	372	−28.6	43	26	371	−28.7		26	370	−29.1	46	29	363	−33.3	
9,000	27	317	−39.5		31	313	−41.6		28	313	−42.3		30	322	−36.3		26	322	−36.5		24	320	−36.8		29	314	−40.9	
10,000	27	274	−46.8		29	270	−48.5		27	269	−49.5		29	278	−44.4		24	278	−44.3		23	277	−44.5		28	270	−47.7	
11,000	24	235	−53.5		26	232	−53.5		16	233	−53.2		26	240	−51.8		20	239	−51.8		23	238	−52.2		28	232	−53.4	
12,000	20	200	−57.5		22	198	−56.6		11	199	−54.9		21	204	−58.5		14	204	−58.2		21	203	−59.6		25	298	−57.3	
13,000	15	171	−59.9		19	169	−56.2		8	171	−54.1		15	173	−63.8						19	173	−64.0		19	170	−57.4	
14,000	12	145	−59.0		15	145	−54.6		7	146	−53.8		9	148	−65.2						13	146	−64.2		14	146	−56.2	
15,000	8	124	−58.6						5	125	−54.2		5	125	−64.2						9	124	−61.6		11	126	−56.6	
16,000	6	107	−59.4																		7	106	−61.6		8	108	−57.0	
17,000	5	91	−59.2																									

See footnotes at end of table.

TABLE 1.—*Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during May 1944*—Continued

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL—Continued

	Jackson, Miss. (97 m.)				Joliet, Ill. (178 m.)				Lake Charles, La. (5 m.)				Lakehurst, N. J.[1] (39 m.)				Little Rock, Ark. (79 m.)				Louisville, Ky. (166 m.)				Mazatlan, Mexico (80 m.)			
Surface	31	1005	21.1	81	31	994	16.3	85	31	1016	21.6	86	30	1014	15.8	79	31	1006	20.5	82	31	998	20.1	76	31	1004	24.3	80
500	31	960	21.0	66	31	958	17.3	78	31	959	19.6	74	30	961	17.0	69	31	959	20.4	65	31	960	20.6	64	31	957	22.8	52
1,000	31	906	17.8	65	31	904	14.6	77	31	905	17.7	61	30	906	15.0	64	31	905	17.1	66	31	906	17.2	66	31	904	23.1	36
1,500	31	854	14.4	67	31	852	11.5	74	31	854	15.0	57	30	855	12.4	58	31	853	13.6	69	31	854	13.3	72	31	853	20.6	34
2,000	31	805	11.6	56	31	801	8.9	67	31	804	12.3	53	30	804	9.7	56	31	804	10.7	59	31	804	10.0	71	31	805	17.7	35
2,500	31	758	8.6	50	31	754	5.9	64	31	758	9.5	46	30	757	6.7	51	31	756	7.9	48	31	757	6.8	64	31	759	14.6	31
3,000	31	713	5.3	51	31	710	3.2	61	31	713	6.6	41	30	712	4.1	48	31	712	5.0	44	31	712	3.7	56	31	715	11.2	32
4,000	30	630	−.8	45	31	626	−3.2	54	31	630	.4	37	30	629	−2.3	47	31	629	−1.4	45	31	629	−2.4	53	30	633	3.6	35
5,000	29	556	−6.6	38	31	552	−9.1	50	31	556	−6.1	35	29	554	−8.6	42	31	554	−7.6	45	31	554	−7.9	48	30	559	−2.9	38
6,000	29	488	−13.1	42	31	484	−15.0	41	31	488	−12.6	39	29	486	−14.8	45	31	486	−14.1	40	31	487	−13.8	39	28	492	−9.7	53
7,000	29	428	−19.7	48	31	424	−21.5	46	31	428	−19.7	35	29	426	−21.4	46	31	426	−20.9	37	31	426	−20.7	35	26	432	−17.0	58
8,000	29	373	−27.0	46	30	369	−28.5	49	31	373	−27.1	40	23	371	−28.6	----	31	371	−28.2	41	31	371	−27.9	39	23	377	−24.3	48
9,000	29	323	−35.0	----	30	320	−35.9	----	31	324	−34.7	44	23	321	−36.3	----	31	322	−35.9	----	31	322	−35.2	40	22	328	−31.2	61
10,000	29	280	−42.8	----	28	277	−43.3	----	31	280	−42.3	----	22	279	−44.2	----	31	278	−43.7	----	30	279	−42.4	----	22	284	−38.8	----
11,000	28	241	−50.4	----	27	239	−50.6	----	31	241	−50.0	----	21	240	−51.7	----	30	239	−51.4	----	24	241	−49.0	----	21	245	−46.3	----
12,000	27	206	−57.5	----	25	204	−57.1	----	31	206	−57.3	----	18	205	−58.8	----	28	205	−58.6	----	15	208	−56.1	----	15	211	−53.0	----
13,000	26	176	−62.6	----	18	173	−61.5	----	31	176	−61.5	----	11	174	−63.9	----	24	175	−63.2	----	13	178	−62.5	----	6	182	−58.5	----
14,000	22	150	−64.2	----	13	148	−62.0	----	27	149	−63.6	----	5	149	−63.5	----	20	148	−63.2	----	6	151	−67.5	----	----	----	----	----
15,000	13	127	−64.1	----	10	125	−59.3	----	24	126	−65.1	----	----	----	----	----	12	128	−61.3	----	----	----	----	----	----	----	----	----
16,000	7	108	−64.7	----	----	----	----	----	19	107	−65.6	----	----	----	----	----	6	107	−62.2	----	----	----	----	----	----	----	----	----
17,000	----	----	----	----	----	----	----	----	11	92	−65.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
18,000	----	----	----	----	----	----	----	----	5	77	−66.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

	Medford, Oreg.[2] (409 m.)				Miami, Fla.[2] (4 m.)				Nashville, Tenn. (180 m.)				Norfolk, Va.[1] (4 m.)				Oakland, Calif. (2 m.)				Ogden, Utah (1,355 m.)				Oklahoma City, Okla. (391 m.)			
Surface	31	968	16.9	46	31	1018	22.5	83	31	997	21.1	71	22	1019	21.4	74	31	1015	14.5	72	31	862	14.9	50	31	968	19.2	75
500	31	957	16.4	46	31	961	20.6	86	31	960	20.8	60	22	962	20.7	62	31	957	13.1	61	----	----	----	----	31	955	19.6	68
1,000	31	903	12.9	47	31	907	17.3	83	31	906	17.5	62	22	908	18.1	56	31	901	13.1	44	----	----	----	----	31	902	17.6	60
1,500	31	850	9.0	52	31	855	14.4	80	31	855	14.0	65	22	856	15.0	53	31	849	11.1	33	31	848	14.8	44	31	851	15.3	53
2,000	31	800	5.1	59	31	806	11.9	73	31	805	10.5	69	22	806	11.9	50	31	799	8.8	27	31	799	11.3	43	31	801	12.4	50
2,500	31	752	2.0	61	31	759	9.4	66	31	758	7.0	68	22	759	9.1	43	31	752	5.9	28	31	752	7.2	46	31	754	8.9	49
3,000	31	706	−.6	60	31	714	6.8	62	31	713	3.7	65	22	714	6.6	40	31	707	3.0	26	31	707	3.1	52	30	710	5.3	48
4,000	31	623	−5.9	51	30	632	1.5	55	31	630	−2.0	54	22	632	−.1	40	31	624	−3.4	28	31	624	−4.7	61	27	628	−1.4	43
5,000	30	547	−12.3	50	30	558	−4.2	49	31	555	−7.4	47	22	557	−6.7	39	31	550	−10.1	34	31	549	−11.8	62	27	553	−8.3	44
6,000	30	479	−18.5	49	30	490	−10.7	45	31	488	−13.4	44	22	489	−13.2	40	31	482	−16.6	36	31	481	−18.8	58	27	485	−14.9	42
7,000	29	419	−24.9	48	30	430	−17.7	43	31	427	−20.4	45	20	428	−19.5	38	31	422	−24.0	37	31	420	−26.0	54	27	425	−22.0	----
8,000	28	364	−32.8	48	30	376	−24.9	42	31	372	−27.4	42	18	373	−26.4	41	31	366	−31.5	42	30	365	−33.1	45	25	370	−29.4	----
9,000	28	314	−40.4	----	30	326	−32.3	42	31	322	−35.0	----	17	324	−33.8	37	31	317	−39.3	----	30	316	−40.8	----	24	321	−36.7	----
10,000	28	271	−47.6	----	30	283	−39.7	----	31	279	−42.5	----	16	281	−41.1	----	31	274	−46.9	----	30	272	−48.4	----	24	277	−44.4	----
11,000	26	233	−53.6	----	30	244	−46.9	----	31	240	−50.6	----	13	242	−49.1	----	31	235	−53.4	----	30	233	−54.3	----	24	238	−52.2	----
12,000	22	199	−57.3	----	28	209	−53.5	----	30	206	−57.1	----	11	208	−55.4	----	30	201	−58.5	----	30	199	−57.6	----	23	204	−58.7	----
13,000	19	170	−58.4	----	24	179	−58.5	----	30	175	−62.4	----	7	178	−61.2	----	30	171	−59.7	----	28	170	−57.6	----	16	174	−62.2	----
14,000	14	144	−57.0	----	21	153	−62.2	----	27	149	−63.4	----	----	----	----	----	28	146	−59.4	----	26	145	−56.6	----	6	150	−61.7	----
15,000	12	123	−57.4	----	15	130	−64.2	----	17	126	−62.4	----	----	----	----	----	24	124	−59.6	----	21	124	−56.8	----	----	----	----	----
16,000	11	105	−57.2	----	11	110	−66.5	----	15	107	−62.4	----	----	----	----	----	19	106	−59.6	----	17	106	−57.6	----	----	----	----	----
17,000	9	90	−57.2	----	7	93	−68.6	----	6	90	−61.4	----	----	----	----	----	12	90	−58.5	----	11	91	−59.4	----	----	----	----	----

	Omaha, Nebr. (301 m.)				Phoenix, Ariz. (339 m.)				Pittsburgh, Pa. (392 m.)				Portland, Maine[2] (20 m.)				Rapid City, S. Dak. (981 m.)				St. Louis, Mo. (171 m.)				St. Paul, Minn. (225 m.)			
Surface	31	978	19.0	72	31	970	24.8	31	31	972	18.5	68	31	1016	10.8	86	31	901	13.5	70	31	996	19.8	75	31	987	16.3	74
500	31	955	18.3	68	31	952	26.8	19	31	960	18.8	65	31	959	14.3	64	----	----	----	----	31	958	19.2	66	31	956	15.3	69
1,000	30	901	15.9	67	31	899	23.3	19	31	906	16.5	61	31	904	12.3	56	31	899	13.8	67	31	904	15.1	67	31	901	12.9	72
1,500	30	850	12.6	68	31	849	19.0	23	31	854	13.3	65	31	852	9.4	55	31	848	12.7	53	31	852	12.9	68	31	848	10.0	71
2,000	30	800	9.7	66	31	800	14.7	26	31	804	10.0	67	31	801	6.3	55	31	798	9.2	57	31	802	9.8	60	31	798	7.2	67
2,500	29	753	6.8	62	31	754	10.3	31	31	757	6.7	65	31	754	3.5	54	31	751	5.7	56	31	755	6.7	56	31	751	4.4	64
3,000	28	708	4.4	58	31	710	6.0	35	31	712	3.9	59	31	709	.9	54	31	706	2.3	56	31	710	3.6	54	31	706	1.7	58
4,000	28	626	−1.9	57	31	627	−1.3	33	30	629	−2.0	54	30	625	−4.9	54	31	623	−4.6	51	31	627	−2.0	52	31	624	−3.9	50
5,000	27	552	−8.8	51	31	552	−8.1	30	30	554	−8.0	51	30	550	−10.9	51	29	548	−11.2	49	31	552	−7.7	45	31	549	−9.8	46
6,000	27	484	−14.7	43	31	485	−15.1	28	30	486	−13.9	49	29	482	−17.2	45	29	480	−17.9	47	31	485	−14.2	41	31	481	−16.1	40
7,000	27	424	−21.5	46	31	424	−22.7	----	30	426	−20.7	50	28	421	−24.2	44	29	419	−25.4	49	31	425	−21.1	39	31	420	−23.5	40
8,000	27	369	−28.5	46	31	369	−30.5	----	30	371	−28.0	51	28	366	−31.5	43	28	364	−33.2	54	31	370	−28.3	39	30	366	−31.0	44
9,000	27	320	−35.9	----	30	320	−38.3	----	30	321	−35.7	----	27	316	−39.1	----	28	314	−40.8	----	31	321	−35.8	41	29	317	−38.5	----
10,000	27	277	−43.8	----	30	276	−45.8	----	30	278	−43.7	----	24	273	−46.9	----	26	272	−47.5	----	31	277	−43.4	----	29	274	−45.8	----
11,000	27	238	−51.2	----	28	237	−52.6	----	30	239	−51.4	----	21	235	−53.8	----	19	233	−53.6	----	31	238	−51.0	----	28	236	−52.0	----
12,000	27	204	−57.3	----	24	202	−56.8	----	30	204	−58.5	----	19	200	−59.6	----	14	199	−57.4	----	31	204	−57.7	----	27	201	−57.3	----
13,000	23	174	−60.6	----	19	173	−59.2	----	28	174	−63.3	----	18	171	−62.4	----	9	170	−58.7	----	31	174	−62.3	----	27	172	−59.9	----
14,000	20	148	−59.4	----	15	147	−59.5	----	25	148	−64.3	----	13	145	−62.7	----	6	144	−56.2	----	26	147	−62.3	----	24	147	−58.7	----
15,000	17	126	−58.6	----	9	126	−60.5	----	15	125	−61.5	----	9	123	−61.3	----	----	----	----	----	24	125	−60.8	----	17	126	−57.5	----
16,000	17	107	−59.2	----	7	107	−61.9	----	10	107	−61.2	----	----	----	----	----	----	----	----	----	19	107	−61.0	----	10	108	−58.1	----
17,000	10	92	−60.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	16	91	−61.6	----	8	93	−59.4	----
18,000	6	78	−60.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	12	78	−62.6	----	----	----	----	----
19,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5	66	−63.4	----	----	----	----	----

	San Antonio, Tex. (242 m.)				San Diego, Calif.[1] (19 m.)				San Juan, P. R. (15 m.)				Santa Maria, Calif. (71 m.)				S. S. Marie, Mich.[2] (221 m.)				Seattle, Wash.[1] (22 m.)				Spokane, Wash. (598 m.)			
Surface	31	986	21.6	79	31	1,012	16.0	73	31	1,014	25.0	80	31	1,008	12.7	83	31	990	10.5	77	30	1,014	15.8	56	31	944	15.7	50
500	31	957	20.5	76	31	956	13.3	80	31	959	20.7	84	31	958	11.5	79	31	958	11.8	72	30	958	12.2	54	----	----	----	----
1,000	31	903	18.3	68	31	901	13.5	64	31	905	16.9	83	31	902	12.9	50	31	902	10.5	68	30	902	8.6	58	31	900	13.1	45
1,500	31	853	15.9	65	31	850	13.3	44	31	854	14.3	77	31	850	11.5	38	31	850	8.1	66	30	849	5.3	65	31	847	8.9	50
2,000	31	803	13.7	51	31	800	11.3	32	31	805	12.0	71	31	800	8.7	34	31	799	5.4	66	30	798	2.0	59	31	797	4.8	56
2,500	31	757	11.2	39	31	754	8.5	30	31	758	10.8	55	31	753	6.1	30	31	752	2.9	64	30	750	−1.2	58	31	749	1.2	59
3,000	31	712	8.1	29	31	709	5.4	34	31	714	8.5	48	31	708	2.9	32	31	706	.4	62	30	704	−3.8	59	31	704	−2.4	65
4,000	31	630	1.3	27	31	627	−.5	----	29	632	3.0	49	31	625	−3.1	32	31	623	−4.7	60	30	620	−9.3	55	31	620	−8.8	62
5,000	30	556	−5.5	32	31	552	−7.1	----	27	558	−2.7	46	31	550	−9.4	32	30	548	−10.3	55	30	544	−15.1	48	31	544	−14.7	60
6,000	28	489	−12.2	29	29	485	−13.9	----	26	491	−8.5	41	31	482	−16.3	33	30	481	−16.9	51	30	475	−22.0	50	31	476	−21.4	56
7,000	28	428	−19.3	33	28	424	−21.3	----	26	431	−15.2	48	31	422	−23.8	31	29	420	−23.6	47	29	414	−29.1	49	30	415	−28.8	51
8,000	28	374	−26.7	38	18	370	−28.6	----	26	376	−21.8	47	31	367	−31.2	----	29	366	−30.7	46	28	360	−36.0	----	27	361	−35.3	55
9,000	28	324	−34.1	----	18	320	−36.3	----	26	328	−28.5	----	31	318	−39.0	----	25	316	−38.5	44	28	310	−42.7	----	26	312	−42.7	----
10,000	28	280	−41.8	----	18	277	−43.7	----	26	285	−35.9	----	29	275	−46.5	----	23	273	−45.4	----	28	268	−49.2	----	24	268	−49.5	----
11,000	28	241	−49.3	----	16	238	−50.4	----	21	246	−43.6	----	29	236	−53.6	----	19	237	−51.5	----	26	229	−53.8	----	20	231	−55.2	----
12,000	27	207	−55.8	----	8	205	−55.9	----	19	212	−51.4	----	29	202	−59.0	----	13	203	−55.8	----	23	196	−56.6	----	19	197	−57.3	----
13,000	26	176	−60.7	----	6	174	−59.8	----	11	181	−59.4	----	29	172	−60.9	----	11	174	−60.3	----	21	168	−58.2	----	12	168	−54.6	----
14,000	21	150	−62.4	----	----	----	----	----	----	----	----	----	28	146	−60.8	----	8	148	−60.5	----	20	144	−57.9	----	7	145	−53.9	----
15,000	7	128	−64.6	----	----	----	----	----	----	----	----	----	23	124	−60.6	----	----	----	----	----	17	122	−58.2	----	----	----	----	----
16,000	----	----	----	----	----	----	----	----	----	----	----	----	18	106	−60.6	----	----	----	----	----	13	105	−56.6	----	----	----	----	----
17,000	----	----	----	----	----	----	----	----	----	----	----	----	8	90	−61.6	----	----	----	----	----	6	90	−56.3	----	----	----	----	----
18,000	----	----	----	----	----	----	----	----	----	----	----	----	5	77	−61.0	----	----	----	----	----	5	77	−56.1	----	----	----	----	----

See footnotes at end of table.

TABLE 1.—*Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent obtained by radiosondes during May 1944*—Continued

STATIONS AND ELEVHTIONS IN METERS ABOVE SEA LEVEL—Continued

	Swan Island, W. I. (10 m.)				Tacubaya, Mexico (2,306 m.)				Tampa, Fla. (3 m.)				Tapachula, Mexico (115 m.)				Tatoosh Island, Wash. (31 m.)				Toledo, Ohio (191 m.)				Tongue Point, Oreg.[1] (21 m.)			
Surface	31	1,013	26.0	79	31	774	17.3	52	31	1,018	23.1	77	31	998	25.8	85	29	1,014	10.1	85	31	994	15.9	82	23	1,017	13.8	64
500	31	958	22.2	81	----	----	----	----	31	962	20.2	70	31	955	24.2	82	29	958	8.7	74	31	959	16.6	70	23	960	10.5	62
1,000	31	904	19.2	71	----	----	----	----	31	908	17.2	69	31	902	21.2	82	29	902	6.6	67	31	904	14.6	69	23	905	7.4	61
1,500	31	854	16.5	63	----	----	----	----	31	856	13.9	73	31	852	18.5	80	29	848	3.9	63	31	853	11.6	69	23	851	4.6	59
2,000	31	804	14.1	49	----	----	----	----	31	806	11.2	67	31	803	15.6	80	29	797	1.1	61	31	803	8.7	68	23	800	1.8	55
2,500	31	758	11.6	41	31	756	16.0	50	31	759	8.8	56	31	757	12.9	78	29	749	−1.6	57	31	755	6.0	63	23	752	−.8	45
3,000	31	714	9.0	36	31	713	12.1	53	31	714	6.1	47	31	713	9.9	75	29	703	−4.1	56	31	711	3.2	56	23	706	−3.0	42
4,000	31	632	3.8	34	31	632	3.7	69	31	631	.4	38	31	632	3.7	72	29	619	−9.7	54	31	627	−2.8	45	23	621	−8.7	42
5,000	31	558	−2.3	31	30	558	−3.4	77	31	557	−5.8	34	30	558	−2.0	59	29	543	−15.5	----	31	552	−8.8	47	22	546	−14.4	37
6,000	30	491	−7.5	32	30	491	−10.0	69	31	489	−12.2	29	30	492	−7.1	37	28	475	−22.3	----	31	484	−15.1	48	21	479	−20.9	38
7,000	30	431	−13.6	32	30	431	−16.0	57	31	429	−19.2	38	30	432	−13.3	36	28	413	−29.5	----	31	424	−22.2	49	19	417	−28.2	----
8,000	29	378	−20.1	32	30	376	−23.0	44	30	374	−26.8	43	30	378	−20.4	38	28	358	−36.3	----	31	369	−29.4	48	9	362	−34.6	----
9,000	29	328	−27.4	----	29	327	−30.0	47	29	324	−34.7	----	29	329	−27.7	40	25	310	−42.8	----	31	320	−37.0	----	8	313	−41.4	----
10,000	28	286	−35.3	----	29	285	−37.5	----	29	280	−42.7	----	27	286	−35.6	----	24	267	−48.6	----	30	276	−44.5	----	8	270	−47.4	----
11,000	26	247	−43.5	----	28	245	−45.3	----	29	241	−50.3	----	26	247	−43.6	----	22	229	−52.1	----	26	238	−51.0	----	5	233	−54.4	----
12,000	26	212	−51.8	----	26	211	−53.3	----	25	207	−56.0	----	25	212	−51.5	----	18	196	−54.1	----	15	205	−55.9	----	----	----	----	----
13,000	23	181	−59.6	----	23	180	−60.4	----	16	177	−60.8	----	22	182	−59.7	----	16	167	−53.9	----	11	176	−60.7	----	----	----	----	----
14,000	11	155	−65.9	----	17	153	−66.3	----	----	----	----	----	17	154	−67.3	----	9	143	−52.7	----	6	148	−62.7	----	----	----	----	----
15,000	----	----	----	----	----	----	----	----	----	----	----	----	8	131	−72.7	----	6	122	−52.0	----	----	----	----	----	----	----	----	----

Altitude (meters) m. s. l.	Washington, D. C. (25 M.)				Altitude (meters) m. s. l.	Washington, D. C. (25 M.)			
	Number of observations	Pressure	Temperature	Relative humidity		Number of observations	Pressure	Temperature	Relative humidity
Surface	31	1,016	20.3	69	7,000	31	427	−21.1	41
500	31	962	19.5	59	8,000	31	372	−28.3	39
1,000	31	907	16.9	61	9,000	31	322	−35.8	
1,500	31	856	13.8	62	10,000	31	279	−44.0	----
2,000	31	806	10.5	60	11,000	31	240	−52.1	----
2,500	31	758	7.5	55	12,000	30	205	−59.4	----
3,000	31	714	4.6	48	13,000	25	174	−64.8	----
4,000	31	630	−1.5	41	14,000	13	148	−65.6	----
5,000	31	555	−8.1	45	15,000	6	126	−64.3	----
6,000	31	488	−14.4	44					----

[1] U. S. Navy.
[2] Humidity data obtained by hair hygrometer, others using electric hygrometer.

NOTE.—All observations taken near 11 p. m., E. S. T. except at Mazatlan and Tapachula, Mexico, where they are taken near 9 p. m. "Number of observations" refers to pressure only, as temperature and humidity data are sometimes missing for some observations at certain levels. Relative humidity data are not used in daily observations when the temperature is below −40.0° C.

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

Means for observations obtained by the electric hygrometer have been adjusted to compensate for the values occurring below the operating range of the humidity element.

TABLE 2.—*Free-air resultant winds based on pilot-balloon observations made near 5 p. m. (75th meridian time) during May 1944. 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. (538 m.)			Albuquerque, N. Mex. (1,630 m.)			Atlanta, Ga. (299 m.)			Billings, Mont. (1,095 m.)			Bismarck, N. Dak. (512 m.)			Boise, Idaho (870 m.)			Brownsville, Tex. (7 m.)			Buffalo, N. Y. (220 m.)			Burlington, Vt. (132 m.)			Charleston, S. C. (17 m.)			Cincinnati, Ohio (152 m.)			Denver, Colo. (1,627 m.)			El Paso, Tex. (1,196 m.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	31	183	4.5	31	219	2.2	30	201	0.9	31	327	0.9	31	77	0.8	31	318	4.7	31	125	6.3	29	303	1.7	31	213	1.8	31	159	1.9	31	223	1.8	31	287	4.2	31	235	3.2
500							30	195	1.8										31	132	6.9	29	278	3.0	31	219	4.0	31	161	3.4	31	231	3.6						
1,000	31	179	7.6				30	184	1.9				31	94	1.0	31	312	5.1	24	143	6.5	27	259	4.4	30	231	4.8	30	174	2.0	31	233	4.4						
1,500	31	188	7.1				29	182	1.8	31	293	1.2	31	113	.8	31	300	3.8	22	147	5.5	27	255	5.9	29	256	5.8	30	210	1.0	29	239	4.9				31	239	4.4
2,000	29	209	6.2	31	230	2.6	29	209	1.9	30	251	1.4	30	158	1.6	31	286	3.3	18	143	2.7	25	259	6.9	27	268	7.2	30	280	.6	26	252	6.3	31	40	0.4	31	251	5.5
2,500	26	221	5.2	31	230	3.3	27	223	2.1	30	262	2.2	27	185	.6	31	268	2.9	18	207	1.3	23	260	8.1	25	281	9.3	28	290	1.2	20	268	6.3	31	339	.7	31	240	4.6
3,000	24	244	5.8	31	232	3.9	25	229	2.8	28	250	3.1	21	229	1.2	29	233	2.8	17	266	2.0	21	270	8.8	16	296	11.3	28	321	1.3	19	261	5.8	30	307	.8	31	236	4.7
4,000	18	266	8.5	25	243	7.6	18	242	2.2	25	261	5.3	16	312	2.7	27	230	5.0	15	259	4.2	19	277	12.8	10	302	12.0	24	312	.9				26	269	3.5	28	237	6.8
5,000	16	273	8.3	16	241	9.3	12	287	4.7	20	249	6.0	10	321	6.0	22	238	5.4	13	280	6.7	12	296	12.8				20	346	1.3				22	249	6.6	25	245	8.9
6,000	16	274	10.1	11	227	9.5	10	289	5.9	17	252	7.0	10	318	8.8	20	267	6.1	13	282	8.6							18	14	3.6				16	261	8.5	19	252	10.8
8,000																12	281	3.2	12	275	13.1													10	251	9.4	10	264	12.5

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.)			Las Vegas, Nev. (573 m.)			Little Rock, Ark. (88 m.)			Medford, Oreg. (410 m.)			Miami, Fla. (15 m.)			Mobile, Ala. (66 m.)			Nashville, Tenn. (194 m.)			New York, N. Y. (15 m.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	31	197	3.4	31	300	0.8	31	197	2.9	31	213	1.4	31	95	4.6	30	190	2.3	31	207	1.8	30	169	2.1	31	320	1.7	31	88	3.9	30	171	2.6	31	208	2.6	28	170	4.3
500							31	189	3.5				31	100	4.6	30	198	2.5				30	182	3.2	31	314	2.3	31	85	6.0	30	175	3.6	31	221	3.7	28	215	4.8
1,000							31	188	3.0	31	228	1.5	31	102	3.7	28	207	4.6	31	193	3.0	28	195	5.5	31	323	1.8	31	77	4.7	29	178	2.9	30	220	4.1	26	242	5.7
1,500				31	303	1.2	31	207	2.6	31	239	1.7	30	103	2.1	23	230	5.9	31	196	4.2	27	203	6.6	31	296	1.7	31	49	3.0	26	197	1.1	30	222	4.4	26	260	6.8
2,000	31	196	3.2	31	303	1.5	30	223	3.1	27	239	2.9	29	92	1.1	19	257	6.0	31	198	4.2	23	219	7.0	29	262	1.5	28	24	2.6	23	236	1.0	27	229	4.8	25	277	6.5
2,500	31	197	4.1	31	259	2.3	28	239	3.6	25	246	3.9	26	113	0.7	17	262	6.8	31	209	4.5	21	216	7.2	27	264	1.8	27	2	2.0	21	186	0.1	24	232	5.3	21	286	8.0
3,000	31	212	4.0	31	239	3.5	27	261	4.3	22	240	5.0	24	102	1.2	13	263	7.3	30	212	4.6	20	210	7.0	25	274	2.7	23	339	2.3	17	85	1.9	19	228	5.6	16	275	9.1
4,000	25	227	5.4	21	235	6.6	21	246	5.5	15	240	7.9	22	168	0.2				30	235	4.5	13	194	7.5	22	301	4.6	20	308	2.8	10	278	1.0	15	256	4.5	10	286	9.9
5,000	13	241	4.7	14	244	5.4	15	267	6.2				21	314	1.9				27	246	5.7	11	205	7.0	18	307	8.5	17	313	2.2									
6,000	10	221	6.1				13	287	6.4				20	331	1.7				26	251	6.4				17	312	8.6	16	288	3.3									
8,000													15	288	4.4				22	281	6.8				13	296	9.3	13	298	5.6									
10,000													14	268	6.9				21	294	8.9																		
12,000													11	282	9.3				13	279	12.0																		

Altitude (meters) m. s. l.	Oakland, Calif. (8 m.)			Oklahoma, City, Okla. (402 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 St. Marie, Mich. (225 m.)			Seattle, Wash. (12 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	258	5.7	30	169	5.5	31	187	3.0	31	239	1.2	29	9	1.9	31	22	2.7	29	165	1.3	30	143	4.2	31	266	3.8	28	177	0.8	26	268	2.6	30	210	1.9	31	186	2.4
500	29	276	3.8	30	175	6.2	31	186	3.6	31	235	1.8				31	217	3.3	29	164	1.7	30	136	4.8	31	278	2.5	28	211	1.6	29	257	1.6				31	193	4.0
1,000	27	280	1.7	29	185	7.0	31	201	3.6	31	227	1.4	29	10	1.8	31	221	4.3	26	183	3.5	28	152	5.9	23	212	.4	27	249	3.9	29	215	2.3	30	231	2.2	29	206	3.9
1,500	25	304	2.0	27	207	7.8	27	202	5.1	31	219	2.0	29	342	1.5	28	217	5.2	22	227	2.7	22	164	5.4	19	204	.8	25	250	4.6	25	203	2.5	29	231	2.8	28	232	4.2
2,000	24	292	2.2	26	222	8.1	23	237	4.9	31	211	3.4	29	306	.9	25	227	5.8	20	251	3.6	20	178	4.0	18	202	1.7	23	254	5.7	24	196	2.8	26	225	3.7	24	254	4.4
2,500	23	324	1.5	22	236	7.3	21	260	5.6	31	209	3.9	25	268	2.4	21	245	7.5	18	252	4.4	13	248	3.9	17	225	1.9	19	260	6.6	22	218	2.3	23	220	4.6	21	279	5.6
3,000	23	329	2.5	21	244	7.8	17	280	6.6	31	216	4.3	22	275	4.5	17	249	6.5	14	255	5.6	12	270	4.7	17	240	3.1	17	269	8.1	20	203	4.0	20	222	4.7	18	286	6.7
4,000	22	324	3.7	20	249	6.7	15	288	7.8	31	226	5.3	17	285	5.2	14	259	5.1	11	275	7.4	11	283	7.3	16	238	4.5	14	288	10.6	12	271	4.0	18	222	5.2	16	296	7.3
5,000	20	310	3.6	19	270	8.5	12	276	9.8	28	233	6.0	12	309	5.7	10	261	6.5							12	229	6.0							16	224	7.0			
6,000	17	292	4.4	15	275	8.4				26	249	8.3	12	283	5.0																			15	219	11.0			
8,000	14	254	4.7							20	256	10.8																						12	238	9.0			
10,000	13	261	7.5							17	258	15.1																											
12,000										11	255	16.8																											

TABLE 3.—*Maximum free-air wind velocities (m. p. s.), for different sections of the United States based on pilot-balloon observations during May 1944*

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]	34.0	NW.	1,740	18	Portland, Maine	44.4	WNW.	4,700	18	Portland, Maine	57.6	NNW.	17,335	25	Mount Washington, N. H.
East-Central [2]	29.2	SSW.	1,634	2	Nashville, Tenn	33.0	WSW.	4,950	8	Huntington, W. Va	33.0	WSW.	5,119	8	Huntington, W. Va.
Southeast [3]	27.8	SW.	2,301	6	Charlotte, N. C	32.0	W.	2,909	6	Atlanta, Ga	55.9	WSW.	14,876	15	Jacksonville, Fla.
North-Central [4]	44.0	SW.	1,900	4	Alpena, Mich	36.7	NNE.	5,000	4	Bismarck, N. Dak	44.0	NNE.	6,267	4	Bismarck, N. Dak.
Central [5]	36.2	S.	2,283	10	Goodland, Kans	42.0	S.	4,263	17	Goodland, Kans	40.0	SW.	11,878	19	Wichita, Kans.
South-Central [6]	38.2	NW.	1,556	5	Tulsa, Okla	38.4	SSW.	3,892	17	Amarillo, Tex	59.0	WNW.	13,027	7	Brownsville, Tex.
	38.2	SSE.	1,821	2	Texarkana, Ark										
Northwest [7]	43.5	SW.	2,442	15	Burns, Oreg	41.8	NW.	5,000	1	Boise, Idaho	67.8	SW.	6,358	12	Spokane, Wash.
West-Central [8]	27.2	SSW.	2,500	31	Modena, Utah	34.4	WSW.	5,000	22	Winnemucca, Nev	58.0	SSW.	10,143	13	Oakland, Calif.
Southwest [9]	41.5	SSW.	2,310	9	Tucson, Ariz	57.5	W.	4,190	18	Raton, N. Mex	46.0	WSW.	12,635	9	Albuquerque, N. Mex.
											46.0	NW.	9,943	3	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.