METEOROLOGICAL AND CLIMATOLOGICAL DATA FOR AUGUST 1942

[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 August 1942*

Stations and elevations in meters above sea level

Altitude (meters) m. s. l.	Albuquerque, N. M. (1,620 m.)				Atlanta, Ga. (298 m.)				Bismarck, N. Dak. (505 m.)				Boise, Idaho (873 m.)				Brownsville, Tex. (6 m.)				Buffalo, N. Y. (221 m.)				Caribou, Maine (191 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	839	23.3	49	31	984	22.3	87	30	954	18.7	75	31	913	23.9	34	30	1,012	26.4	87	31	992	18.2	80	31	992	14.6	84
500					31	962	22.7	76									30	958	23.9	82	31	960	19.0	71	31	957	16.4	73
1,000					31	908	20.5	75	30	901	19.4	65	31	899	25.9	33	30	904	21.5	70	31	906	16.4	66	31	903	13.8	67
1,500					31	857	17.4	78	30	850	17.1	65	31	849	24.3	30	30	854	19.0	65	31	854	13.3	70	31	850	10.8	67
2,000	31	803	21.9	48	31	808	14.7	74	29	801	14.3	62	31	801	20.5	29	30	805	16.5	56	31	804	11.0	62	31	800	8.1	66
2,500	31	758	18.5	48	31	761	12.2	69	29	755	11.1	61	31	756	16.4	30	30	759	13.8	53	31	758	8.5	56	31	753	5.8	63
3,000	31	715	15.0	51	31	717	9.4	66	29	711	7.8	56	31	712	12.4	30	30	715	11.1	49	31	713	6.3	52	31	708	3.5	57
4,000	31	634	7.0	63	31	635	4.2	61	29	629	1.7	50	31	631	4.7	32	30	634	5.7	45	31	631	1.5	46	31	626	−1.8	53
5,000	31	561	−0.2	76	31	561	−1.1	58	28	555	−4.5	43	31	558	−2.6	34	29	560	0.2	45	31	556	−4.1	42	31	551	−7.4	48
6,000	31	495	−6.4	79	30	495	−6.7	52	28	488	−11.0	35	31	491	−9.8	34	28	494	−5.7	44	29	489	−10.5	42	31	484	−13.9	43
7,000	30	435	−12.2	74	30	435	−12.6	49	27	428	−18.0	31	31	430	−17.2	34	28	434	−11.8	41	28	429	−17.2	40	31	424	−20.9	42
8,000	30	381	−18.7	68	30	380	−19.5	47	26	373	−25.2	29	30	376	−24.3	33	27	380	−18.6	38	27	375	−24.2	39	31	369	−28.1	39
9,000	29	332	−25.4	62	28	332	−26.6	45	25	324	−32.7	29	29	327	−31.7	32	26	332	−25.5	36	27	326	−30.6	39	30	320	−35.3	38
10,000	28	289	−32.8	58	26	289	−34.1	43	24	281	−40.1		28	284	−39.1	32	26	288	−33.0	36	26	283	−37.3	37	29	277	−41.7	
11,000	24	250	−40.6		26	249	−41.9		23	242	−46.2		28	244	−45.3		26	250	−40.7		26	244	−44.6		28	238	−47.3	
12,000	24	216	−48.2		26	215	−49.3		23	208	−50.8		26	210	−49.6		26	215	−48.5		24	210	−50.6		28	204	−51.3	
13,000	24	185	−56.0		26	184	−56.3		23	178	−53.3		23	180	−53.4		25	184	−55.9		21	179	−54.1		28	175	−53.7	
14,000	23	157	−63.3		26	157	−62.2		20	152	−55.1		23	154	−56.9		25	157	−63.2		19	153	−57.5		27	150	−55.5	
15,000	21	133	−69.2		25	133	−65.9		14	130	−56.7		22	132	−59.4		25	133	−69.9		19	130	−59.9		25	128	−57.5	
16,000	16	113	−71.7		24	113	−67.3		13	111	−57.5		22	112	−60.9		25	112	−73.9		16	111	−61.2		22	109	−57.9	
17,000	14	95	−69.6		24	96	−66.6		11	95	−56.4		21	95	−60.8		22	94	−74.5		12	94	−60.0		19	93	−57.1	
18,000	11	80	−66.4		24	81	−64.9		8	81	−55.2		19	81	−59.9		21	79	−72.5		9	80	−58.8		16	79	−55.1	
19,000	7	68	−63.9		21	69	−62.1						16	69	−58.5		19	66	−68.7		7	68	−57.1		12	68	−53.6	
20,000					17	59	−59.9						13	59	−56.6		11	56	−65.4									
21,000													7	50	−54.9		6	47	−62.0									

Stations and elevations in meters above sea level

Altitude (meters) m. l. s.	Charleston, S. C. (14 m.)				Denver, Colo. (1,616 m.)				Detroit, Mich.* (217 m.)				El Paso, Tex. (1,193 m.)				Ely, Nev. (1,908 m.)				Great Falls, Mont. (1,128 m.)				Huntington, W. Va. (172 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	1,017	24.0	91	31	840	19.9	54	31	990	17.8	91	31	882	24.7	61	30	810	19.1	33	31	888	19.8	45	30	997	20.4	92
500	31	962	22.9	76					31	958	19.3	75													30	960	21.6	74
1,000	31	908	20.2	71					31	904	16.7	73													30	906	19.1	70
1,500	31	857	17.2	68					31	852	13.7	71	31	851	24.3	55					31	850	19.2	46	30	855	15.8	74
2,000	31	808	14.6	64	31	803	20.0	49	31	803	11.4	60	31	804	20.9	54	30	802	20.5	33	31	801	15.5	46	30	806	12.9	69
2,500	31	762	12.0	62	31	757	17.0	48	31	756	9.3	52	31	758	17.0	60	30	756	19.5	31	31	755	11.7	50	30	759	10.7	58
3,000	31	717	9.2	61	31	714	13.4	50	30	711	6.9	48	31	715	13.0	69	30	713	15.6	31	31	711	8.0	54	30	715	8.2	54
4,000	31	635	3.9	56	31	633	6.0	55	30	630	2.0	42	31	634	6.1	76	30	633	6.9	35	31	630	1.2	59	30	632	2.9	54
5,000	30	561	−1.6	55	31	560	−1.5	62	30	556	−3.9	42	31	561	−0.3	75	29	560	−1.6	43	31	556	−5.1	56	29	558	−2.2	46
6,000	29	494	−7.5	50	31	493	−8.4	63	29	489	−10.3	41	30	494	−6.2	71	29	493	−9.2	46	31	488	−12.2	54	29	492	−8.0	41
7,000	29	434	−13.6	46	30	432	−15.1	57	28	429	−17.1	41	30	435	−11.7	64	28	432	−16.0	46	30	428	−19.4	51	29	432	−14.3	40
8,000	25	380	−20.2	44	30	378	−22.0	53	27	374	−24.2	39	29	380	−17.9	59	27	378	−22.6	44	30	373	−26.9	50	29	378	−20.9	39
9,000	23	331	−27.5	40	30	329	−29.3	51	26	325	−31.6	38	29	332	−24.5	56	26	329	−29.9	41	30	323	−34.4	48	29	329	−28.0	38
10,000	23	287	−35.2	41	29	286	−36.8	48	26	282	−39.4		29	289	−31.9	54	25	286	−36.8	39	30	280	−42.1		29	286	−35.4	37
11,000	22	249	−42.7		29	246	−43.9		24	243	−47.2		29	250	−39.7		25	247	−42.6		30	241	−48.3		29	247	−43.0	
12,000	22	214	−50.0		29	212	−50.5		24	208	−52.9		29	216	−47.7		25	213	−47.8		30	207	−51.7		29	213	−50.0	
13,000	22	183	−56.8		29	182	−56.4		23	178	−57.4		28	185	−55.7		24	182	−53.7		29	177	−53.7		28	182	−56.2	
14,000	22	156	−62.8		27	154	−61.9		23	152	−60.4		28	157	−63.6		23	156	−58.7		29	152	−55.3		28	155	−61.4	
15,000	21	132	−66.4		27	131	−65.7		22	129	−63.7		28	133	−70.3		22	133	−61.8		28	129	−57.1		26	132	−64.8	
16,000	19	112	−67.3		27	112	−67.1		18	110	−64.7		27	112	−73.4		22	113	−62.9		28	110	−58.3		23	112	−66.2	
17,000	16	95	−66.3		27	94	−66.0		15	93	−63.6		23	94	−71.5		22	96	−62.1		27	94	−58.2		20	95	−66.0	
18,000	15	80	−63.7		26	.80	−63.6		12	79	−61.0		20	80	−69.2		19	82	−59.8		25	80	−57.0		17	81	−64.0	
19-000	9	68	−62.1		23	68	−60.8		5	67	−58.2		18	68	−65.7		15	70	−57.4		22	69	−55.5		11	68	−61.1	
20,000	6	58	−60.8		11	58	−58.4						13	58	−62.0		6	59	−55.3		15	58	−54.0		6	58	−58.6	
21,000					6	50	−56.1						7	49	−59.5						5	50	−52.4					

*NOTE.—Due to surface readings from a faulty barometer, all pressures in Table 1 for Detroit, Mich., for the months of July and August 1942 are 1.5 mbs. too low from the surface through 5 kilometers, and 1.0 mb. too low above 5 kilometers.

TABLE 1.—*Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during August 1942*—Continued

Stations and elevations in meters above sea level

Attitude (meters) m. s. l.	Joliet, Ill. (178 m.)				Lake Charles, La. (5 m.)				(1) Lakehurst, N. J. (39 m.)				Medford, Oreg. (401 m.)				Miami, Fla. (4 m.)				Nashville, Tenn. (180 m.)				(1) Norfolk, Va. (4 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	995	19.4	87	31	1014	25.8	90	27	1,012	20.5	86	31	965	26.1	37	31	1,017	25.9	87	31	996	22.8	86	28	1,019	23.8	82
500	31	959	21.0	74	31	959	24.5	79	27	960	20.9	68	31	954	26.2	37	31	962	24.4	85	31	960	22.9	74	28	963	22.1	77
1,000	31	905	18.1	73	31	906	22.0	71	27	907	18.4	65	31	901	23.2	38	31	908	21.4	81	31	907	20.1	72	28	910	19.3	75
1,500	31	854	15.0	73	31	856	19.5	63	27	855	15.4	62	31	851	19.6	41	31	858	18.6	73	31	856	17.1	73	28	858	16.9	70
2,000	31	804	12.8	64	31	807	16.9	59	27	806	12.9	57	31	802	15.8	47	31	809	15.7	66	31	807	14.5	70	28	809	14.6	69
2,500	31	758	11.0	57	31	760	14.1	55	27	759	10.6	49	31	756	12.7	52	31	762	12.9	61	31	760	11.8	67	28	763	11.9	68
3,000	31	714	8.5	54	31	717	11.1	55	27	715	8.2	46	31	712	10.0	49	31	718	9.9	58	31	716	9.1	65	28	719	9.4	65
4,000	30	632	3.1	49	31	635	5.4	55	27	632	3.0	42	30	631	3.9	42	31	636	4.1	55	31	634	3.8	60	28	636	3.6	61
5,000	30	558	−2.4	45	31	562	−.2	59	27	558	−2.7	40	30	557	−2.6	39	31	562	−1.6	58	28	560	−1.5	53	27	562	−2.2	57
6,000	30	491	−8.8	41	31	495	−5.8	59	26	491	−9.1	40	29	491	−9.4	37	30	495	−7.4	56	28	493	−7.1	47	27	494	−8.1	54
7,000	30	431	−15.5	41	31	435	−12.0	56	25	431	−15.4	41	29	431	−16.6	35	29	435	−13.5	53	28	434	−13.3	44	27	434	−14.5	55
8,000	29	377	−22.5	41	31	381	−18.7	53	24	376	−22.1	48	25	376	−24.4	34	29	381	−20.0	50	27	379	−20.2	42	----	----	----	----
9,000	29	328	−29.6	40	31	333	−25.5	51	24	328	−29.1	49	25	326	−31.7	33	29	332	−26.8	48	27	330	−27.0	40	----	----	----	----
10,000	29	285	−36.9	39	31	289	−32.8	49	24	285	−36.4	----	25	283	−38.6	32	28	288	−34.1	47	26	288	−34.4	40	----	----	----	----
11,000	27	246	−44.3	----	31	251	−40.7	----	21	246	−43.7	----	24	244	−45.1	----	24	250	−41.9	----	26	249	−42.1	----	----	----	----	----
12,000	27	212	−50.7	----	30	216	−48.7	----	19	211	−50.5	----	21	210	−49.5	----	19	215	−49.6	----	26	214	−49.7	----	----	----	----	----
13,000	27	181	−55.3	----	29	185	−56.8	----	18	182	−56.2	----	21	180	−53.4	----	18	184	−57.1	----	25	183	−56.9	----	----	----	----	----
14,000	27	154	−59.2	----	29	157	−64.4	----	18	155	−60.3	----	21	154	−56.6	----	18	157	−63.9	----	25	156	−63.0	----	----	----	----	----
15,000	25	132	−62.5	----	28	133	−70.0	----	16	132	−62.6	----	21	131	−59.1	----	18	133	−68.0	----	25	133	−66.3	----	----	----	----	----
16,000	25	112	−64.4	----	28	113	−73.3	----	15	112	−62.9	----	21	112	−60.7	----	16	113	−69.8	----	25	112	−68.0	----	----	----	----	----
17,000	24	95	−63.8	----	25	95	−72.8	----	9	95	−62.8	----	19	95	−61.3	----	15	95	−69.2	----	20	95	−67.3	----	----	----	----	----
18,000	19	81	−61.8	----	24	80	−70.0	----	7	81	−63.2	----	18	81	−60.3	----	12	80	−67.0	----	20	80	−64.8	----	----	----	----	----
19,000	12	69	−59.3	----	20	68	−67.5	----	----	----	----	----	18	69	−58.6	----	8	68	−63.6	----	15	68	−62.2	----	----	----	----	----
20,000	----	----	----	----	16	57	−64.4	----	----	----	----	----	13	58	−56.6	----	----	----	----	----	11	58	−59.9	----	----	----	----	----
21,000	----	----	----	----	5	48	−61.3	----	----	----	----	----	9	50	−54.8	----	----	----	----	----	6	49	−57.9	----	----	----	----	----
22,000	----	----	----	----	----	----	----	----	----	----	----	----	5	43	−53.7	----	----	----	----	----	----	----	----	----	----	----	----	----

Stations and elevations in meters above sea level

Altitude (meters) m. s. l.	Oakland, Calif. (6 m.)				Oklahoma City, Okla. (391 m.)				Omaha, Nebr. (301 m.)				(1) Pensacola, Fla. (24 m.)				Phoenix, Ariz. (339 m.)				Portland, Maine (20 m.)				St. Louis, Mo. (171 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	1012	15.9	82	31	969	24.3	79	31	980	22.3	79	17	1015	27.4	78	30	969	30.8	42	31	1014	15.8	88	31	996	22.7	78
500	31	956	17.9	64	31	958	25.3	76	31	958	23.2	68	17	961	24.4	73	30	952	32.3	37	31	959	18.3	68	31	959	23.0	66
1,000	31	902	22.6	32	31	905	23.7	68	31	904	21.7	63	17	908	21.5	66	30	900	30.0	34	31	905	15.3	71	31	906	19.9	67
1,500	31	851	21.8	25	31	854	20.7	69	31	854	18.7	63	17	857	18.8	61	30	851	26.7	35	31	853	12.3	70	31	855	16.9	68
2,000	31	803	19.3	22	31	806	17.6	67	31	804	15.9	61	17	808	15.9	58	30	803	22.7	39	31	803	9.6	67	31	806	14.4	60
2,500	31	757	16.2	22	31	760	14.5	66	30	759	13.2	56	17	762	13.4	55	30	758	18.7	45	31	756	7.0	60	31	759	11.9	56
3,000	31	714	12.9	22	31	716	11.7	63	30	715	10.3	55	16	718	10.9	50	30	715	14.8	50	31	711	4.8	53	31	715	9.3	53
4,000	31	633	6.6	24	31	635	5.7	58	30	633	4.4	53	16	636	5.4	48	30	634	7.4	56	31	629	−0.2	48	31	634	4.0	50
5,000	31	560	−0.2	26	30	562	0.1	52	30	560	−1.6	49	15	563	−0.4	46	29	561	0.7	60	29	554	−5.8	39	29	560	−1.5	46
6,000	31	494	−7.2	26	30	495	−5.7	48	30	493	−7.8	44	12	495	−5.9	45	28	495	−5.5	56	29	487	−12.3	32	29	493	−7.5	44
7,000	31	433	−14.4	23	27	435	−12.1	45	29	433	−14.7	42	11	436	−11.7	44	28	435	−11.4	51	27	427	−19.1	31	29	433	−14.2	42
8,000	30	378	−21.9	22	27	381	−18.9	44	29	378	−21.9	40	11	382	−18.4	43	28	381	−18.5	48	27	372	−25.9	31	28	378	−21.1	40
9,000	30	329	−29.3	21	26	332	−25.7	43	29	329	−29.1	38	11	333	−25.5	49	28	332	−26.0	46	26	323	−33.4	30	27	330	−28.0	39
10,000	30	286	−36.8	20	25	289	−32.9	42	29	286	−36.2	35	9	290	−32.7	----	27	289	−33.7	45	24	280	−40.8	----	27	286	−35.2	37
11,000	30	247	−43.2	----	24	250	−40.5	----	29	247	−43.5	----	9	252	−40.3	----	26	250	−41.3	----	22	241	−47.0	----	27	248	−42.5	----
12,000	29	213	−48.9	----	21	216	−48.1	----	29	212	−50.0	----	7	217	−48.6	----	25	216	−48.9	----	18	207	−51.9	----	26	213	−49.4	----
13,000	29	182	−54.5	----	21	185	−55.5	----	29	182	−55.3	----	----	----	----	----	23	185	−56.5	----	16	177	−55.0	----	26	183	−55.6	----
14,000	29	156	−59.6	----	21	157	−62.6	----	29	155	−59.4	----	----	----	----	----	21	157	−63.3	----	10	152	−56.7	----	26	156	−60.7	----
15,000	29	132	−63.5	----	21	134	−68.3	----	29	132	−62.1	----	----	----	----	----	20	134	−68.7	----	8	129	−58.6	----	25	132	−64.7	----
16,000	29	113	−65.2	----	21	113	−71.1	----	25	112	−63.5	----	----	----	----	----	19	113	−70.9	----	----	----	----	----	25	112	−66.5	----
17,000	28	95	−64.4	----	18	95	−70.8	----	23	95	−63.5	----	----	----	----	----	17	95	−69.3	----	----	----	----	----	21	95	−65.9	----
18,000	23	81	−62.4	----	18	80	−67.8	----	19	81	−62.2	----	----	----	----	----	12	80	−67.1	----	----	----	----	----	19	81	−63.7	----
19,000	18	69	−60.2	----	15	68	−64.6	----	7	69	−60.0	----	----	----	----	----	6	68	−63.9	----	----	----	----	----	10	69	−61.2	----
20,000	10	58	−57.9	----	12	58	−61.7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	8	58	−58.8	----
21,000	6	50	−55.6	----	8	49	−58.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

TABLE 1.—*Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during August 1942*—Continued

Stations and elevations in meters above sea level

Altitude (meters) m. s. l.	St. Paul, Minn (225 m.)				San Antonio, Tex. (242 m.)				San Diego, Calif. (19 m.)				S. S. Marie, Mich. (221 m.)				(1) Seattle, Wash (27 m.)				Spokane, Wash. (598 m.)				Washington, D. C. (25 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	988	20.3	81	29	987	26.6	74	28	1,008	19.1	83	30	990	15.5	84	30	1012	20.6	69	31	943	22.8	40	30	1,016	22.0	85
500	31	957	20.4	74	29	959	25.3	76	28	954	20.6	62	30	958	16.6	72	30	958	18.8	62					30	962	21.1	77
1,000	31	903	17.9	72	29	906	22.7	77	28	902	23.6	33	30	903	14.6	68	30	904	16.6	56	31	900	23.1	38	30	908	18.2	76
1,500	31	852	15.2	72	29	855	20.2	76	28	852	23.1	24	30	851	11.8	70	30	852	14.2	54	31	850	19.3	38	30	856	15.4	74
2,000	31	802	12.7	65	29	807	17.4	70	28	804	20.6	26	30	802	9.3	66	30	803	11.5	53	31	801	15.2	41	30	806	13.0	67
2,500	31	756	10.1	62	29	761	14.8	63	28	758	17.3	33	30	754	7.3	59	30	756	8.3	54	31	755	11.2	43	30	760	10.8	65
3,000	31	712	7.6	57	29	717	12.3	59	28	715	13.7	35	30	710	5.0	55	30	711	5.8	46	31	711	7.8	45	30	716	8.5	62
4,000	30	630	2.1	53	29	636	6.5	59	28	634	7.1	39	29	627	−0.4	48	30	629	0.1	36	30	628	1.4	46	29	634	3.2	59
5,000	30	556	−3.8	49	29	562	0.8	59	28	560	0.6	38	27	553	−6.1	41	30	554	−6.3	32	30	555	−5.1	47	29	560	−2.4	55
6,000	29	489	−10.0	44	29	496	−4.9	55	27	493	−6.1	30	27	486	−12.7	36	30	487	−13.4	33	30	487	−12.0	45	29	493	−8.0	48
7,000	29	429	−16.7	42	29	436	−11.0	52	27	433	−12.6	29	27	425	−19.7	33	29	426	−20.8	34	30	427	−19.2	43	28	433	−14.4	45
8,000	29	374	−23.9	39	28	382	−16.8	52	16	381	−20.0		24	370	−26.8	32	28	371	−28.3	40	29	372	−26.5	42	26	378	−21.2	45
9,000	29	326	−31.2	37	28	333	−23.9	51	16	331	−27.7		23	322	−34.1	30	28	322	−35.5	43	29	323	−33.7	42	24	329	−28.3	44
10,000	27	282	−38.4	35	28	290	−31.2	49	16	288	−35.1		20	278	−41.1		27	279	−42.7		29	280	−40.9		23	286	−35.1	44
11,000	25	244	−45.4		28	251	−39.2	48	16	249	−42.2		18	240	−47.2		25	240	−49.6		29	241	−47.0		22	247	−42.2	
12,000	24	209	−50.8		25	216	−47.3		16	215	−49.3		17	206	−51.7		25	205	−53.8		28	207	−50.8		22	213	−49.1	
13,000	24	179	−54.2		25	186	−55.4		13	184	−56.2		15	176	−52.6		23	176	−55.8		28	177	−52.9		20	182	−54.9	
14,000	23	153	−56.3		25	158	−62.7		12	157	−62.8		11	150	−54.7		21	149	−57.8		28	151	−54.7		20	156	−59.7	
15,000	21	131	−58.3		25	134	−68.0		9	133	−67.6		10	128	−57.2		15	127	−59.3		27	130	−56.3		17	132	−63.1	
16,000	20	112	−59.2		22	113	−72.2		9	113	−70.4		9	109	−58.4		12	108	−59.7		25	111	−57.3		15	112	−64.5	
17,000	15	95	−58.9		21	95	−71.9		5	96	−70.0		6	93	−57.1		8	91	−58.9		23	94	−57.6		15	95	−64.5	
18,000	13	81	−57.5		18	80	−68.4										5	77	−57.8		21	80	−57.1		13	80	−63.3	
19,000	11	70	−55.9		16	68	−64.4														19	68	−56.2		12	68	−60.8	
20,000	5	60	−54.2		13	58	−60.5														15	58	−55.0		9	58	−58.3	
21,000																					6	50	−53.2					

Stations and elevations in meters above sea level

Altitude (meters) m. s. l.	Anchorage, Alaska (42 m.)				Bethel, Alaska (7 m.)				Fairbanks, Alaska (156 m.)				Juneau, Alaska (49 m.)				Ketchikan, Alaska (26 m.)				Nome, Alaska (14 m.)				San Juan, P. R. (15 m.)				Swan Island, W. I. (10 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	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	1,006	15.5	72	22	1,009	13.7	81	31	990	16.8	62	31	1,011	15.5	77	31	1,015	17.0	75	19	1,003	12.5	79	28	1,014	26.5	84	28	1,012	26.8	86
500	31	952	12.6	72	22	952	10.2	87	31	951	14.0	64	31	959	13.0	79	31	960	14.3	77	19	947	10.5	82	28	960	23.6	90	28	957	22.9	90
1,000	31	897	9.1	75	22	896	6.9	90	31	896	10.1	67	31	903	9.9	85	31	904	11.0	80	19	892	7.4	85	28	907	20.5	89	28	904	19.8	86
1,500	31	844	5.9	82	22	843	4.5	89	31	843	6.4	71	30	850	6.9	88	31	852	8.4	78	19	839	4.7	84	28	856	17.9	85	28	853	16.9	81
2,000	31	794	2.5	85	22	792	2.4	84	31	793	2.9	76	30	800	4.2	87	31	801	6.5	72	19	789	2.1	83	28	807	15.2	77	28	804	14.1	77
2,500	30	746	−0.3	83	22	744	0.2	77	31	745	−0.3	81	30	752	2.1	77	31	754	3.9	69	19	741	−0.6	84	28	761	12.9	68	28	758	11.7	73
3,000	30	701	−2.9	81	22	699	−2.0	71	31	700	−3.4	81	28	706	−0.1	68	31	709	1.5	65	19	696	−3.3	84	28	717	10.3	58	28	714	9.0	70
4,000	28	617	−8.8	79	22	616	−6.6	70	31	616	−9.1	76	26	623	−5.0	59	31	625	−3.9	61	19	613	−8.8	73	28	635	4.5	53	26	632	3.2	67
5,000	28	542	−14.3	76	22	542	−12.6	71	30	541	−15.2	74	23	548	−10.9	53	30	550	−9.8	59	19	538	−15.1	69	27	561	−0.8	47	26	559	−2.6	67
6,000	28	474	−20.5	74	22	474	−19.0	66	30	473	−22.1	71	21	480	−17.4	52	28	482	−16.1	57	18	470	−21.7	65	26	494	−6.4	48	26	492	−8.5	68
7,000	28	413	−27.0	71	22	414	−25.6	63	29	412	−29.1	68	20	420	−24.4	51	26	422	−22.9	55	18	410	−28.5	62	26	435	−12.8	48	26	432	−14.6	67
8,000	28	359	−34.0	69	22	360	−32.1	61	29	357	−36.4	66	19	365	−31.6	51	22	367	−29.9	54	15	356	−35.7	61	23	380	−19.9	47	26	378	−21.3	64
9,000	28	310	−41.3		22	311	−39.2		29	308	−43.6		19	316	−38.4	51	18	318	−37.2	54	14	308	−42.9		23	331	−27.6	45	26	329	−28.7	61
10,000	28	268	−46.9		22	269	−46.4		28	265	−49.4		17	273	−44.0		17	275	−44.6		13	264	−48.4		23	288	−35.4	43	24	286	−36.8	60
11,000	28	230	−49.9		22	231	−50.6		26	228	−50.6		15	235	−48.7		17	237	−51.1		13	228	−49.2		22	249	−43.3		22	246	−45.5	
12,000	28	197	−49.7		21	198	−49.4		26	195	−49.3		15	201	−52.9		17	202	−55.6		13	195	−46.4		22	214	−51.3		18	211	−54.6	
13,000	27	170	−48.9		20	170	−48.6		24	167	−47.8		14	172	−53.0		16	172	−57.0		13	168	−45.1		22	183	−58.6		16	180	−64.1	
14,000	24	145	−49.1		19	146	−48.6		22	144	−47.8		13	147	−51.7		15	147	−55.5		11	145	−44.7		22	156	−65.0		15	152	−73.3	
15,000	22	125	−48.9		17	125	−48.9		21	123	−47.7		10	126	−51.7		14	126	−55.3		10	125	−44.6		21	132	−70.0		12	128	−80.8	
16,000	21	107	−49.0		17	108	−48.9		19	106	−47.0		10	108	−51.4		13	108	−55.4		9	108	−44.5		20	111	−73.0		12	107	−87.2	
17,000	17	92	−48.8		16	93	−48.3		18	91	−46.4		7	92	−50.6		10	92	−54.9		7	93	−44.6		18	94	−73.1		10	89	−87.0	
18,000	13	79	−48.3		14	79	−47.6		15	78	−45.8		6	78	−49.8		8	78	−54.6		5	80	−44.2		17	79	−70.6		6	75	−84.6	
19,000	10	68	−47.9		10	68	−47.0		15	67	−45.5		5	67	−48.4										13	67	−68.1		6	62	−76.6	
20,000	8	58	−47.6		9	59	−46.5		8	58	−45.4														8	57	−64.9					
21,000																									5	48	−61.6					
22,000																									5	40	−58.9					

LATE REPORT FOR JULY 1942

Altitude (meters) m. s. l.	Station and elevation in meters above sea level: Fairbanks, Alaska (156 m.)				Altitude (meters) m. s. l.	Station and elevation in meters above sea level: Fairbanks, Alaska (156 m.)			
	Number of observations	Pressure	Temperature	Relative humidity		Number of observations	Pressure	Temperature	Relative humidity
Surface	31	994	20.2	51	10,000	30	270	−47.5	
500	31	955	17.1	54	11,000	30	232	−49.8	
1,000	31	900	12.7	60	12,000	30	199	−48.2	
1,500	31	848	8.8	68	13,000	30	171	−47.1	
2,000	31	798	5.0	76	14,000	28	147	−46.8	
2,500	31	750	1.8	80	15,000	27	127	−46.6	
3,000	31	705	−0.8	81	16,000	26	109	−46.5	
4,000	31	622	−6.3	73	17,000	24	94	−46.3	
5,000	30	546	−12.5	66	18,000	22	81	−45.8	
6,000	30	478	−19.5	65	19,000	18	70	−45.3	
7,000	30	417	−26.5	62	20,000	12	60	−44.7	
8,000	30	362	−34.1	62	21,000	7	52	−44.3	
9,000	30	313	−41.5						

CORRECTED DATA FOR JULY 1942

Altitude (meters) m. s. l.	Station and elevation in meters above sea level: Lake Charles, La. (5 m.)				Altitude (meters) m. s. l.	Station and elevation in meters above sea level: Lake Charles, La. (5 m.)			
	Number of observations	Pressure	Temperature	Relative humidity		Number of observations	Pressure	Temperature	Relative humidity
Surface	31	1017	25.7	89	9,000	30	333	−26.4	48
500	31	961	24.8	73	10,000	30	290	−33.9	48
1,000	31	908	22.2	69	11,000	29	250	−41.8	
1,500	31	857	19.6	62	12,000	29	216	−49.7	
2,000	31	809	16.7	59	13,000	27	185	−57.2	
2,500	31	762	13.9	56	14,000	26	156	−63.5	
3,000	31	718	11.1	54	15,000	26	133	−68.2	
4,000	31	637	5.7	50	16,000	22	113	−70.8	
5,000	31	563	−0.1	52	17,000	19	95	−71.3	
6,000	31	496	−6.0	52	18,000	17	80	−69.4	
7,000	31	436	−12.4	50	19,000	16	68	−66.4	
8,000	30	382	−19.3	49	20,000	7	58	−63.1	

All observations taken at 11:00 p. m., 75th meridian time.

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

Number of observations refers to pressure only, as temperature and humidity are missing for some observations at certain levels, also, the humidity data are not used in daily observations when the temperature is below −40° C.

Stations marked with the figure one (1) are Navy stations.

TABLE 2.—*Free-air resultant winds based on pilot-balloon observations made near 5 p. m. (75th meridian time) during August 1942. 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 866 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	155	3.6	31	165	0.2	31	194	0.9	31	30	2.2	31	313	1.4	31	320	4.6	31	132	5.0	31	234	2.5	30	225	1.1	31	152	1.7	31	86	0.5	31	60	2.8	31	172	1.5
500							31	191	1.3										31	133	6.6	31	246	3.9	30	229	2.5	31	178	2.6	31	164	0.4						
1,000	31	140	4.6				31	207	1.6				31	258	1.2	31	318	4.7	30	142	5.4	29	236	4.3	29	252	3.6	30	194	2.0	31	242	1.6						
1,500	31	149	4.8				30	246	2.7	31	355	1.6	30	263	1.7	31	315	4.1	30	146	4.2	27	249	5.3	28	269	5.8	28	218	2.1	31	261	2.5				31	156	1.6
2,000	30	157	3.9	31	200	0.6	28	253	3.1	31	334	0.6	27	278	5.4	31	301	2.8	29	144	4.3	23	259	6.0	25	273	7.2	22	245	3.4	28	272	4.0	31	60	3.2	31	155	0.9
2,500	28	166	4.0	31	202	0.8	27	260	2.8	31	266	2.9	20	269	6.4	30	288	2.7	27	136	4.0	16	264	5.9	20	274	6.5	21	256	3.6	26	266	5.7	31	72	2.6	31	127	0.9
3,000	21	211	2.7	31	154	0.9	25	262	3.3	27	255	4.9	18	281	7.8	30	268	3.4	24	119	3.1	12	274	4.8	16	280	6.1	21	247	3.6	24	278	5.3	31	121	1.8	30	40	0.6
4,000	17	259	2.2	31	315	1.3	21	274	2.9	27	264	9.0	15	275	11.9	30	253	6.4	20	126	3.7				10	306	4.7	18	243	3.9	20	284	5.9	30	266	3.9	29	353	0.3
5,000	15	295	2.7	31	289	1.6	18	267	4.0	25	268	11.7	13	279	12.7	28	264	8.1	18	119	3.3							15	233	4.3	16	287	6.1	28	271	6.5	29	318	0.9
6,000	10	288	2.1	24	269	2.9	15	289	4.2	23	270	13.4	13	286	15.3	27	257	8.4	16	111	2.8							11	240	5.4	12	296	7.9	20	274	7.8	25	289	1.3
8,000				21	248	5.2	11	285	4.1	19	269	13.7				25	266	9.1																13	267	10.9	21	235	4.0
10,000				16	246	8.4	11	301	4.5	11	278	16.9				20	278	13.8																12	261	15.7	17	235	5.1
12,000																16	271	19.2																11	270	21.4	12	237	6.2
14,000																																		10	274	17.5	11	227	3.0

TABLE 2.—*Free-air resultant winds based on pilot-balloon observations made near 5 p. m. (75th meridian time) during August 1942. Directions given in degrees from North (N=360°, E=90°, S=180°, W=270°)—Velocities in meters per second*—Continued

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. (570m.)			Little Rock, Ark. (88m.)			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	Directions	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	31	222	2.1	31	281	0.9	30	186	1.0	28	313	0.7	31	98	2.5				31	184	2.3	30	130	1.0	31	304	1.9	30	116	3.5	29	178	2.0	30	210	0.3	30	199	1.2
500							30	194	2.2				31	139	1.7							30	157	1.7	31	310	2.4	30	115	4.5	29	166	2.5	30	224	0.8	30	236	3.1
1,000							30	209	1.9	28	319	1.0	27	181	2.1				31	188	3.1	29	193	0.6	31	322	2.1	30	112	4.7	27	158	2.4	30	233	1.1	28	263	3.9
1,500							30	244	2.9	28	297	1.6	24	221	3.2				31	183	3.9	25	219	1.6	31	308	1.4	27	112	4.2	23	153	1.8	30	263	1.5	26	282	3.9
2,000	31	239	2.6	31	276	1.8	26	261	3.4	27	275	1.6	22	228	3.2				31	195	3.7	22	226	2.8	31	313	1.5	27	112	3.9	21	169	1.3	26	257	1.6	22	290	5.0
2,500	31	242	3.2	31	270	2.4	26	273	4.6	23	259	4.1	21	225	2.9				30	214	3.9	17	239	3.1	31	199	2.0	26	117	4.0	17	206	1.2	21	258	1.7	19	279	5.9
3,000	31	243	3.2	31	249	3.0	25	275	5.6	20	261	5.4	21	225	3.4				30	214	3.4	14	244	2.9	31	214	2.2	27	115	4.3	15	188	1.9	20	314	1.9	15	288	5.8
4,000	29	242	3.9	30	251	3.3	21	265	6.3	16	266	9.2	18	195	3.5				30	213	4.1	10	299	1.8	30	235	3.7	23	115	3.8				17	287	3.4	10	308	5.9
5,000	27	239	5.0	28	256	4.5	20	262	7.7	13	263	11.2	15	215	2.8				28	215	5.2				30	229	5.2	17	119	2.4				13	281	2.8			
6,000	23	242	7.4	27	261	4.8	18	265	8.7				13	201	2.5				27	251	5.4				29	246	5.5	14	108	2.4				12	272	3.5			
8,000	19	247	14.3	17	247	8.9	12	267	7.0										25	248	9.3				27	239	9.1	11	95	3.2									
10,000	15	242	18.8				12	273	9.0										23	254	13.1				26	247	12.0												
12,000	11	250	19.2																20	256	14.7				23	250	16.0												
14,000																			20	255	11.8				20	256	15.1												
16,000																			18	227	4.5				13	253	8.0												

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. (230 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	31	279	5.3	29	165	3.7	30	177	2.4	31	257	0.5	31	55	1.5	31	158	1.0	31	200	2.5	30	137	3.4	31	279	3.5	30	298	1.9	31	260	2.0	31	105	0.2	30	185	1.8
500	31	267	3.4	29	162	4.3	30	178	3.5	31	267	1.5				31	193	1.4	31	217	2.9	30	134	4.8	31	274	2.5	30	261	2.0	31	297	1.1				30	202	2.2
1,000	31	252	2.4	29	160	4.5	30	195	3.2	31	244	1.7	31	63	1.5	31	219	1.7	29	234	4.2	30	141	4.9	29	299	1.7	28	255	3.5	27	337	2.1	31	252	1.1	28	248	2.7
1,500	31	241	2.7	29	183	4.3	30	218	3.7	31	232	2.1	31	103	0.8	31	235	2.5	27	240	5.8	29	146	4.8	29	292	1.3	26	256	5.4	26	332	1.3	31	263	1.6	28	259	3.9
2,000	30	236	2.7	27	201	4.3	29	245	4.4	31	208	1.9	30	189	1.3	29	271	2.6	21	268	4.7	28	150	4.2	27	253	1.6	23	265	6.7	24	262	0.6	31	271	2.1	25	276	5.2
2,500	29	222	2.8	26	238	4.1	28	255	4.3	31	209	1.6	29	240	2.7	26	281	3.5	14	278	4.9	26	154	3.5	26	204	1.9	18	280	7.9	22	342	0.7	30	266	3.0	24	277	5.6
3,000	29	222	2.9	25	263	4.4	26	267	4.9	31	210	1.7	25	268	5.3	24	273	3.9	11	274	6.2	25	165	3.4	25	200	2.2	14	294	6.7	20	320	1.3	29	277	4.5	23	275	5.4
4,000	29	211	3.5	22	298	4.2	25	281	6.6	30	143	0.8	21	273	7.9	21	290	5.1				18	161	1.2	24	180	2.1				19	296	2.3	25	273	6.5	20	276	5.8
5,000	28	226	4.5	19	302	5.5	21	288	8.2	26	188	1.0	18	266	9.3	17	293	5.7				14	235	0.7	23	170	1.2				17	247	4.0	21	270	8.2	17	278	8.1
6,000	27	236	5.4	17	297	6.2	20	290	9.8	26	202	1.5	13	257	12.5	13	291	7.4				13	217	1.6	23	179	0.2				16	271	4.8	20	277	8.4	15	274	10.3
8,000	22	252	6.9	14	284	9.8	15	290	10.9	22	256	4.0	12	253	15.9							10	330	2.2							12	252	7.2	14	276	8.3			
10,000	22	258	12.2	10	300	11.7	10	264	17.2	22	241	7.8																			10	266	7.4	12	262	12.1			
12,000	18	250	15.4							22	236	10.3																						10	264	15.1			
14,000	15	251	15.7							16	238	9.1																											
16,000	10	264	5.0							11	215	2.4																											

TABLE 3.—*Maximum free-air wind velocities (m. p. s.), for different sections of the United States based on pilot-balloon observations during August 1942*

Section	Surface to 2,500 meters (m. s. l.)					Between 2,500 and 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]	29.3	W	1,720	3	Boston, Mass	38.5	WSW	4,780	24	Boston, Mass	57.6	WNW	9,310	5	Portland, Maine.
East-Central [2]	23.5	SW	620	23	Hatteras, N. C	30.4	W	4,970	24	Washington, D. C	44.4	WSW	10,440	9	Washington, D. C.
Southeast [3]	22.2	W	630	5	Charleston, S. C	21.6	WNW	2,630	5	Birmingham, Ala	30.5	SW	10,420	31	Tampa, Fla.
North-Central [4]	34.3	W	1,220	19	Sault Ste Marie, Mich	33.8	SW	2,990	21	La Crosse, Wis	59.0	W	12,130	4	Detroit, Mich.
Central [5]	40.9	S	1,210	5	Dodge City, Kans	27.8	NW	4,180	7	North Platte, Nebr	40.8	W	12,050	4	Omaha, Nebr.
South-Central [6]	30.7	SSE	630	30	Houston, Tex	21.5	NNW	4,980	10	Tulsa, Okla	33.3	NW	11,810	11	Amarillo, Tex.
Northwest [7]	30.9	NW	1,700	20	Ellensburg, Wash	30.4	SSW	5,000	3	Medford, Oreg	61.0	WSW	11,800	1	Billings, Mont.
West-Central [8]	24.9	SSW	1,630	29	Grand Junction, Colo	30.8	SW	4,320	6	Reno, Nev	62.0	SW	8,880	27	Ely, Nev.
Southwest [9]	25.4	SSW	2,290	29	Winslow, Ariz	33.8	SSW	5,000	28	Las Vegas, Nev	46.8	SW	12,610	27	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.
[7] Wyoming, Colorado, Utah, northern Nevada, and northern California.
[9] Southern California, southern Nevada, Arizona, New Mexico, and extreme west Texas.