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 June 1946*—Continued

Standard pressure surface (mb.)	Tampa, Fla. (1,019.3 mb.)				Tatoosh Island, Wash. (1,014.1 mb.)				Toledo, Ohio (994.4 mb.)				Washington, D. C. (1,015.5 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	28	9	23.7	86	30	31	12.4	87	30	191	17.9	77	30	25	21.3	73
1,000	28	168	23.5	83	30	148	11.5	85	30	142	(*)	----	30	158	21.2	68
950	28	617	21.4	79	30	579	9.5	80	30	583	17.7	67	30	604	19.0	64
900	28	1,084	18.6	80	30	1,023	7.2	79	30	1,043	15.5	68	30	1,065	16.2	67
850	28	1,573	15.4	81	30	1,491	4.3	82	30	1,526	12.6	68	30	1,550	13.5	65
800	28	2,085	12.4	78	30	1,983	1.5	80	30	2,034	10.4	64	30	2,058	10.8	55
750	28	2,627	9.8	66	30	2,504	−1.2	75	30	2,576	7.4	62	30	2,595	7.8	53
700	28	3,196	6.6	64	30	3,048	−4.3	72	29	3,133	3.7	57	30	3,160	4.2	52
650	28	3,804	3.2	61	30	3,632	−7.8	69	27	3,740	0.0	57	30	3,760	0.5	52
600	28	4,446	−0.2	59	30	4,246	−11.4	61	27	4,375	−3.5	48	30	4,397	−3.2	54
550	27	5,140	−4.0	60	30	4,909	−15.7	60	27	5,058	−7.4	44	30	5,081	−7.2	47
500	27	5,885	−8.1	59	30	5,620	−20.3	59	27	5,795	−11.8	44	30	5,818	−11.6	45
450	27	6,704	−13.0	57	30	6,398	−25.5	----	27	6,603	−16.8	----	29	6,626	−16.8	45
400	27	7,586	−18.7	59	30	7,236	−31.6	----	27	7,474	−23.0	----	29	7,493	−22.8	----
350	27	8,567	−25.9	----	29	8,164	−38.4	----	27	8,434	−30.2	----	29	8,459	−29.7	----
300	27	9,663	−34.5	----	28	9,214	−44.9	----	27	9,513	−38.4	----	29	9,540	−37.6	----
250	27	10,909	−44.9	----	28	10,419	−49.2	----	26	10,744	−47.3	----	29	10,773	−46.7	----
200	27	12,362	−56.6	----	27	11,884	−49.6	----	25	12,184	−55.9	----	27	12,213	−55.8	----
175	27	13,196	−62.4	----	26	12,761	−49.4	----	24	13,045	−59.2	----	25	13,054	−60.0	----
150	20	14,133	−67.4	----	25	13,772	−49.4	----	20	14,012	−61.6	----	22	14,012	−63.1	----
125	9	15,216	−70.5	----	23	14,962	−50.4	----	16	15,153	−63.4	----	17	15,150	−63.9	----
100	----	------	------	----	17	16,423	−51.0	----	10	16,538	−62.9	----	13	16,533	−65.6	----
80	----	------	------	----	7	17,853	−50.7	----	5	17,941	−62.2	----	----	------	------	----

[1] Data not yet received.
[2] Insufficient 0400 observations during June.
*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.

LATE REPORT FOR SWAN ISLAND, WEST INDIES

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 May 1946*

STATIONS AND MEAN SURFACE PRESSURES

Standard pressure surface (mb.)	Swan Island, W. I. (1,011.6 mb.)				Standard pressure surface (mb.)	Swan Island, W. I. (1,011.6 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity		Number of observations	Dynamic height	Temperature	Relative humidity
Surface	29	10	26.8	81	500	29	5,861	−7.0	34
1,000	29	113	26.0	80	450	29	6,688	−12.2	-------
950	29	571	22.4	81	400	29	7,569	−18.1	-------
900	29	1,032	19.5	78	350	29	8,552	−25.5	-------
850	29	1,523	16.9	73	300	29	9,652	−33.9	-------
800	29	2,039	14.5	61	250	29	10,904	−43.7	-------
750	29	2,588	11.8	51	200	28	12,363	−55.6	-------
700	29	3,157	8.5	45	175	27	13,201	−62.0	-------
650	29	3,773	5.1	42	150	25	14,139	−68.1	-------
600	29	4,415	1.4	40	125	10	15,239	−72.4	-------
550	29	5,112	−2.6	37					

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

Altitude (meters) m. s. l.	Abilene, Tex. (534 m.)			Albuquerque, N. Mex. (1,630 m.)			Atlanta, Ga. (299 m.)			Billings, Mont. (1,095 m.)			Bismarck, N. Dak. (512 m.)			Boise, Idaho (868 m.)			Brownsville, Tex. (7 m.)			Buffalo, N. Y. (220 m.)			Burlington, Vt. (100 m.)			Charleston, S. C. (16 m.)			Cincinnati, Ohio (150 m.)			Denver, Colo. (1,627 m.)			El Paso, Tex. (1,198 m.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	29	151	5.6	30	229	3.2	27	281	0.9	30	61	2.5	30	195	0.2	30	311	3.3	30	129	6.0	30	239	4.2	19	309	2.1	30	162	1.7	30	240	1.8	29	331	1.8	30	198	1.7
500	---	---	---	---	---	---	27	259	0.6	---	---	---	---	---	---	---	---	---	30	134	7.8	30	249	5.8	19	283	3.6	30	185	4.5	30	236	3.3	---	---	---	---	---	---
1,000	29	159	7.0	---	---	---	27	246	0.9	---	---	---	30	172	1.0	30	311	3.6	29	147	6.3	27	252	5.7	19	279	4.6	28	198	2.9	30	241	4.5	---	---	---	---	---	---
1,500	29	167	7.3	---	---	---	26	235	1.6	30	64	2.1	29	199	1.6	30	296	3.1	25	158	4.6	27	259	7.2	18	281	6.5	24	213	2.0	27	251	5.4	---	---	---	30	198	2.8
2,000	29	172	6.0	30	229	4.0	25	227	1.1	29	128	1.3	27	241	2.7	30	262	2.9	21	152	3.9	26	271	8.2	16	280	8.1	22	272	1.5	25	259	7.7	29	327	1.3	30	200	2.4
2,500	28	177	4.8	30	222	3.8	25	269	1.4	27	201	2.4	24	246	3.9	29	241	4.2	17	123	4.8	22	282	10.2	12	300	10.1	21	288	1.8	21	274	7.4	28	307	0.4	30	191	1.5
3,000	26	204	3.1	30	234	4.2	25	279	1.7	26	230	4.8	21	260	6.7	29	227	5.7	15	97	3.2	18	289	9.4	10	299	11.4	21	306	1.8	15	290	8.1	28	233	1.6	30	219	1.2
4,000	24	298	0.8	30	250	5.5	20	307	2.6	22	244	10.5	18	275	11.1	28	230	8.5	11	124	2.5	16	300	10.8	---	---	---	19	280	3.1	11	306	8.6	27	238	4.6	28	273	1.6
5,000	21	331	2.7	29	247	8.8	12	311	4.7	22	248	14.0	15	272	13.8	26	244	12.7	10	121	0.9	10	307	7.7	---	---	---	19	288	3.8	---	---	---	26	245	7.0	26	231	2.0
6,000	18	337	3.5	27	249	8.0	10	304	6.7	19	257	18.4	12	269	16.9	20	241	14.9	---	---	---	---	---	---	---	---	---	18	284	4.8	---	---	---	21	256	11.2	22	271	2.3
8,000	16	320	3.9	25	267	10.5	10	302	8.1	12	256	21.2	---	---	---	16	244	20.6	---	---	---	---	---	---	---	---	---	14	286	4.4	---	---	---	14	261	15.4	16	280	5.0
10,000	13	322	4.7	23	266	11.9	---	---	---	---	---	---	---	---	---	11	266	23.1	---	---	---	---	---	---	---	---	---	10	298	6.0	---	---	---	11	271	19.1	10	302	6.6
12,000	---	---	---	19	270	15.1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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. (416 m.)			Miami, Fla. (12 m.)			Mobile, Ala. (66 m.)			Nashville, Tenn. (194 m.)			New York, N. Y. (15 m.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	30	209	5.3	30	259	4.4	30	213	1.4	30	247	1.5	29	100	4.2	28	226	3.8	30	191	2.8	30	190	1.4	30	305	3.6	30	118	4.1	29	163	2.3	30	224	2.3	30	228	2.1
500	---	---	---	---	---	---	30	224	2.1	---	---	---	29	113	4.8	28	224	5.0	---	---	---	30	196	2.6	30	306	3.8	30	118	5.8	29	180	3.4	30	221	3.0	30	258	3.5
1,000	---	---	---	---	---	---	30	253	2.2	30	243	2.1	28	119	3.1	27	233	6.6	30	198	5.0	30	196	3.5	30	295	3.0	30	124	5.1	25	161	2.6	29	219	2.8	26	272	5.3
1,500	---	---	---	30	259	4.5	29	272	2.8	30	250	2.6	26	165	0.9	27	248	7.5	30	200	5.8	30	200	4.0	30	268	2.7	28	123	4.3	22	123	1.6	29	228	2.4	24	286	6.2
2,000	30	210	5.2	30	262	4.4	28	276	4.3	27	230	3.2	26	229	0.7	25	263	9.1	30	204	6.3	27	209	3.8	30	226	4.0	27	130	3.5	20	112	1.3	25	243	3.3	23	296	7.6
2,500	30	219	6.2	30	255	4.3	28	291	5.2	24	251	5.8	24	264	1.3	22	275	9.4	30	200	7.0	27	220	3.3	27	210	5.1	24	131	3.0	13	149	1.5	25	256	3.5	19	289	8.2
3,000	30	213	7.5	29	247	4.3	26	297	6.0	21	257	6.5	24	259	1.4	16	287	8.4	30	206	7.2	26	227	2.9	25	207	7.0	23	139	2.5	11	170	1.9	25	278	4.0	18	292	8.8
4,000	30	212	8.6	29	236	6.8	23	312	5.5	13	257	7.6	21	288	2.8	12	290	9.6	30	220	8.8	20	283	3.7	21	221	10.0	20	142	1.8	---	---	---	20	300	5.5	13	295	6.7
5,000	26	224	11.3	28	238	9.3	18	303	5.9	10	260	9.4	18	290	3.1	10	304	11.4	30	216	10.9	16	283	3.9	18	229	11.1	16	117	3.2	---	---	---	15	304	7.1	---	---	---
6,000	24	232	13.1	23	244	12.0	16	304	5.8	---	---	---	15	283	4.4	---	---	---	30	227	12.0	15	295	5.2	15	239	11.0	14	127	2.9	---	---	---	12	300	9.4	---	---	---
8,000	20	242	20.2	17	260	14.8	12	324	5.1	---	---	---	12	330	2.6	---	---	---	26	228	14.7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10,000	15	244	24.4	14	264	19.8	---	---	---	---	---	---	---	---	---	---	---	---	21	237	15.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Altitude (meters) m. s. l.	Oakland, Calif. (8 m.)			Oklahoma City, Okla. (396 m.)			Omaha, Nebr. (306 m.)			Phoenix, Ariz. (338 m.)			Rapid City, S. Dak. (982 m.)			St. Louis, Mo. (181 m.)			St. Paul, Minn. (225 m.)			San Antonio, Tex. (240 m.)			San Diego, Calif. (15 m.)			Sault Ste. Marie, Mich. (225 m.)			Seattle, Wash. (116 m.)			Spokane, Wash. (603 m.)			Washington, D. C. (24 m.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	30	262	7.6	30	171	5.1	29	157	2.1	30	259	1.5	28	113	1.5	29	202	2.3	30	161	0.6	29	132	3.8	30	246	3.6	27	284	3.3	29	238	2.5	29	240	2.0	30	238	1.9
500	30	279	7.2	30	172	6.1	29	174	4.1	30	265	2.4	---	---	---	29	218	4.7	30	169	0.6	29	139	4.9	30	274	2.5	27	282	4.4	29	230	3.4	---	---	---	30	232	2.4
1,000	29	289	5.1	30	171	7.2	28	188	5.2	30	255	3.5	28	122	1.2	28	214	5.9	29	199	2.1	29	143	5.2	29	292	2.1	25	271	5.4	28	221	4.6	29	235	3.3	26	260	3.9
1,500	28	284	5.4	30	186	6.7	25	204	6.5	30	239	3.8	28	160	1.5	28	229	5.8	27	221	4.2	28	147	4.6	29	283	2.6	23	280	6.6	27	214	5.0	29	224	3.6	25	266	5.7
2,000	28	274	4.7	26	201	7.0	23	212	9.0	30	223	4.4	27	213	2.3	26	238	6.1	22	254	5.5	26	156	5.0	28	272	3.4	22	284	6.9	23	198	5.6	27	222	4.2	23	279	7.8
2,500	28	258	5.3	26	218	6.4	23	228	9.4	30	218	6.4	26	250	4.0	25	252	7.0	19	266	6.5	23	158	4.0	27	257	4.3	19	296	6.4	20	198	6.3	21	216	4.7	22	285	9.6
3,000	28	254	6.0	23	230	5.5	23	248	10.6	30	217	6.9	24	261	6.5	25	261	7.3	18	277	7.8	20	177	2.5	27	251	4.8	19	301	7.3	14	206	6.6	18	211	5.8	22	285	10.3
4,000	28	256	8.7	19	250	3.0	21	270	11.8	30	216	8.5	24	263	9.0	19	276	9.7	16	282	12.2	18	293	0.6	27	248	6.1	16	301	10.5	10	214	5.8	11	219	7.4	22	288	10.8
5,000	26	254	11.3	17	298	3.5	18	285	12.0	29	228	7.8	22	260	12.6	15	284	7.7	11	279	12.0	14	282	0.9	25	240	7.7	13	293	14.3	---	---	---	---	---	---	16	285	11.1
6,000	26	254	14.4	14	307	4.6	18	292	14.1	26	233	7.1	20	260	15.6	14	289	9.8	11	288	15.0	13	292	2.2	22	239	8.8	11	287	17.7	---	---	---	---	---	---	10	267	13.6
8,000	24	252	19.4	12	289	8.1	---	---	---	24	247	8.8	---	---	---	11	315	13.0	---	---	---	---	---	---	18	241	12.3	---	---	---	---	---	---	---	---	---	---	---	---
10,000	16	258	20.3	---	---	---	---	---	---	22	261	12.8	---	---	---	---	---	---	---	---	---	---	---	---	15	238	14.1	---	---	---	---	---	---	---	---	---	---	---	---
12,000	10	269	17.2	---	---	---	---	---	---	18	256	15.2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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

Section	Surface to 2,500 meters (m. s. l.)					2,501 to 5,000 meters (m. s. l.)					Above 5,000 meters (m. s. l.)				
	Maximum velocity	Direction	Altitude (m.) m. s. l.	Date	Station	Maximum velocity	Direction	Altitude (m.) m. s. l.	Date	Station	Maximum velocity	Direction	Altitude (m.) m. s. l.	Date	Station
Northeast [1]	42.0	NW.	2,102	10	Caribou, Maine	52.4	WNW.	5,000	13	Burlington, Vt.	76.0	W.	7,837	18	Caribou, Maine.
East-Central [2]	29.8	SW.	2,370	1	Knoxville, Tenn.	48.0	SW.	4,870	2	Hatteras, N. C.	97.0	WSW.	12,022	3	Huntington, W. Va.
Southeast [3]	20.7	SSW.	1,006	2	Jacksonville, Fla.	25.0	WNW.	4,426	5	Charleston, S. C.	48.0	W.	10,719	4	Atlanta, Ga.
North-Central [4]	35.8	SSW.	1,215	24	St. Paul, Minn.	38.9	W.	5,000	7	Bismarck, N. Dak.	66.0	WSW.	11,565	18	Bismarck, N. Dak.
Central [5]	39.6	SSW.	1,412	12	Dodge City, Kans.	56.0	SSW.	4,909	20	Columbia, Mo.	76.0	SSW.	6,449	20	Columbia, Mo.
South-Central [6]	28.2	SSW.	2,387	15	Amarillo, Tex.	39.5	W.	4,933	1	Fort Worth, Tex.	74.0	SSW.	12,190	4	Burrwood, La.
Northwest [7]	37.6	W.	2,409	6	Great Falls, Mont.	44.3	S.	3,766	9	Butte, Mont.	71.0	SW.	10,298	5	Boise, Idaho.
West-Central [8]	32.0	SSW.	2,466	5	Modena, Utah	57.1	SW.	4,926	5	Reno, Nev.	65.0	S.	10,888	11	Oakland, Calif.
Southwest [9]	32.6	SW.	2,160	14	Las Vegas, Nev.	36.0	SW.	4,780 4,960	26	Albuquerque, N. Mex.	59.2	WSW.	12,929	11	Bakersfield, Calif.

[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.