LATE REPORTS OF AEROLOGICAL DATA FOR APRIL 1949

TABLE 1

Standard pressure surface (mb.)	Swan Island, W. I. (1,012.8 mb.) Number of observations	Dynamic height	Temperature	Relative humidity	Standard pressure surface (mb.)	Swan Island, W. I. (1,102.8 mb.) Number of observations	Dynamic height	Temperature	Relative humidity
Surface	30	10	26.1	80	450	29	6,715	−10.7	----
1,000	30	122	25.5	80	400	28	7,606	−17.3	----
950	30	577	22.3	83	350	27	8,590	−24.9	----
900	30	1,043	20.0	73	300	27	9,693	−33.4	----
850	30	1,535	17.4	64	250	27	10,948	−42.9	----
800	30	2,051	14.9	55	200	26	12,416	−54.3	----
750	30	2,598	12.6	43	175	26	13,258	−60.9	----
700	30	3,172	9.8	34	150	25	14,203	−66.6	----
650	30	3,787	6.8	----	125	23	15,298	−71.0	----
600	29	4,437	3.5	----	100	19	16,598	−75.1	----
550	29	5,136	−.8	----	80	9	17,875	−76.8	----
500	29	5,892	−5.5	----					

TABLE 2.—*Free-air resultant winds based on pilot balloon observations made near 2200 G. C. T., during May 1949. Directions given in degrees from north (N=360°, E=90°, S=180°, W=270°). Speeds in meters per second*

Altitude (meters) m. s. l.	Abilene, Tex. (534 m.)			Albuquerque, N. Mex. 1,627 m.)			Atlanta, Ga. (299 m.)			Billings, Mont. (1,095 m.)			Bismarck, N. Dak. (505 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 (273 m.)			Denver, Colo. (1,618 m.)			El Paso, Tex. (1,198 m.)		
	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed
Surface	31	155	5.1	31	208	2.4	31	319	1.2	31	315	0.5	30	280	0.4	31	328	3.9	31	130	7.3	31	244	3.3	30	252	1.4	28	149	1.3	31	244	1.5	29	31	0.8	31	213	3.7
500	---	---	---	---	---	---	31	277	1.1	---	---	---	---	---	---	---	---	---	31	144	8.2	31	256	5.9	30	249	2.7	28	152	2.4	31	245	2.3	---	---	---	---	---	---
1,000	31	167	6.7	---	---	---	31	263	2.4	---	---	---	30	273	.6	31	326	4.1	30	159	7.0	31	265	6.9	29	254	4.0	28	248	1.2	30	256	4.1	---	---	---	---	---	---
1,500	31	179	7.5	---	---	---	28	263	3.2	31	274	.9	28	264	1.8	31	312	3.4	24	168	5.5	31	268	7.3	28	264	5.8	28	307	2.8	27	254	4.2	---	---	---	31	218	4.5
2,000	28	193	7.5	31	221	3.8	25	271	4.0	28	247	1.4	27	277	3.2	31	291	2.9	22	164	4.2	29	273	8.6	24	275	8.0	24	315	4.5	26	271	5.6	29	46	1.1	31	219	4.6
2,500	23	204	7.8	31	229	4.5	25	284	5.0	28	253	2.0	26	283	4.4	30	263	2.5	19	161	3.2	26	276	9.4	22	276	10.1	22	313	5.6	23	283	6.4	29	246	.7	31	223	4.5
3,000	22	221	6.6	31	229	5.2	23	292	5.8	26	260	3.9	23	290	7.0	30	234	2.7	17	181	3.3	24	284	11.4	21	277	12.4	21	308	6.3	20	301	7.0	28	197	1.2	31	229	5.9
4,000	20	240	9.0	30	238	7.9	19	289	8.6	19	259	3.6	20	295	10.1	26	195	3.5	15	228	2.9	22	285	13.7	18	279	14.7	21	301	7.6	15	305	8.0	22	244	7.4	31	241	9.0
5,000	17	258	10.3	29	245	10.6	13	290	11.9	17	265	5.7	13	290	9.8	21	204	1.7	13	274	4.6	15	287	14.2	15	282	17.7	18	292	8.7	12	312	8.7	17	249	10.5	29	245	13.4
6,000	15	271	13.3	27	248	14.4	10	296	10.6	14	250	6.5	---	---	---	17	235	1.7	11	269	6.2	---	---	---	11	277	18.6	17	295	9.8	12	308	8.4	12	258	11.8	27	246	14.7
8,000	---	---	---	23	256	18.1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	10	283	10.0	---	---	---	---	---	---	24	253	20.4
10,000	---	---	---	17	253	21.9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	10	246	24.1
12,000	---	---	---	10	258	27.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Altitude (meters) m. s. l.	Ely, Nev. (1,910 m.)			Grand Junction, Colo. (1,475 m.)			Greensboro, N. C. (271 m.)			Havre, Mont. (767 m.)			Jacksonville, Fla. (16 m.)			Joliet, Ill. (178 m.)			Las Vegas, Nev. (663 m.)			Little Rock, Ark. (88 m.)			Medford, Oreg. (416 m.)			Miami, Fla. (11 m.)			Mobile, Ala. (66 m.)			Nashville, Tenn. (182 m.)			New York, N. Y. (15 m.)		
Surface	31	194	1.9	31	230	1.8	29	214	0.6	29	298	0.7	30	65	2.3	30	250	1.5	31	199	2.8	30	188	1.6	31	288	1.2	30	100	3.3	31	211	2.2	31	297	0.6	30	194	0.7
500	---	---	---	---	---	---	29	220	1.1	---	---	---	30	44	1.0	30	271	1.4	---	---	---	30	202	2.4	31	288	1.4	30	105	4.1	31	217	2.5	31	264	1.0	30	250	2.3
1,000	---	---	---	---	---	---	29	227	1.8	29	304	1.6	29	328	1.3	28	246	3.1	31	195	3.8	29	211	3.4	31	278	1.7	30	85	2.1	27	258	1.5	29	239	2.1	30	274	3.7
1,500	---	---	---	31	233	2.0	27	259	3.3	29	277	1.2	28	293	2.5	25	241	4.6	31	202	4.0	26	230	2.8	31	263	1.1	30	8	3.0	25	278	1.8	29	256	2.9	29	284	5.0
2,000	31	194	2.1	31	243	2.6	27	288	5.1	27	259	2.3	25	297	3.0	25	255	6.5	30	207	4.9	25	240	3.0	26	192	.7	29	349	2.7	20	333	1.8	27	273	4.2	27	291	6.8
2,500	31	183	3.1	31	231	2.8	27	297	6.6	26	253	3.0	24	299	4.1	23	279	7.5	29	208	5.1	21	253	4.2	24	182	1.5	23	323	2.8	17	360	3.1	24	279	5.2	26	296	7.6
3,000	30	197	3.0	31	231	3.9	25	295	7.0	22	263	5.0	23	313	5.1	18	289	9.4	28	214	5.0	17	252	5.1	23	195	1.3	21	337	3.6	14	357	2.9	23	279	5.6	22	298	9.0
4,000	21	214	5.0	28	226	4.8	22	303	6.7	12	271	7.1	20	327	6.3	15	289	10.1	27	240	5.6	---	---	---	18	252	.4	19	317	2.3	14	318	3.5	21	282	6.6	10	288	8.6
5,000	18	235	6.6	23	230	6.8	17	307	6.3	11	267	6.1	17	317	8.1	---	---	---	26	238	8.0	---	---	---	15	281	1.7	13	295	4.2	10	325	5.4	15	298	5.8	---	---	---
6,000	15	251	9.2	21	249	5.3	12	306	7.9	---	---	---	15	315	9.5	---	---	---	22	249	10.8	---	---	---	14	303	3.6	---	---	---	---	---	---	12	298	5.3	---	---	---
8,000	---	---	---	12	263	8.4	---	---	---	---	---	---	11	301	8.8	---	---	---	16	252	17.2	---	---	---	11	267	8.7	---	---	---	---	---	---	---	---	---	---	---	---
10,000	---	---	---	---	---	---	---	---	---	---	---	---	11	304	14.3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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. Cloud, Minn. (318 m.)			St. Louis, Mo. (181 m.)			San Antonio, Tex. (240 m.)			San Diego, Calif. (13 m.)			Sault Ste. Marie, Mich. (221 m.)			Seattle, Wash. (116 m.)			Spokane, Wash. (725 m.)			Washington, D. C. (24 m.)		
Surface	31	265	6.3	31	168	4.3	30	184	2.0	31	232	1.5	31	117	0.9	31	224	1.9	31	190	1.8	30	135	3.8	31	259	3.7	31	307	3.4	30	260	1.9	30	233	2.0	30	224	1.0
500	31	274	5.1	31	173	4.6	30	189	2.6	31	232	2.0	---	---	---	31	222	1.9	31	212	2.1	30	148	5.0	31	256	2.9	31	284	3.8	30	284	1.7	---	---	---	30	236	2.0
1,000	25	296	3.1	31	189	5.1	29	195	3.9	31	233	2.3	31	132	.8	30	217	2.7	30	222	3.9	29	152	4.9	23	274	1.9	29	270	5.0	27	270	.9	30	228	2.4	30	252	3.0
1,500	25	288	3.3	29	209	5.8	25	213	5.9	31	221	2.4	31	250	1.5	25	244	3.7	28	234	5.6	27	155	5.2	22	264	2.5	26	268	4.7	27	200	1.0	30	223	2.5	29	269	4.2
2,000	25	293	2.7	26	221	7.1	23	234	5.8	31	216	3.7	29	256	2.1	21	280	5.4	27	252	5.3	25	175	5.2	21	267	2.2	26	282	5.8	24	243	1.4	26	227	2.7	25	277	5.7
2,500	23	289	3.3	22	241	7.1	14	275	3.7	31	213	5.1	26	269	2.3	18	281	7.5	27	268	6.6	20	200	3.5	19	280	2.4	23	294	7.8	23	208	1.7	23	224	2.4	23	297	8.1
3,000	21	282	3.8	20	243	7.4	12	285	3.9	31	218	6.2	24	272	4.0	16	286	10.9	22	282	7.3	15	263	3.2	19	271	4.3	22	302	9.0	22	206	3.1	19	215	3.5	22	303	9.6
4,000	21	275	6.4	18	256	10.7	---	---	---	29	238	8.4	24	286	5.4	12	302	11.5	16	304	6.5	11	286	4.5	19	276	7.9	19	301	12.6	16	250	3.9	18	240	4.4	19	295	10.8
5,000	21	279	9.5	15	262	11.5	---	---	---	28	248	10.4	21	274	7.2	10	298	12.4	12	316	8.3	---	---	---	18	277	9.6	19	303	14.8	16	234	4.4	14	240	5.0	18	306	10.9
6,000	21	280	12.3	---	---	---	---	---	---	23	253	12.9	18	276	9.8	---	---	---	10	306	8.7	---	---	---	17	271	10.6	15	308	18.4	16	238	6.0	11	233	4.7	16	287	11.7
8,000	16	295	13.8	---	---	---	---	---	---	16	267	14.8	12	283	12.8	---	---	---	---	---	---	---	---	---	14	264	13.7	---	---	---	10	252	2.9	---	---	---	10	299	6.2
10,000	11	290	13.2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

TABLE 3.—*Free-air resultant winds based on rawin observations made near 0300 G. C. T., during May 1949. Directions given in degrees from north (N=360°, E=90°, S=180°, W=270°). Speeds in meters per second*

Altitude (meters) m. s. l.	Albuquerque, N. Mex. (1,636 m.)			Big Spring, Tex. (774 m.)			Bismarck, N. Dak. (505 m.)			Brownsville, Tex. (7 m.)			Caribou, Maine (191 m.)			Charleston, S. C. (13 m.)			Columbia, Mo. (237 m.)			Grand Junction, Colo. (1,473 m.)			Greensboro, N. C. (275 m.)			Hatteras, N. C. (3 m.)			International Falls, Minn. (358 m.)			Little Rock, Ark. (80 m.)			Medford, Oreg. (401 m.)		
	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed
Surface	31	164	0.9	31	141	4.7	31	49	2.1	31	129	5.4	31	250	1.0	31	157	0.4	31	132	1.6	31	104	1.4	31	80	0.6	31	117	0.9	31	103	0.6	31	172	0.7	31	322	2.4
500	---	---	---	---	---	---	---	---	---	31	140	9.3	31	260	3.5	30	192	2.8	31	167	3.3	---	---	---	31	198	1.1	31	195	1.3	30	136	1.2	30	173	3.7	31	314	2.8
1,000	---	---	---	31	157	8.5	31	149	1.1	31	159	7.9	31	277	5.1	31	249	1.8	31	199	4.4	---	---	---	31	238	2.4	31	241	2.2	30	227	1.7	29	202	4.1	31	306	3.5
1,500	---	---	---	31	180	8.9	31	316	1.6	31	152	7.2	30	289	6.7	31	297	2.4	30	228	5.1	31	106	1.4	31	261	3.7	31	251	2.3	29	257	4.0	29	221	3.6	31	316	2.3
2,000	31	249	2.9	31	202	6.9	31	303	3.6	31	162	5.6	30	283	8.0	31	316	2.8	30	253	5.6	31	183	2.4	31	277	4.0	31	274	2.6	29	272	5.2	29	233	3.8	31	313	2.1
2,500	31	247	4.9	31	221	6.2	31	303	4.9	31	169	3.9	30	277	9.2	31	307	2.9	28	261	5.2	31	206	4.1	31	290	4.6	31	280	2.9	30	291	6.6	29	241	4.4	31	254	2.7
3,000	31	246	6.7	31	237	6.4	30	282	5.7	31	174	2.6	30	281	10.9	30	314	3.7	28	264	6.0	31	215	4.0	31	298	5.7	31	281	3.6	31	305	8.7	29	253	5.4	31	247	3.0
4,000	31	245	8.9	31	260	7.8	30	302	8.4	30	274	1.6	30	274	13.4	29	307	5.2	28	277	6.7	30	235	4.9	30	303	6.8	30	283	4.0	31	287	10.0	29	273	7.7	31	253	3.5
5,000	31	241	10.9	31	267	8.5	30	287	8.5	30	288	4.2	28	269	15.4	28	306	5.5	26	276	8.0	30	247	6.4	29	299	8.0	28	291	5.5	30	283	11.5	30	272	8.4	30	254	4.2
6,000	31	251	12.1	31	259	10.4	30	290	10.6	30	293	5.4	27	263	18.1	28	305	6.9	26	275	8.9	30	245	8.7	29	293	8.6	28	283	7.2	30	277	13.0	30	270	10.1	29	233	4.5
8,000	29	256	15.9	30	262	16.0	29	279	11.1	30	282	10.9	20	256	18.1	27	298	8.3	24	277	11.1	25	244	7.8	28	288	11.0	25	280	6.0	28	294	16.9	29	268	13.1	27	227	4.8
10,000	22	263	19.4	26	264	20.0	27	284	11.7	30	281	19.2	12	267	18.1	23	290	9.0	23	269	12.5	20	265	7.3	25	280	9.6	22	274	7.2	20	286	20.3	25	271	15.2	23	252	6.6
12,000	16	260	20.3	22	258	24.4	21	285	12.7	24	283	27.9	---	---	---	17	289	12.4	19	275	15.9	14	257	13.7	19	287	13.0	20	266	8.3	12	287	23.9	21	261	16.1	16	263	6.9
14,000	---	---	---	15	265	24.6	12	256	12.3	12	272	23.3	---	---	---	10	286	11.7	---	---	---	---	---	---	10	291	11.0	18	271	8.6	---	---	---	16	275	17.1	11	274	9.6
16,000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	12	269	10.5	---	---	---	---	---	---	---	---	---

Altitude (meters) m. s. l.	Miami, Fla. (12 m.)			Nantucket, Mass. (14 m.)			Nashville, Tenn. (180 m.)			New Orleans, La. (6 m.)			Oakland, Calif. (8 m.)			Oklahoma City, Okla. (392 m.)			Rapid City, S. Dak. (980 m.)			San Antonio, Tex. (242 m.)			San Juan, P. R. (28 m.)			St. Cloud, Minn. (318 m.)			Santa Maria, Calif. (72 m.)			Sault Ste. Marie, Mich. (221 m.)			Spokane, Wash. (726 m.)		
	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed	Observations	Direction	Speed
Surface	31	81	1.0	29	213	1.7	31	139	0.3	31	148	1.3	31	271	6.1	31	140	3.9	31	273	0.4	31	120	4.5	31	123	3.2	31	117	0.9	31	275	3.5	31	308	1.2	31	219	1.4
500	31	96	3.3	29	259	4.2	30	206	.9	31	164	3.2	31	279	5.0	30	149	5.4	---	---	---	31	140	7.7	31	109	7.4	30	87	.9	31	311	3.6	31	285	1.8	---	---	---
1,000	31	82	3.6	29	291	4.1	30	247	2.1	31	152	1.6	31	284	4.4	30	179	7.8	31	282	.3	31	151	8.7	31	106	7.1	30	212	3.9	31	318	2.8	31	280	2.9	31	225	2.4
1,500	31	55	3.2	29	291	4.5	30	260	3.0	31	144	.6	31	296	3.4	29	202	7.2	31	184	.7	31	166	6.4	31	105	6.1	29	241	4.5	31	333	2.5	31	297	4.3	31	249	2.6
2,000	31	36	3.1	28	282	5.2	30	264	8.8	31	310	1.1	31	309	3.3	30	223	6.7	31	247	1.2	31	186	4.5	31	98	5.0	29	261	5.9	31	328	2.4	31	282	5.3	31	260	2.3
2,500	31	27	3.0	27	271	5.7	31	279	5.0	30	281	1.8	31	321	3.5	30	238	6.7	31	272	2.1	31	205	4.5	31	96	5.0	29	269	6.8	31	320	3.1	30	289	7.2	30	263	1.6
3,000	31	18	2.4	27	266	6.9	31	283	5.8	30	292	2.6	31	315	3.4	31	247	7.7	31	288	3.2	31	229	4.9	31	92	4.6	30	276	7.5	31	302	4.5	30	291	8.5	30	260	2.1
4,000	31	325	2.2	29	265	9.3	31	289	7.5	31	301	5.0	30	297	3.7	31	262	9.1	29	268	4.2	30	259	5.6	31	92	3.1	30	288	8.9	31	294	6.9	29	291	10.9	29	257	4.4
5,000	31	300	4.6	27	261	11.4	31	293	8.8	30	303	7.0	30	288	5.3	30	263	9.9	29	271	4.8	29	267	7.3	30	141	1.7	30	285	10.7	31	281	9.1	29	296	13.2	29	253	4.6
6,000	31	288	6.1	25	263	13.7	29	292	10.1	30	295	8.2	29	285	6.6	30	272	11.9	28	269	6.6	29	273	9.0	30	233	2.5	29	282	10.9	31	280	10.6	28	299	15.6	29	245	5.4
8,000	31	280	10.9	16	256	17.7	28	287	12.9	30	289	10.7	28	290	8.8	28	258	14.3	27	271	7.0	28	276	13.7	30	256	8.6	28	278	14.9	30	281	14.2	23	294	17.4	28	239	7.3
10,000	29	272	12.5	11	250	22.9	25	287	14.1	28	286	16.5	27	286	11.2	27	257	13.9	26	252	13.2	24	279	22.2	29	259	14.7	26	284	14.0	28	271	16.4	19	284	16.5	23	241	8.9
12,000	27	269	17.4	---	---	---	22	278	15.9	21	297	25.3	24	291	15.5	---	---	---	21	259	14.4	17	274	27.9	27	267	21.7	24	279	12.9	26	272	18.1	---	---	---	16	268	7.6
14,000	25	280	17.9	---	---	---	16	290	16.6	12	288	24.6	15	262	11.3	---	---	---	17	268	10.9	12	277	24.6	24	270	21.0	16	268	13.3	24	264	16.8	---	---	---	---	---	---
16,000	19	285	11.4	---	---	---	11	309	11.2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	20	273	12.2	---	---	---	22	254	12.4	---	---	---	---	---	---
18,000	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	10	155	2.0	---	---	---	14	247	7.0	---	---	---	---	---	---

Altitude (meters) m. s. l.	Tatoosh Island, Wash. (33 mi.)		
	Observations	Direction	Speed
	31	200	1.8
500	31	250	2.0
1,000	31	219	1.5
1,500	31	211	2.3
2,000	31	212	3.1
2,500	31	217	3.6
3,000	30	236	4.0
4,000	31	239	6.0

Altitude (meters) m. s. l.	Tatoosh Island, Wash. (33 m.)		
	Observations	Direction	Speed
5,000	30	241	8.0
6,000	30	244	9.4
8,000	28	241	10.8
10,000	25	227	10.4
12,000	20	241	8.7
14,000	18	257	7.2
16,000	18	258	7.4
18,000	13	267	1.4

NOTE.—Resultants prepared from rawins at high altitudes are biased toward lower wind speeds. Values appearing in this table should therefore be used with caution when the number of observations missing is greater than three. See note following Table III in the June 1948 issue of the MONTHLY WEATHER REVIEW.