CLIMATOLOGICAL TABLES.*

CONDENSED CLIMATOLOGICAL SUMMARY.

In the following table are given for the various sections of the climatological service of the Weather Bureau, the monthly average temperature and total rainfall; the stations reporting the highest and lowest temperatures, with dates of occurrence; the stations reporting the greatest and least total precipitation; and other data as indicated by the several headings.

The mean temperature for each section, the highest and lowest temperatures, the average precipitation, and the greatest and least monthly amounts are found by using all trustworthy records available.

The mean departures from normal temperatures and precipitation are based only on records from stations that have 10 or more years of observations. Of course, the number of such records is smaller than the total number of stations.

Condensed climatological summary of temperature and precipitation by sections, January, 1922.

Section.	Temperature.								Precipitation.					
	Section average.	Departure from the normal.	Monthly extremes.						Section average.	Departure from the normal.	Greatest monthly.		Least monthly.	
			Station.	Highest.	Date.	Station.	Lowest.	Date.			Station.	Amount.	Station.	Amount.
	°F.	°F.		°F.			°F.		In.	In.		In.		In.
Alabama	47.4	+1.1	5 stations	79	19†	Maple Grove	15	2	7.08	+2.30	Valley Head	10.41	Alaga	3.10
Alaska														
Arizona	39.5	−2.9	Camelback	80	2	Chin Lee	−23	22	1.91	+0.45	Ashdale R. S	7.60	Benson	T.
Arkansas	39.1	−1.8	Huttig	74	4	2 stations	10	19	2.63	−1.60	El Dorado	7.98	Morrillton	0.77
California	41.8	−4.0	Santa Ana	82	14	Madeline	−28	19	3.47	−1.94	Squirrel Inn	14.48	Bagdad	0.22
Colorado	20.1	−3.0	2 stations	73	2†	Fraser	−45	20	0.85	−0.01	Cumbres	8.07	4 stations	0.00
Florida	59.0	−0.3	Inverness	92	21	De Funiak Springs	21	14	2.19	−0.89	Bluff Springs	5.92	Homestead	0.25
Georgia	46.6	−0.2	3 stations	82	21	Blue Ridge	12	2†	4.71	+0.77	Blue Ridge	11.65	St. George	2.25
Hawaii														
Idaho	15.3	−7.6	Lewiston	51	9	Felt	−50	19	1.48	−0.90	Musselshell	4.11	Pleasant Valley	0.38
Illinois	25.9	−0.6	Sparta	69	4	Kankakee	−11	25	1.28	−1.16	White Hall	2.30	Edwardsville	0.60
Indiana	26.7	−1.9	Shelbyville	67	4	Goshen	−25	25	1.65	−1.54	Salem	2.89	Connersville	0.76
Iowa	19.8	+1.9	Harlan	57	1	2 stations	−29	24	0.89	−0.16	Rockwell City	2.30	Postville	0.32
Kansas	28.5	−1.2	Atwood	72	2	St. Francis	− 7	30	0.41	−0.30	Hanover	1.60	Phillipsburg	0.00
Kentucky	34.6	−0.6	Saint John	67	4	Middlesboro	1	14	2.25	−2.14	Junction City	5.48	Henderson	0.71
Louisiana	51.0	−0.1	Jeanerette	84	4	Bastrop	21	2	5.96	+1.70	Ludington	10.80	Burrwood	3.04
Maryland-Delaware	30.3	−2.3	Great Falls, Md	63	5	Oakland, Md	−15	17	3.96	+0.71	Cheltenham, Md	5.63	Clear Spring, Md	1.39
Michigan	19.0	−1.1	Monroe	54	5	Humboldt	−41	25	1.31	−0.73	Calumet	3.20	Hastings	0.37
Minnesota	9.4	+1.9	Milan	49	2	2 stations	−51	22†	0.65	−0.12	St. Cloud	1.88	Fosston	0.05
Mississippi	46.7	−0.2	Woodville	81	19	2 stations	20	2	6.52	+1.49	Shubuta	11.03	Hernando	2.15
Missouri	29.5	−0.6	Jefferson City (2)	66	3†	Mexico	− 6	23	1.21	−1.05	Nevada	6.15	Lexington	0.32
Montana	15.1	−3.5	Winifred	60	8	Medicine Lake	−42	22	0.70	−0.35	Heron	4.32	2 stations	0.06
Nebraska														
Nevada	22.2	−9.2	Las Vegas	66	10	San Jacinto	−39	19	1.13	+0.02	Mahoney Ranger Sta	3.44	Quinn River Ranch	0.13
New England	18.4	−2.1	Rutland, Vt	58	5	Van Buren, Me	−38	24	2.04	−1.35	Kingston, R. I	3.88	Cornwall, Vt	0.79
New Jersey	27.6	−2.3	Asbury Park	57	5	Culvers Lake	−13	26	2.62	−0.99	Tuckerton	4.13	Boonton	1.08
New Mexico	31.3	−2.9	Pearl (near)	73	17	2 stations	−19	21	0.51	−0.16	Mountain Park	2.71	3 stations	0.00
New York	19.6	−3.3	Sharon Springs (1)	55	5	Wanakena	−37	25	2.21	−0.75	Dannemora	4.95	Chazy	0.83
North Carolina	39.8	−1.3	2 stations	82	21	Parker	− 1	14	4.58	+0.87	Rock House	9.22	Banners Elk	2.13
North Dakota	7.0	+2.1	Medora	55	6	Minot	−46	23	0.49	−0.05	Amenia	1.60	3 stations	0.10
Ohio	26.4	−2.2	Waverly	69	5	Paulding	−20	25	1.62	−1.49	Green	3.41	Milfordton	0.70
Oklahoma	36.1	−2.6	Poteau	77	4	Blackwell	− 7	21	1.50	+0.26	Meeker	2.58	Kenton	0.06
Oregon	27.4	−6.0	Port Orford	67	11	Drewsey	−39	20	2.77	−1.85	Government Camp	10.59	Tule Lake	0.16
Pennsylvania	25.0	−3.1	3 stations	62	5	3 stations	−19	24†	2.26	−0.93	Coatesville	4.46	Lawrenceville	1.15
Porto Rico														
South Carolina	44.2	−1.3	3 stations	81	20†	Santuck	14	2	3.53	+0.07	Landrum	8.64	Florence No. 1	1.57
South Dakota	13.8	−0.4	Alexandria	60	14	Pine Ridge	−30	30	0.95	+0.47	Sioux Falls	2.23	Eureka	0.16
Tennessee	38.9	−0.2	2 stations	69	4	Crossville	− 3	14	4.36	−0.70	Copperhill	8.67	Memphis	2.26
Texas	45.9	−2.5	Falfurrias	92	18	Romero	− 5	19	2.47	+0.72	Beaumont	9.34	2 stations	T.
Utah	18.1	−6.9	Springdale	64	1	East Portal	−42	19	1.29	−0.15	Silver Lake	4.91	Lemay	0.05
Virginia	33.9	−2.4	Runnymede	72	5	2 stations	− 5	13†	4.00	+0.63	Guinea Mills	6.20	Winchester	1.83
Washington	24.9	−5.9	North Head	60	11	Lowden	−28	18	2.10	−2.44	Paradise Inn	12.65	Wapato	0.07
West Virginia	30.2	−1.9	Glenville	68	4	Cheat Bridge	−15	13	2.75	−1.16	Bayard	4.81	Camden-On-Gauley	1.01
Wisconsin	13.2	−0.6	Prairie du Sac	51	31	Danbury	−54	24	0.80	−0.48	Stevens Point	1.87	Coddington	0.10
Wyoming	12.3	−7.1	Chugwater	59	16	Moran	−51	19	0.79	−0.07	Moran	2.04	Hyattville	0.00

* For description of tables and charts, see REVIEW, for January, 1921, p. 41

† Other dates also.

TABLE I.—*Climatological data for Weather Bureau stations, January, 1922.*

Districts and stations.	Elevation of instruments.			Pressure.			Temperature of the air.													Precipitation.			Wind.										
	Barometer above sea level.	Thermometer above ground.	Anemometer above ground.	Station, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean max. + mean min. ÷ 2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.	Mean wet thermometer.	Mean temperature of the dew-point.	Mean relative humidity.	Total.	Departure from normal.	Days with .01, or more.	Total movement.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.	Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Total snowfall.	Snow, sleet and ice on ground at end of month.
	Ft.	Ft.	Ft.	In.	In.	In.	°F.	°F.	°F		°F	°F.		°F	°F.	°F.	°F.	%	In.	In.		Miles								0–10	In.	In.
New England.							22.7	− 1.4										71	2.11	− 1.4										4.7		
Eastport	76	67	85	29.98	30.07	+ .07	19.6	− 0.5	45	12	28	−11	24	12	33	18	12	71	1.90	− 1.9	9	10,428	nw.	74	ne	11	13	6	12	5.1	14.0	1.8
Greenville, Me	1,070	6	.....	28.86	30.10	.....	11.0	.....	32	6	21	−28	23	1	32	.....	.....	.....	2.02	.....	9	.....	.....	.....	.....	.....	20	5	6	.....	20.3	15.0
Portland, Me	103	82	117	30.01	30.14	+ .09	20.8	− 1.2	41	15	28	− 7	24	14	30	17	9	63	3.40	− 0.4	8	6,787	nw.	40	ne.	11	20	4	7	3.5	13.8	13.0
Concord	288	70	79	29.81	30.14	+ .09	17.8	− 3.4	43	15	28	−23	24	8	37	.....	.....	.....	1.73	− 1.6	6	3,924	nw.	38	w.	22	18	5	8	4.0	13.2	9.1
Burlington	404	11	48	29.70	30.18	+ .13	15.0	− 1.3	45	5	24	−15	26	6	32	.....	.....	.....	1.26	− 0.6	7	9,918	s.	56	s.	15	11	7	13	5.0	13.8	5.0
Northfield	876	12	60	29.17	30.18	+ .13	12.2	− 2.9	49	5	25	−28	26	0	43	8	5	84	1.21	− 1.3	10	5,530	s.	34	sw.	22	11	11	9	4.9	15.7	11.1
Boston	125	115	188	29.99	30.13	+ .08	27.2	+ 0.2	51	5	34	0	25	20	24	23	15	60	1.41	− 2.4	4	8,715	w.	52	ne.	11	12	10	9	4.6	9.2	0.2
Nantucket	12	14	90	30.10	30.11	+ .07	30.0	− 2.1	49	5	36	8	25	24	21	27	23	77	3.68	+ 0.3	10	13,292	nw.	67	ne.	29	8	11	12	6.3	0.5	0.0
Block Island	26	11	46	30.10	30.13	+ .06	29.6	− 1.8	50	5	36	4	25	24	22	27	22	73	3.04	− 0.8	11	16,960	nw.	70	ne.	11	12	9	10	4.9	3.1	T.
Providence	160	215	251	29.96	30.14	+ .08	26.6	− 0.6	50	5	34	1	25	19	21	23	15	64	1.36	− 3.0	8	10,855	nw.	60	nw.	22	14	11	6	4.1	2.7	T
Hartford	159	123	140	.....	30.17	+ .10	24.8	− 0.7	49	5	33	− 2	26	17	27	.....	.....	.....	2.19	− 1.6	8	6,018	nw.	32	nw.	22	13	8	10	.....	6.6	2.5
New Haven	106	74	153	30.04	30.17	+ .09	26.6	− 0.7	49	5	34	3	25	20	22	23	18	73	2.08	− 1.8	11	6,695	ne.	34	ne.	28	13	8	10	4.9	7.4	1.2
Middle Atlantic States.							30.3	− 1.2										71	3.24	0.0										4.9		
Albany	97	102	115	30.08	30.20	+ .13	20.6	− 1.9	46	5	29	−10	26	12	28	18	14	80	2.00	− 0.6	8	6,179	nw.	34	s.	8	16	7	8	4.4	16.7	4.0
Binghamton	871	10	84	29.20	30.17	+ .09	21.2	− 1.9	54	5	31	−13	26	12	35	.....	.....	.....	1.85	− 0.1	9	4,625	nw.	30	w.	22	10	10	11	5.8	15.9	3.0
New York	314	414	454	29.81	30.17	+ .07	29.0	− 1.2	50	5	36	6	26	22	26	25	17	61	2.46	− 1.3	8	13,470	nw.	67	nw.	2	10	10	11	5.6	9.9	3.3
Harrisburg	374	94	104	29.79	30.22	+ .12	26.9	− 1.8	52	5	34	4	26	20	25	23	16	66	2.49	− 0.3	10	5,391	nw.	35	ne.	11	11	8	12	5.2	16.8	4.5
Philadelphia	117	123	190	30.06	30.20	+ .09	31.2	− 0.6	53	5	37	9	26	25	22	27	21	66	3.16	− 0.2	8	7,801	n.	46	n.	28	9	9	13	5.8	15.6	6.6
Reading	325	81	98	29.84	30.21	.....	27.8	.....	51	5	35	6	26	21	24	25	21	78	2.16	− 1.4	8	5,419	nw.	31	n.	11	12	7	12	5.6	18.8	6.0
Scranton	805	111	119	29.29	30.19	+ .10	24.1	− 1.4	51	5	32	− 2	26	16	28	21	16	76	1.96	− 0.8	7	5,865	sw.	40	nw.	11	10	12	9	5.4	10.2	0.7
Atlantic City	52	37	48	30.12	30.18	+ .07	32.2	− 0.3	53	5	39	11	25	26	22	28	24	75	4.04	+ 0.6	10	14,370	nw.	74	e.	11	11	4	16	5.6	9.2	5.0
Cape May	18	13	49	30.19	30.21	+ .09	32.4	− 1.7	53	5	39	11	26	26	22	28	24	76	3.95	+ 0.6	12	8,010	n.	48	nw.	2	13	4	14	5.5	9.1	1.8
Sandy Hook	22	10	55	30.14	30.17	.....	29.3	.....	50	5	35	10	2	24	20	26	20	68	1.74	.....	8	14,099	nw.	72	ne.	11	12	8	11	5.1	3.7	1.0
Trenton	190	159	183	29.96	30.18	.....	28.4	.....	52	5	36	5	26	21	23	25	20	72	2.41	− 0.8	7	9,733	w.	60	ne.	11	7	9	15	6.1	13.5	7.5
Baltimore	123	100	113	30.06	30.20	+ .08	32.2	− 1.2	61	5	38	13	25	26	23	28	21	64	4.88	+ 1.7	11	4,820	n.	41	ne.	11	10	4	17	6.1	31.3	14.8
Washington	112	62	85	30.08	30.20	+ .07	32.0	− 0.9	62	5	39	11	26	25	31	28	20	66	5.56	+ 2.2	9	5,705	n.	38	nw.	11	7	7	17	6.7	31.5	17.0
Lynchburg	681	153	188	29.42	30.19	+ .06	35.1	− 0.7	62	5	44	8	25	27	35	31	26	71	3.90	+ 0.2	12	6,350	nw.	30	nw.	12	8	9	14	6.0	22.7	7.6
Norfolk	9	170	205	30.08	30.19	+ .06	39.2	− 0.2	69	21	46	20	25	32	31	34	28	71	3.49	+ 0.1	12	12,187	ne.	52	sw.	11	5	7	19	7.3	3.4	0.0
Richmond	144	11	52	30.04	30.21	+ .08	35.0	− 3.0	65	5	42	13	25	28	31	30	24	69	4.58	+ 1.6	10	7,247	ne.	36	sw.	5	8	4	19	6.9	22.1	5.0
Wytheville	2,304	49	56	27.73	30.21	+ .07	32.6	− 0.4	59	4	40	10	26	25	28	29	25	79	2.96	− 1.3	10	4,844	w.	30	sw.	3	7	4	20	7.2	13.8	0.5
South Atlantic States.							44.6	− 0.5										79	3.69	− 0.1										6.6		
Asheville	2,255	70	84	27.76	30.20	+ .05	38.2	+ 2.8	63	4	46	12	14	31	30	34	29	76	2.84	− 1.8	12	6,925	nw.	34	e.	11	6	6	19	7.1	4.7	0.0
Charlotte	779	55	62	29.33	30.19	+ .04	40.2	− 0.2	68	21	48	18	26	33	23	36	31	74	5.24	+ 1.0	13	5,292	ne.	24	nw.	11	6	7	18	7.2	1.8	0.0
Hatteras	11	12	50	30.13	30.14	.00	45.8	0.0	69	2	52	25	2	39	23	42	40	85	7.58	+ 2.6	10	15,362	n.	52	nw.	29	7	7	17	6.9	T.	0.0
Manteo	12	5	42	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Raleigh	376	103	110	29.78	30.20	+ .07	38.6	− 1.8	72	21	46	18	25	31	30	35	32	80	4.09	+ 0.5	11	7,417	ne.	33	w.	11	6	3	22	7.4	8.9	3.2
Wilmington	78	81	91	30.10	30.19	+ .05	44.0	− 1.6	76	21	52	22	25	36	25	40	36	79	3.57	+ 0.1	9	6,961	n.	30	s.	11	9	6	16	6.4	2.4	0.0
Charleston	48	11	92	30.13	30.18	+ .03	47.4	− 1.9	74	6	55	26	26	40	24	42	39	80	2.48	− 1.0	9	8,942	n.	37	s.	11	11	7	13	5.9	0.0	0.0
Columbia, S. C.	351	41	57	29.82	30.21	+ .06	44.1	− 1.0	78	21	52	24	26	36	29	39	35	77	2.22	− 1.1	9	5,980	ne.	28	sw.	21	9	7	15	6.8	0.7	0.0
Due West	711	10	55	29.42	30.22	.....	42.2	.....	68	21	49	19	2	35	29	.....	.....	.....	3.92	.....	11	7,358	ne.	34	nw.	11	7	7	17	7.0	0.4	0.0
Greenville, S. C	1,039	113	122	29.05	30.18	.....	41.8	.....	66	21	48	21	26	35	27	37	33	78	5.32	.....	15	7,153	ne.	32	sw.	13	6	9	16	6.7	3.1	0.0
Augusta	180	62	77	30.00	30.20	+ .04	45.8	− 0.1	78	21	54	23	2	38	33	41	38	79	2.70	− 1.4	10	4,951	ne.	25	nw.	11	8	9	14	6.5	0.8	0.0
Savannah	65	150	194	30.11	30.19	+ .04	49.0	− 0.9	78	6	56	27	26	42	27	43	39	78	3.01	− 0.1	7	9,227	ne.	50	w.	11	11	7	13	6.0	0.0	0.0
Jacksonville	43	209	245	30.13	30.18	+ .03	53.4	− 0.5	78	21	60	30	2	46	24	49	46	85	3.21	+ 0.1	9	9,215	n.	48	sw.	11	12	6	13	5.9	0.0	0.0
Florida Peninsula.							60.5	+ 1.1										78	1.44	− 1.3										4.6		
Key West	22	10	64	30.07	30.09	− .01	70.4	+ 1.6	80	10	75	55	14	66	13	65	62	81	2.60	+ 0.6	10	8,249	e.	37	w.	11	14	12	5	4.2	0.0	0.0
Miami	25	71	79	30.10	30.13	.....	67.6	+ 0.3	80	9	74	40	13	61	28	62	58	77	0.55	− 2.9	7	6,190	e.	30	sw.	11	9	14	8	4.6	0.0	0.0
Sand Key	23	39	72	30.08	30.11	+ .01	70.2	.....	77	27	73	56	13	68	13	66	63	77	3.04	.....	9	12,715	e.	48	nw.	12	13	14	4	4.0	0.0	0.0
Tampa	35	79	92	30.11	30.15	+ .03	61.4	+ 1.3	83	23	70	37	2	53	27	55	51	78	1.16	− 1.6	6	5,207	ne.	30	se.	30	6	17	8	5.8	0.0	0.0
East Gulf States.							49.0	+ 1.6										80	5.59	+ 0.6										7.1		
Atlanta	1,174	190	216	28.92	30.19	+ .04	43.0	+ 0.8	68	19	50	21	2	36	24	40	36	81	5.03	− 0.3	15	9,552	nw.	44	nw.	1	9	2	20	6.9	1.0	0.0
Macon	370	78	87	29.79	30.20	+ .04	46.6	+ 1.0	76	21	55	25	2	38	30	41	37	75	3.16	− 2.0	12	5,730	ne.	29	nw.	1	8	6	17	6.8	0.0	0.0
Thomasville	273	49	58	29.87	30.18	+ .02	51.6	+ 0.6	76	6	60	28	2	44	32	46	42	77	2.72	− 1.4	9	3,786	ne.	24	sw.	10	7	5	19	7.2	0.0	0.0
Pensacola	56	149	185	30.10	30.16	+ .02	54.2	+ 1.9	71	19	60	33	2	49	23	51	49	86	4.62	+ 0.6	10	11,526	ne.	55	se.	29	7	4	20	7.0	0.0	0.0
Anniston	741	9	57	29.39	30.20	+ .04	45.2	+ 3.0	72	19	53	18	2	37	32	.....	.....	.....	5.83	+ 0.5	15	5,319	se.	26	se.	10	6	4	15	6.8	T.	0.0
Birmingham	700	11	48	29.42	30.20	+ .04	45.9	+ 0.6	74	19	54	23	2	38	30	41	36	74	6.20	+ 0.9	12	6,084	n.	29	s.	4	4	10	17	7.4	0.0	0.0
Mobile	57	125	161	30.09	30.15	.00	53.0	+ 3.2	72	21	60	32	2	46	24	49	47	84	6.79	+ 1.9	13	8,515	ne.	37	n.	1	5	8	18	7.0	0.0	0.0
Montgomery	223	100	112	29.94	30.20	+ .04	48.7	+ 1.0	77	19	56	27	2	42	27	44	40	77	6.94	+ 1.8	13	5,982	ne.	23	w.	10	5	10	16	7.1	T.	0.0
Corinth	469	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Meridian	375	85	93	29.76	30.17	+ .01	47.7	+ 2.7	78	19	55	26	2	40	33	43	40	79	8.49	+ 3.0	16	5,277	ne.	25	sw.	10	4	7	20	7.4	0.0	0.0
Vicksburg	247	65	73	29.90	30.19	+ .04	46.9	− 0.1	75	4	54	30	2	40	33	43	41	86	6.46	+ 0.8	16	5,970	ne.	26	sw.	4	4	7	20	7.4	0.0	0.0
New Orleans	53	76	84	30.08	30.14	+ .01	56.0	+ 3.0	80	19	63	37	2	49	25	52	49	84	5.22	+ 0.6	15	6,300	ne.	42	ne.	29	7	6	18	7.1	0.0	0.0
West Gulf States.							45.2	− 0.9										78	3.13	+ 0.1										7.2		
Shreveport	249	77	93	29.90	30.18	+ .04	44.6	− 1.6	73	18	52	29	12	38	33	41	38	82	5.73	+ 1.3	17	5,943	ne.	27	w.	10	5	3	23	7.8	0.0	0.0
Bentonville	1,303	11	44	.....	.....	.....	34.8	+ 0.7	64	4	44	10	19	26	41	.....	.....	.....	1.37	.....	8	.....	.....	.....	.....	.....	8	4	19	.....	1.1	0.0
Fort Smith	457	79	94	29.68	30.18	+ .04	39.0	+ 0.7	69	4	47	18	19	31	39	35	30	74	2.44	− 0.1	8	6,438	e.	54	sw.	4	7	4	20	6.9	1.3	0.0
Little Rock	357	136	144	29.80	30.18	+ .03	39.8	− 0.8	67	4	47	24	25	33	33	36	31	73	1.90	− 2.9	9	6,309	n.	41	nw.	11	7	4	20	7.2	T.	0.0
Brownsville	57	4	26	.....	.....	.....	57.8	.....	84	19	66	34	20	49	38	.....	.....	.....	1.51	.....	14	.....	n.	.....	.....	.....	.....	.....	.....	.....	0.0	0.0
Corpus Christi	20	69	77	30.10	30.12	+ .02	53.5	0.0	77	18	61	30	20	46	39	49	46	81	1.12	− 1.1	10	9,566	n.	38	n.	10	6	4	21	7.4	0.0	0.0
Dallas	512	109	117	29.62	30.19	.....	43.2	.....	74	18	51	22	19	35	39	.....	.....	.....	2.09	.....	12	6,049	nw.	39	s.	3	7	6	18	7.2	T.	0.0
Fort Worth	670	106	114	29.42	30.15	+ .03	43.0	− 1.3	73	18	52	19	19	34	41	38	32	71	1.63	+ 0.7	12	6,806	e.	34	nw.	10	7	6	18	6.9	T	0.0
Galveston	54	106	114	30.08	30.14	+ .01	52.0	− 0.7	72	4	57	35	12	47	28	49	47	87	4.84	+ 1.2	18	9,911	n.	42	w.	10	6	2	23	7.7	0.0	0.0
Groesbeck	461	11	56	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Houston	138	111	121	29.97	30.12	.....	50.5	− 2.4	78	3	57	30	20	44	39	.....	.....	.....	5.98	.....	17	6,818	n.	35	nw.	10	7	4	20	7.4	0.0	0.0
Palestine	510	64	72	29.62	30.16	+ .04	45.0	− 1.5	76	3	52	24	20	38	35	41	36	76	5.62	+ 1.8	15	6,722	ne.	30	s.	15	4	3	24	8.0	T.	0.0
Port Arthur	34	58	66	30.08	30.12	.....	50.4	.....	75	4	56	31	12	45	31	48	46	89	5.06	.....	21	8,341	ne.	37	nw.	10	5	5	21	7.6	0.0	0.0
San Antonio	701	119	132	29.38	30.13	+ .03	49.4	− 1.7	79	18	57	29	20	42	34	43	37	68	1.23	− 0.4	11	6,285	ne.	45	nw.	10	7	3	21	7.1	0.0	0.0
Taylor	582	55	63	29.54	30.18	+ .07	45.7	− 1.8	75	3	53	25	20	38	35	.....	.....	.....	3.62	+ 0.8	12	7,048	n.	31	s.	3	4	4	23	8.1	0.0	0.0

TABLE I.—*Climatological data for Weather Bureau stations, January, 1922*—Continued.

Districts and stations.	Elevation of instruments.			Pressure.			Temperature of the air.													Precipitation.			Wind.										
	Barometer above sea level.	Thermometer above ground.	Anemometer above ground.	Station, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean max. + mean min. ÷ 2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.	Mean wet thermometer.	Mean temperature of the dew-point.	Mean relative humidity.	Total.	Departure from normal.	Days with .01, or more.	Total movement.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.	Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Total snowfall.	Snow, sleet and ice on ground at end of month.
	Ft.	Ft.	Ft.	In.	In.	In.	°F.	°F.	°F		°F	°F.		°F	°F.	°F.	°F.	%	In.	In.		Miles								0-10	In.	In.
Ohio Valley and Tennessee.							**32.8**	**− 0.3**										**74**	**2.44**	**− 1.4**										**6.1**		
Chattanooga	762	189	213	29.38	30.21	+ .05	41.5	+ 0.9	64	19	48	20	2	35	26	37	32	72	6.29	+ 0.7	19	5,831	n.	36	nw.	11	4	7	20	7.4	4.1	0.0
Knoxville	996	102	111	29.11	30.19	+ .04	39.7	+ 2.2	64	4	47	18	2	33	28	36	32	78	4.64	− 0.3	16	4,563	ne.	28	sw.	4	2	10	19	7.6	1.8	0.0
Memphis	399	76	97	29.79	30.23	+ .07	40.0	− 0.3	69	4	47	22	24	33	33	36	32	76	2.26	− 3.0	9	6,372	n.	34	w.	4	5	6	20	7.6	T.	0.0
Nashville	546	168	191	29.62	30.22	+ .06	38.9	+ 0.9	64	4	47	19	2	31	31	35	30	74	2.90	− 2.0	14	7,670	ne.	37	nw.	11	7	7	17	6.5	0.9	0.0
Lexington	989	193	230	29.11	30.22	+ .09	32.6	− 0.4	59	4	40	10	25	25	30	.....	.....	.....	1.87	− 2.0	11	10,886	ne.	42	sw.	15	11	6	14	5.9	2.2	0.0
Louisville	525	219	255	29.64	30.24	+ .10	33.4	− 0.9	63	4	41	12	24	26	31	30	25	71	1.59	− 2.3	9	9,433	ne.	50	w.	4	13	7	11	5.1	1.5	0.0
Evansville	431	139	175	29.74	30.23	+ .09	32.3	0.0	62	4	40	11	25	25	27	29	24	71	1.47	− 2.2	10	9,170	ne.	40	n.	11	7	14	10	6.1	0.4	0.0
Indianapolis	822	194	230	29.29	30.21	+ .09	26.7	− 1.5	60	4	35	− 1	25	18	35	24	18	72	1.26	− 1.6	9	9,335	ne.	38	sw.	14	12	7	12	5.4	2.9	0.0
Royal Center	736	11	55	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Terra Haute	575	96	129	29.55	30.20	+ .06	27.4	.....	60	4	36	1	23	19	35	24	19	73	1.14	.....	7	7,327	ne.	35	sw.	14	7	14	10	5.7	4.0	0.0
Cincinnati	628	11	51	29.52	30.22	+ .10	29.2	− 1.1	61	4	38	6	25	21	31	.....	.....	.....	2.07	− 1.3	10	6,537	ne.	30	nw.	11	12	8	11	5.4	1.8	0.0
Columbus	824	179	222	29.29	30.20	+ .09	27.2	− 1.4	59	4	36	3	23	19	30	24	19	73	1.80	− 1.2	10	8,763	sw.	38	nw.	11	11	7	13	5.3	3.4	0.0
Dayton	899	181	216	29.19	30.19	.....	27.8	− 1.1	56	4	36	4	25	20	28	24	19	74	1.43	− 1.6	7	8,545	ne.	44	ne.	11	12	8	11	5.1	3.7	0.0
Elkins	1,947	59	67	28.07	30.23	+ .11	29.3	+ 0.3	63	4	40	0	13	19	39	25	21	80	3.18	− 0.2	14	4,414	w.	31	nw.	11	7	7	17	6.9	15.4	0.0
Parkersburg	638	77	84	29.59	30.23	+ .11	31.8	+ 0.5	64	4	40	8	25	24	33	28	22	71	1.91	− 1.3	13	4,639	w.	29	nw.	1	13	6	12	5.5	1.3	0.0
Pittsburgh	842	353	410	29.27	30.21	+ .10	28.8	− 1.9	59	4	37	6	24	21	26	25	20	71	1.56	− 1.3	10	8,721	sw.	39	nw.	11	10	6	15	5.8	6.3	0.0
Lower Lake Region.							**22.5**	**− 1.9**										**73**	**1.85**	**− 0.8**										**5.5**		
Buffalo	767	247	280	29.30	30.16	+ .09	23.2	− 1.5	52	4	30	3	23	16	23	21	17	76	1.44	− 1.9	9	15,494	w.	76	sw.	22	4	7	20	7.4	9.6	1.7
Canton	448	10	61	29.64	30.15	.....	12.8	− 3.5	45	5	22	−17	25	4	32	.....	.....	.....	1.82	− 1.3	14	9,242	w.	52	w.	22	14	7	10	4.5	15.8	5.2
Oswego	335	76	91	.....	30.17	+ .10	20.2	− 3.7	45	5	28	− 8	26	13	29	.....	.....	.....	1.40	− 1.8	11	9,992	s.	52	nw.	11	8	3	20	.....	24.6	5.7
Rochester	523	86	102	29.58	30.18	+ .11	22.6	− 1.4	51	5	30	− 3	26	16	25	19	13	66	2.41	− 0.7	13	7,632	w.	44	w.	22	6	9	16	6.8	25.5	6.0
Syracuse	597	97	113	29.51	30.18	+ .11	20.2	− 2.8	50	5	28	− 8	26	13	30	.....	.....	.....	3.54	+ 1.4	16	9,029	s.	51	nw.	22	5	11	15	6.8	31.6	4.0
Erie	714	130	166	29.37	30.17	+ .09	25.7	− 0.8	55	4	32	5	25	19	24	23	17	70	1.97	− 1.1	11	12,323	w.	63	se.	14	8	13	10	5.8	9.0	T.
Cleveland	762	190	201	29.34	30.20	+ .11	25.6	− 0.6	56	4	33	2	25	19	26	22	17	71	1.52	− 0.9	9	10,238	w.	46	w.	15	9	9	13	6.0	7.3	T.
Sandusky	629	62	103	29.48	30.19	+ .10	25.8	− 0.5	56	4	33	3	23	19	28	.....	.....	.....	1.29	− 0.8	6	10,094	sw.	44	sw.	14	12	11	8	4.5	4.5	0.0
Toledo	628	208	243	29.49	30.21	+ .12	24.4	− 1.2	55	4	32	1	24	17	32	21	16	73	1.54	− 0.4	6	11,674	sw.	51	sw.	5	14	10	7	4.1	7.0	0.5
Fort Wayne	856	113	124	29.25	30.22	.....	22.9	− 4.0	56	4	32	− 6	25	14	35	20	16	79	1.72	.....	8	7,813	sw.	42	sw.	4	12	8	11	5.1	11.4	2.5
Detroit	730	218	245	29.36	30.19	+ .11	23.8	− 0.5	52	4	32	0	23	16	29	21	17	76	1.58	− 0.4	8	9,466	sw.	48	w.	5	15	8	8	4.4	5.9	T.
Upper Lake Region.							**18.1**	**− 0.2**										**80**	**1.23**	**− 0.8**										**6.0**		
Alpena	609	13	92	29.45	30.15	+ .11	19.4	+ 0.7	38	9	28	− 8	25	11	35	17	13	82	1.13	− 1.1	9	9,122	sw.	45	nw.	22	10	6	15	5.5	15.5	3.9
Escanaba	612	54	60	29.45	30.15	+ .10	14.7	+ 0.2	38	9	24	−17	25	6	32	13	10	86	1.12	− 0.4	7	7,338	nw.	38	ne.	4	11	8	12	4.9	11.9	7.0
Grand Haven	632	54	89	29.46	30.18	+ .11	23.2	− 1.3	45	4	30	− 3	25	16	29	21	17	77	1.39	− 1.4	16	9,981	w.	60	w.	22	6	10	15	6.5	11.6	0.1
Grand Rapids	707	70	87	29.39	30.19	+ .13	23.6	− 0.2	50	4	31	2	22	16	28	20	16	76	0.71	− 2.1	10	5,152	w.	32	w.	22	6	9	16	6.7	5.4	T.
Houghton	684	62	99	29.36	30.12	+ .07	13.4	− 1.1	36	31	21	−20	25	5	43	.....	.....	.....	2.79	+ 0.8	16	7,478	e.	42	w.	19	6	3	22	7.7	28.5	19.8
Lansing	878	11	62	29.19	30.17	.....	21.0	− 1.0	48	4	30	−12	25	12	31	18	15	83	1.23	− 0.9	13	5,498	sw.	27	sw.	4	7	10	14	5.8	5.9	T.
Ludington	637	60	66	29.43	30.16	.....	22.4	.....	41	4	29	1	22	16	23	20	17	80	0.56	.....	10	9,450	w.	54	w.	21	7	9	15	6.5	6.5	0.5
Marquette	734	77	111	29.30	30.14	+ .10	17.2	+ 1.3	38	31	24	−13	23	10	31	14	11	80	1.94	− 0.1	14	9,187	sw.	50	se.	14	9	5	17	6.5	22.2	15.9
Port Huron	638	70	120	29.44	30.17	+ .11	22.2	+ 0.4	51	4	30	− 3	23	14	27	20	17	81	1.10	− 0.8	7	9,335	nw.	45	w.	22	13	11	7	4.5	6.8	T.
Saginaw	641	69	77	29.46	30.18	.....	21.8	.....	46	4	30	− 5	25	14	30	19	16	81	0.92	− 1.3	9	7,010	sw.	35	sw.	4	7	10	14	5.9	6.1	0.2
Sault Sainte Marie	614	11	52	29.41	30.15	+ .12	12.1	− 1.2	35	8	21	−20	25	3	33	11	9	90	1.44	− 0.7	16	5,315	se.	48	nw.	22	2	9	20	7.8	16.0	17.0
Chicago	823	140	310	29.28	30.20	+ .10	24.8	+ 1.1	52	4	32	− 1	22	17	37	22	16	68	1.16	− 0.8	9	9,688	sw.	42	sw.	4	12	10	9	4.7	2.0	0.0
Green Bay	617	109	144	29.47	30.17	+ .11	13.0	− 1.6	37	9	22	−20	24	4	41	12	9	82	0.88	− 0.8	5	8,806	sw.	48	w.	21	7	9	15	6.3	10.8	4.0
Milwaukee	681	125	139	29.41	30.18	+ .10	21.6	+ 1.8	45	31	29	− 7	23	14	32	18	12	66	0.92	− 1.1	5	8,888	sw.	31	sw.	4	12	13	6	4.2	1.5	0.0
Duluth	1,133	11	47	28.85	30.15	+ .06	8.6	− 1.8	36	9	17	−30	23	1	38	7	5	89	0.51	− 0.5	10	10,488	sw.	53	nw.	14	10	6	15	6.0	5.5	4.8
North Dakota.							**7.1**	**+ 3.0**										**85**	**0.46**	**− 0.2**										**5.9**		
Moorhead	940	50	58	29.09	30.17	+ .03	8.4	+ 5.7	35	9	18	−29	23	−2	35	7	3	83	0.42	− 0.3	11	7,163	s.	32	n.	21	9	6	16	6.2	4.2	2.3
Bismarck	1,674	8	57	28.28	30.17	+ .04	8.4	+ 1.7	40	9	19	−32	23	−2	41	7	4	85	0.34	− 0.2	6	6,683	nw.	44	nw.	14	11	9	11	5.5	3.9	6.3
Devils Lake	1,482	11	44	28.43	30.11	− .01	4.1	+ 3.8	33	9	15	−35	23	−6	38	3	1	88	0.58	0.0	11	7,585	w.	39	n.	14	9	10	12	5.4	6.3	5.7
Ellendale	1,457	10	56	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand Forks	835	12	89	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Williston	1,878	41	48	28.02	30.11	.00	7.4	+ 0.9	38	9	18	−36	23	−3	42	6	4	81	0.51	− 0.1	11	5,490	w.	37	nw.	14	10	4	17	6.4	5.0	5.1
Upper Mississippi Valley.							**22.2**	**+ 0.6**										**76**	**1.17**	**− 0.5**										**5.1**		
Minneapolis	918	102	208	29.11	30.14	.....	13.8	.....	39	9	22	−18	22	6	42	.....	.....	.....	0.88	+ 0.2	7	9,378	s.	41	nw.	21	8	11	12	6.2	7.0	2.4
St. Paul	837	236	261	29.23	30.19	+ .08	12.8	+ 1.3	40	9	21	−20	24	4	42	.....	.....	.....	0.90	0.0	7	9,422	se.	52	nw.	21	10	12	9	5.2	8.0	2.7
La Crosse	714	11	48	29.38	30.20	+ .09	14.0	− 1.2	42	9	24	−24	24	4	39	.....	.....	.....	1.25	+ 0.2	4	3,920	s.	24	w.	14	12	6	13	5.5	13.8	3.0
Madison	974	70	78	29.10	30.22	+ .12	17.0	+ 0.5	41	31	26	−12	24	8	34	14	12	82	0.63	− 0.9	3	7,404	nw.	35	sw.	21	12	10	9	4.5	1.5	T.
Wausau	1,247	4	.....	28.77	30.19	.....	10.8	.....	36	31	20	−32	24	1	39	.....	.....	.....	0.77	.....	7	.....	nw.	.....	.....	.....	8	11	12	6.1	8.5	13.5
Charles City	1,015	10	49	29.07	30.21	+ .07	13.2	+ 1.8	38	2	23	−29	6	3	37	11	9	87	1.44	+ 0.5	8	5,295	se.	30	nw.	14	10	10	11	5.8	20.5	4.3
Davenport	606	71	79	29.53	30.23	+ .11	23.0	+ 2.2	50	31	32	− 5	24	14	39	19	13	70	0.98	− 0.6	2	6,019	e.	36	nw.	4	16	8	7	4.0	1.0	0.0
Des Moines	861	84	97	29.23	30.19	+ .05	22.6	+ 2.2	49	9	31	− 5	24	14	28	20	15	76	0.85	− 0.4	7	6,039	se.	35	sw.	16	14	7	10	4.8	3.2	T.
Dubuque	698	81	96	29.43	30.23	+ .11	19.7	+ 1.4	42	9	28	− 9	24	11	35	17	12	75	1.16	− 0.3	5	5,026	nw.	25	nw.	21	17	6	8	3.8	2.8	0.0
Keokuk	614	61	78	29.52	30.24	+ .10	25.3	+ 1.6	55	3	34	1	23	16	39	21	15	66	1.04	− 0.6	5	5,818	e.	35	w.	4	13	11	7	4.6	3.5	0.0
Cairo	356	87	93	29.81	30.21	+ .05	34.3	− 0.5	64	4	42	15	24	27	30	31	26	74	1.48	− 2.3	8	7,468	n.	42	n.	11	6	8	17	6.7	4.0	0.0
Peoria	609	11	45	29.53	30.23	+ .11	23.8	+ 0.7	54	4	34	− 4	24	14	44	20	18	87	1.69	− 0.5	6	5,661	s.	31	sw.	4	14	10	7	4.2	2.8	0.0
Springfield, Ill.	644	10	91	29.50	30.21	+ .08	25.2	− 1.1	56	4	34	− 4	23	17	43	21	17	78	1.83	− 0.4	7	6,395	ne.	29	s.	2	15	8	8	4.2	7.1	T.
Hannibal	534	74	109	29.63	30.23	+ .10	27.1	+ 0.4	57	3	36	1	23	18	40	.....	.....	.....	1.56	− 0.6	6	6,570	sw.	33	sw.	14	11	9	11	5.1	4.3	T.
St. Louis	567	265	303	29.58	30.21	+ .07	30.2	− 0.8	61	14	38	3	23	22	41	26	20	68	0.74	− 1.5	6	8,919	s.	48	sw.	4	11	10	10	5.2	4.1	0.0
Missouri Valley.							**23.2**	**+ 2.2**										**78**	**1.09**	**+ 0.1**										**5.1**		
Columbia, Mo.	781	11	84	29.34	30.21	+ .08	28.4	+ 1.2	63	3	37	− 3	23	19	42	.....	.....	.....	1.53	− 0.7	4	6,419	e.	33	sw.	4	13	10	8	4.6	4.3	0.0
Kansas City	963	161	181	29.12	30.20	+ .05	29.7	+ 3.5	64	3	38	1	23	21	46	25	18	63	0.61	− 0.5	6	8,389	nw.	39	n.	10	15	4	12	4.8	1.4	0.0
St. Joseph	967	11	49	29.10	30.18	.....	27.8	.....	56	9	37	1	19	19	31	23	18	73	0.55	.....	5	6,607	se.	36	nw.	4	15	8	8	4.3	1.1	0.0
Springfield, Mo.	1,324	98	104	28.73	30.19	+ .05	31.8	+ 0.5	61	4	40	7	24	24	41	29	25	80	1.38	− 1.3	5	7,993	se.	34	w.	4	10	6	15	5.9	7.4	0.0
Iola	984	11	50	29.10	30.20	+ .06	30.0	+ 2.4	64	3	40	3	23	20	39	.....	.....	.....	0.96	0.0	6	5,432	s.	28	sw.	4	8	6	17	6.9	6.0	0.0
Topeka	987	92	107	.....	.....	.....	28.8	+ 3.2	62	9	38	2	19	19	33	.....	.....	.....	0.34	− 0.6	6	7,739	s.	40	n.	10	11	5	15	5.6	2.1	0.0
Drexel	1,299	10	53	28.72	30.17	.....	21.2	.....	49	9	31	−10	19	12	32	18	16	87	1.45	.....	6	9,051	nw.	41	sw.	16	12	11	8	4.7	10.9	3.2
Lincoln	1,189	11	84	28.85	30.18	+ .03	24.2	+ 3.0	55	9	34	− 7	19	14	34	21	17	79	1.13	+ 0.5	5	8,206	s.	33	nw.	14	13	5	13	5.3	6.4	T.
Omaha	1,105	115	122	28.95	30.19	+ .04	23.6	+ 3.1	50	2	32	− 5	19	15	30	20	15	70	0.94	+ 0.3	8	6,723	nw.	33	n.	4	14	10	7	4.3	6.2	0.5
Valentine	2,598	47	51	27.31	30.17	+ .05	16.8	− 1.4	53	1	28	−18	19	6	44	14	12	85	1.00	+ 0.5	9	7,564	w.	40	nw.	14	17	6	8	4.7	16.0	4.8
Sioux City	1,135	94	164	28.91	30.19	+ .04	19.2	+ 3.6	46	9	28	− 9	5	10	32	17	13	77	1.36	+ 0.8	6	9,494	nw.	47	nw.	14	15	4	12	5.3	11.2	2.5
Huron	1,306	59	74	28.72	30.20	+ .04	13.8	+ 4.3	42	9	23	−18	5	4	35	12	9	84	1.34	+ 0.8	9	7,798	se.	42	nw.	14	15	6	10	4.3	11.9	7.0
Pierre	1,572	70	75	28.42	30.18	+ .05	13.6	− 0.3	42	9	23	−17	23	4	42	11	8	79	0.68	+ 0.2	7	6,456	nw.	40	nw.	14	16	3	12	4.8	9.0	2.0
Yankton	1,233	49	57	28.80	30.19	+ .03	18.2	+ 2.7	46	2	28	−11	19	9	35	.....	.....	.....	1.77	+ 1.2	7	6,730	nw.	36	nw.	14	11	11	9	5.3	15.0	9.0

TABLE I.—*Climatological data for Weather Bureau stations, January, 1922*—Continued.

Districts and stations.	Elevation of instruments.			Pressure.			Temperature of the air.													Precipitation.			Wind.										
	Barometer above sea level.	Thermometer above ground.	Anemometer above ground.	Station, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean max. + mean min. ÷ 2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.	Mean wet thermometer.	Mean temperature of the dew-point.	Mean relative humidity.	Total.	Departure from normal.	Days with .01, or more.	Total movement.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.	Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Total snowfall.	Snow, sleet and ice on ground at end of month.
	Ft.	Ft.	Ft.	In.	In.	In.	°F.	°F.	°F		°F	°F.		°F	°F.	°F.	°F.	%	In.	In.		Miles								0-10	In.	In.
Northern Slope.							15.9	− 3.1										73	0.74	− 0.1										5.0		
Billings	3,140	5																															
Havre	2,505	11	44	27.38	30.14	+ .04	13.8	+ 0.3	49	13	24	−26	30	4	48	12	10	84	0.42	− 0.3	9	6,679	sw.	38	sw.	8	5	11	15	6.6	4.2	2.6
Helena	4,110	87	112	25.78	30.16	+ .01	19.6	− 0.4	48	1	27	−17	30	12	31	16	9	64	0.52	− 0.4	6	6,744	sw.	33	sw.	21	6	9	16	6.7	8.0	3.0
Kalispell	2,973	48	56		30.18	+ .06	16.9	− 2.7	42	9	24	12	18	10	21				0.74	− 0.8	10	3,048	nw.	22	sw.	9	7	4	20		8.9	6.5
Miles City	2,371	26	48	27.51	30.20	+ .08	13.8	− 0.7	43	9	22	−25	30	5	37	12	9	84	1.00	+ 0.4	11	5,234	se.	33	nw.	21	13	13	5	4.8	10.1	6.5
Rapid City	3,259	50	58	26.59	30.20	+ .10	16.8	− 4.7	50	13	28	−16	23	6	49	14	8	67	0.97	+ 0.5	9	5,869	n.	46	nw.	10	11	8	12	5.5	10.0	3.3
Cheyenne	6,088	84	101	23.89	30.10	+ .05	21.0	− 4.6	55	2	31	−22	18	11	36	17	8	58	0.47	+ 0.1	4	10,624	w.	71	w.	21	16	9	6	3.9	4.3	T.
Lander	5,372	60	68	24.58	30.26	+ .14	7.4	−10.0	39	2	20	−34	19	−6	46	4	− 1	73	1.13	+ 0.7	6	2,004	sw.	17	nw.	10	23	4	4	3.1	12.1	6.6
Sheridan	3,790	10	47	26.08	30.19		11.6		47	13	24	−29	30	−1	46	10	5	74	1.27		12	3,572	nw.	29	s.	9	14	7	10	4.7	13.3	10.6
Yellowstone Park	6,200	11	48	23.81	30.21	+ .07	12.5	− 5.1	39	1	21	−23	18	4	29	10	7	80	0.74	− 1.5	9	6,787	s.	27	n.	17	9	10	12	5.7	8.1	17.8
North Platte	2,821	11	51	27.12	30.19	+ .07	21.6	+ 0.2	58	2	35	−11	30	8	40	17	12	74	0.66	+ 0.2	6	6,106	w.	34	nw.	10	15	9	7	3.9	6.3	4.0
Middle Slope.							29.2	+ 0.2										69	0.59	− 0.1										4.9		
Denver	5,292	106	113	24.65	30.08	+ .03	27.7	− 1.4	61	2	39	−10	19	16	37	21	11	58	0.30	− 0.1	4	5,661	s.	36	w.	14	19	9	3	3.0	4.9	T.
Pueblo	4,685	80	86	25.23	30.08	+ .03	26.1	− 3.0	61	2	41	− 5	20	11	50	21	13	62	0.39	0.0	5	4,306	nw.	38	nw.	14	17	10	4	3.8	3.9	0.0
Concordia	1,392	56	58	28.65	30.18	+ .04	27.0	+ 2.6	57	9	37	0	19	17	36	22	18	77	0.38	− 0.3	5	7,017	s.	37	n.	12	10	8	13	5.7	0.9	0.0
Dodge City	2,509	11	51	27.47	30.18	+ .07	28.6	+ 1.3	69	2	40	− 1	19	17	46	24	19	74	0.45	0.0	5	7,425	s.	34	s.	29	15	8	8	4.4	0.2	0.0
Wichita	1,358	139	158	28.67	30.16	+ .03	30.8	+ 1.1	63	3	39	3	19	22	37	27	21	72	0.88	+ 0.1	7	9,029	s.	47	s.	2	9	6	16	6.3	0.8	0.0
Altus	1,410	5					37.2		69	3	47	12	19	27	40				0.89		5						14	1	16		0.0	0.0
Broken Arrow	765	11	52																														
Muskogee	652	4					37.8		66	14	47	13	19	29	35				2.23		7		se.				10	12	9		0.6	0.0
Oklahoma City	1,214	10	47	28.86	30.18	+ .07	35.2	+ 0.5	68	3	44	10	19	26	36	30	24	69	1.15	− 0.2	8	8,765	n.	39	s.	2	8	9	14	6.2	0.6	0.0
Southern Slope.							40.3	− 1.2										59	0.54	− 0.2										5.6		
Abilene	1,738	10	52	28.29	30.15	+ .06	41.3	− 1.3	75	3	51	16	19	31	43	34	25	60	1.18	+ 0.3	8	6,825	n.	44	sw.	2	7	5	19	7.0	T.	0.0
Amarillo	3,676	10	49	26.28	30.12	+ .06	34.0	+ 0.1	67	2	46	2	19	22	39	27	21	70	0.78	+ 0.2	8	8,666	se.	37	nw.	10	14	11	6	4.6	1.2	0.0
Del Rio	944	64	71	29.12	30.13	+ .07	48.8	− 1.4	70	14	58	25	13	39	44				0.15	− 0.7	3	5,766	se.	46	nw.	10	10	3	18	6.5	0.0	0.0
Roswell	3,566	75	85	26.38	30.07	+ .03	37.1	− 2.1	68	18	52	6	19	22	50	29	16	48	0.04	− 0.5	2	5,990	s.	38	sw.	31	16	7	8	4.2	T.	0.0
Southern Plateau.							37.7	− 3.0										53	0.78	0.0										3.2		
El Paso	3,762	110	133	26.20	30.03	+ .02	43.5	− 0.6	67	18	55	20	14	32	35	34	22	46	0.30	− 0.2	5	7,622	nw.	46	sw.	3	19	8	4	3.3	0.3	0.0
Santa Fe	7,013	57	66	23.16	30.06	+ .02	28.0	− 0.5	51	1	38	5	21	18	30	22	15	63	0.64	0.0	4	6,376	n.	36	se.	30	15	10	6	3.9	10.2	1.0
Flagstaff	6,908	10	59	23.26	30.04	− .01	21.3	− 5.4	52	1	35	−20	21	7	49	17			4.78		8	4,712	w.	36	s.	30	18	7	6		41.8	20.0
Phoenix	1,108	76	81	28.85	30.03	.00	48.6	− 1.4	69	13	62	24	21	36	38	40	30	55	1.29	+ 0.1	6	3,100	e.	22	w.	3	15	13	3	3.5	0.0	0.0
Yuma	141	9	54	29.91	30.06	+ .01	50.8	− 3.9	70	27	62	29	21	40	33	42	29	46	0.54	+ 0.1	6	5,385	n.	30	s.	30	18	10	3	3.3	0.0	0.0
Independence	3,957	9	41	26.00	30.12	+ .05	34.2	− 6.3	57	1	46	6	31	23	33	28	18	57	1.11	+ 0.2	3	4,940	nw.	40	sw.	17	24	4	3	1.8	10.1	8.0
Middle Plateau.							20.9	− 7.5										74	1.09	0.0										3.6		
Reno	4,532	74	81	25.50	30.21	+ .08	24.1	− 8.4	49	26	35	− 1	20	13	33	22	17	74	0.64	− 1.3	9	3,247	w.	39	w.	27	15	8	8	4.4	5.4	2.3
Tonopah	6,090	12	20	24.04	30.17		24.4		48	1	31	−10	19	18	28	22	16	70	1.04	+ 0.3	5	5,497	w.	43	w.	17	22	4	5	2.9	9.0	3.0
Winnemucca	4,344	18	56	25.69	30.28	+ .12	14.8	−14.0	39	1	29	−18	19	1	40	14	10	81	1.15	+ 0.1	7	4,853	ne.	34	nw.	27	15	7	9	4.2	10.5	8.8
Modena	5,479	10	43	24.59	30.17	+ .07	16.6	−10.9	47	1	31	−12	20	2	39	13	8	73	1.72	+ 1.0	7	6,105	w.	48	s.	30	20	6	5	2.6	14.6	6.2
Salt Lake City	4,360	163	203	25.69	30.21	+ .06	22.2	− 6.6	50	1	30	− 7	19	15	23	20	16	77	1.42	+ 0.1	10	4,356	se.	33	nw.	27	14	5	12	4.6	13.2	2.2
Grand Junction	4,602	60	68	25.41	30.09	+ .03	27.0	+ 2.3	59	2	38	5	21	16	31	22	16	68	0.58	+ 0.1	4	3,859	se.	30	s.	28	19	6	6	3.1	5.5	3.5
Northern Plateau.							20.3	− 8.5										83	1.06	− 0.6										7.2		
Baker	3,471	48	53	26.54	30.28	+ .12	14.4	− 9.5	36	1	24	−16	19	5	33	14	11	83	0.61	− 0.7	11	4,352	se.	21	nw.	17	7	8	16	6.0	10.1	2.0
Boise	2,739	78	86	27.32	30.30	+ .11	20.6	− 8.7	45	26	28	−10	19	13	31	20	16	77	0.90	− 1.0	7	3,326	w.	29	se.	26	9	3	19	6.9	9.5	1.5
Lewiston	757	40	48	29.40	30.24	+ .08	27.3	− 7.2	51	9	34	− 7	19	21	22				0.56	− 1.0	10	2,643	e.	21	ne.	8	6	8	17	6.8	5.9	T.
Pocatello	4,477	60	68	25.52	30.26	+ .06	16.0	− 9.1	41	1	24	−20	19	8	30	14	11	81	1.54	+ 0.9	10	6,141	se.	36	sw.	17	5	8	18	7.1	12.5	1.0
Spokane	1,929	101	110	28.09	30.23	+ .11	20.6	− 6.1	40	8	28	−12	18	14	28	20	18	86	1.19	− 1.1	13	3,128	nw.	23	sw.	26	1	6	24	8.4	13.7	8.0
Walla Walla	991	57	65	29.13	30.25	+ .10	23.0	−10.2	48	9	30	− 4	18	16	34	22	20	88	1.54	− 0.5	10	2,684	s.	20	se.	26	3	4	24	8.3	16.3	3.8
North Pacific coast region.							36.9	− 3.1										82	2.87	− 3.9										6.4		
North Head	211	11	56	29.90	30.13	+ .08	39.8	− 2.0	60	11	44	24	18	35	21	38	35	83	3.43	− 3.2	18	8,739	se.	64	s.	26	13	10	8	4.6	1.5	0.0
Port Angeles	29	8	53	30.15	30.17		35.8		50	25	41	22	31	30	15				1.59	− 3.9	12	4,657	s.	38	n.	16	6	10	15	6.5	2.0	0.0
Seattle	125	215	250	30.04	30.18	+ .13	35.5	− 3.8	50	8	40	16	18	31	16	34	32	85	1.89	− 3.0	12	7,052	se.	45	s.	26	6	7	18	6.9	2.6	0.0
Tacoma	213	113	120	29.96	30.19	+ .15	34.4	− 3.7	54	8	40	12	18	29	19				1.72	− 4.1	13	5,021	sw.	39	ne.	30	3	8	20	7.7	1.3	0.0
Tatoosh Island	86	7	57	30.01	30.11	+ .13	39.5	− 1.7	49	12	43	28	30	36	10	37	35	83	4.68	− 7.5	19	13,850	e.	61	s.	26	9	5	17	6.3	0.0	0.0
Yakima	1,071	4																															
Medford	1,425	4																															
Portland, Oreg.	153	68	106	30.02	30.18	+ .10	35.2	− 3.9	52	25	40	16	18	30	17	33	29	78	3.08	− 3.4	16	3,945	e.	26	s.	26	6	4	21	7.4	1.7	0.0
Roseburg	510	9	57	29.62	30.19	+ .09	37.2	− 3.6	56	24	44	14	19	30	23	35	32	83	3.68	− 2.0	16	1,836	s.	14	w.	1	5	18	8	5.7	2.4	0.0
Middle Pacific coast region.							43.8	− 3.7										72	2.20	− 2.3										4.2		
Eureka	62	73	89	30.11	30.18	+ .08	43.2	− 3.7	59	12	50	25	19	36	21	41	37	77	2.54	− 5.1	16	4,159	se.	39	n.	6	9	8	14	5.6	T.	0.0
Point Reyes Light	490	7	18	29.56	30.08		47.6	− 1.8	64	13	52	31	19	43	20				2.06		11	13,474	nw.	84	nw.	1	15	10	6	3.9	0.1	0.0
Red Bluff	332	50	56	29.77	30.14	+ .02	41.9	− 3.5	65	11	52	22	21	32	34	38	30	66	1.41	− 2.5	7	4,086	nw.	40	nw.	18	16	10	5	3.8	T.	0.0
Sacramento	69	106	117	30.06	30.14	+ .02	40.6	− 5.0	58	26	47	26	21	34	24	39	35	78	2.16	− 1.5	7	4,906	se.	48	nw.	18	13	10	8	4.4	1.5	0.0
San Francisco	155	208	243	29.95	30.12	+ .01	46.8	− 2.7	61	12	53	32	19	41	21	42	36	69	2.41	− 1.9	8	6,397	nw.	40	ne.	19	18	5	8	3.7	T.	0.0
San Jose	141	12	110	29.97	30.13		42.9	− 5.4	62	25	54	23	21	32	32				2.46	− 0.4	9	4,203	s.	29	ne.	19	17	8	6	3.7	0.0	0.0
South Pacific coast region.							49.0	− 2.1										66	3.76	+ 1.0										4.0		
Fresno	327	89	98	29.77	30.14	+ .04	41.7	− 3.7	60	26	49	24	19	34	25	38	34	77	2.46	+ 0.9	7	3,889	nw.	29	nw.	2	12	8	11	4.8	T.	0.0
Los Angeles	338	159	191	29.69	30.06	− .02	53.4	− 0.9	77	13	62	31	20	44	29	45	37	58	4.64	+ 1.8	6	4,686	ne.	33	e.	29	18	8	5	3.5	0.0	0.0
San Diego	87	62	70	29.95	30.05	− .02	52.5	− 1.5	72	12	60	35	21	45	23	47	41	68	3.45	+ 1.4	10	5,011	nw.	52	s.	30	15	8	8	4.4	0.0	0.0
San Luis Obispo	201	32	40	29.87	30.10	+ .01	48.6	− 2.4	76	11	61	24	20	36	42	41	33	61	4.48	− 0.2	8	3,018	n.	27	ne.	19	15	11	5	3.5	0.0	0.0
West Indies.																																	
San Juan, P. R.	82	8	54	29.94	30.03		74.4		82	27	79	66	9	70	15				5.37	+ 0.8	21	10,865	e.	42	e.	14	11	13	7	5.2	0.0	0.0
Panama Canal.																																	
Balboa Heights	118	7	97																														
Colon	25	5	71																														
Alaska.																																	
Juneau	80	11	49				31.5		42	11	34	15	30	29	11	30	26	82	11.56		21	3,538	se.	20	ne.	17	4	2	25	8.5	12.7	T.

TABLE II.—*Data furnished by the Canadian Meteorological Service, January, 1922.*

Stations.	Altitude above mean sea level, Jan. 1, 1919.	Pressure.			Temperature of the Air.						Precipitation.		
		Station reduced to mean of 24 hours.	Sea level reduced to mean of 24 hours.	Departure from normal.	Mean max.+mean min.÷2.	Departure from normal.	Mean maximum.	Mean minimum.	Highest.	Lowest.	Total.	Departure from normal.	Total snowfall.
	Feet.	*Inches.*	*Inches.*	*Inches.*	°*F*	°*F*	°*F*	°*F*	°*F*	°*F*	*Inches.*	*Inches.*	*Inches.*
St. Johns, N. F.	125												
Sydney, C. B. I.	48	29.92	29.97	+0.04	20.5	0.0	28.4	12.7	46	−12	5.80	+0.70	52.0
Halifax, N. S.	88	29.91	30.02	+ .05	21.1	− 0.7	29.7	12.4	46	−11	2.96	−2.81	17.3
Yarmouth, N. S.	65	29.97	30.04	+ .04	25.3	− 1.0	31.5	19.1	48	0	2.81	−2.60	13.2
Charlottetown, P. E. I.	38	29.95	29.99	+ .03	16.8	− 0.2	24.7	9.0	42	−14	3.59	−0.37	20.7
Chatham, N. B.	28	30.01	30.05	+ .08	11.0	+ 1.2	22.8	− 0.8	38	−27	2.36	−1.23	22.6
Father Point, Que.	20	30.10	30.13	+ .13	8.4	+ 0.4	17.5	− 0.6	32	−18	2.78	−0.07	27.8
Quebec, Que.	296	29.78	30.13	+ .11	9.4	+ 0.3	17.6	1.3	36	−19	2.44	−1.57	23.4
Montreal, Que.	187	29.92	30.15	+ .11	12.8	+ 1.1	19.7	5.9	39	−12	2.36	−1.37	20.6
Stonecliffe, Ont.	489												
Ottawa, Ont.	236	29.89	30.18	+ .15	11.9	+ 2.3	22.7	1.1	40	−19	1.81	−1.18	18.1
Kingston, Ont.	285	29.83	30.17	+ .12	17.2	+ 0.1	25.2	9.3	42	−11	1.21	−2.24	5.4
Toronto, Ont.	379	29.74	30.17	+ .12	23.2	+ 1.8	30.1	16.4	46	− 1	1.38	−1.54	9.0
Cochrane, Ont.	930												
White River, Ont.	1,244	28.68	30.08	+ .07	1.1	+ 1.5	15.2	−13.0	35	−47	1.24	−0.45	12.4
Port Stanley, Ont.	592	29.52	30.19	+ .12	22.6	+ 0.4	31.6	13.7	48	− 6	1.93	−1.06	1.4
Southampton, Ont.	656	29.39			19.6	− 0.8	27.1	12.0	37	− 7	2.97	−1.08	26.3
Parry Sound, Ont.	688	29.38	30.12	+ .11	15.2	+ 1.4	25.4	5.1	40	−14	4.80	+0.72	45.8
Port Arthur, Ont.	644	29.38	30.13	+ .06	7.3	+ 4.2	16.8	− 2.2	31	−27	0.45	−0.37	4.5
Winnipeg, Man.	760	29.23	30.13	+ .02	3.0	+ 9.8	12.0	− 6.0	35	−38	0.27	−0.61	2.7
Minnedosa, Man.	1,690	28.16	30.10	.00	0.6	+ 7.8	11.1	− 9.8	32	−41	0.28	−0.52	2.8
Le Pas, Man.	860												
Qu'Appelle, Sask.	2,115	27.67	30.05	− .03	3.8	+ 7.6	14.0	− 6.3	39	−40	0.43	−0.07	4.3
Medicine Hat, Alb.	2,144	27.66	30.02	− .05	15.6	+10.1	25.0	6.2	45	−24	0.53	−0.04	5.3
Moose Jaw, Sask.	1,759												
Swift Current, Sask.	2,392	27.41	30.18	+ .09	10.8	+ 7.7	20.7	1.0	41	−48	0.81	+0.17	8.1
Calgary, Alb.	3,428												
Banff, Alb.	4,521	25.30	30.14	+ .14	8.7	− 3.4	18.5	− 1.2	39	−36	0.97	−0.22	9.7
Edmonton, Alb.	2,150	27.60	30.00	+ .03	10.1	+ 8.3	20.0	0.4	47	−50	0.75	−0.07	7.4
Prince Albert, Sask.	1,450	28.39	30.06	− .03	2.0	+10.4	11.7	− 7.6	42	−40	0.64	−0.33	6.4
Battleford, Sask.	1,592	28.20	30.05	− .03	2.5	+ 8.4	12.9	− 7.8	43	−43	0.20	−0.20	2.0
Kamloops, B. C.	1,262												
Victoria, B. C.	230	29.89	30.15	+ .18	36.3	− 2.2	39.9	32.7	47	21	2.77	−2.62	7.7
Barkerville, B. C.	4,180												
Triangle Island, B. C.	680												
Prince Rupert, B. C.	170												
Hamilton, Ber.	151	29.98	30.15	+ .02	61.7	− 0.3	67.6	55.9	76	45	5.95	+1.01	0.0

SEISMOLOGICAL REPORTS FOR JANUARY, 1922.

W. J. HUMPHREYS, Professor in Charge.

[Weather Bureau, Washington, March 3, 1922.]

SEISMOLOGICAL ABBREVIATIONS USED IN THE INSTRUMENTAL REPORTS.

CHARACTER OF THE EARTHQUAKE.

I=noticeable.
II=conspicuous.
III=strong.
d=(terræ motus domesticus)=local earthquake (sensible or felt).
v=(terræ motus vicinus)=near-by earthquake (within 1,000 km).
r=(terræ motus remotus)=distant earthquake (1,000 to 5,000 km. distant).
u=(terræ motus ultimus)=very distant earthquake (beyond 5,000 km.).
Δ=distance to epicenter.

PHASES.

P=(undæ primæ)=first preliminary tremors.
PR_n=P waves reflected *n* times at the earth's surface.
S=(undæ secundæ)=second preliminary tremors.
SR_n=S waves reflected *n* times at the earth's surface.
PS=transformed waves; longitudinal (P) to transverse (S) or vice versa.
L=(undæ longæ)=long waves in the principal portion.
M=(undæ maximæ)=greatest motion in the principal portion.
C=(coda)=trailers.
O=time at epicenter.
L_{rep1}=long waves reaching the station from the antiepicenter (40,000 km.−Δ).
L_{rep2}=long waves again reaching the station from the antiepicenter (40,000 km.+Δ).
F=(finis)=end of perceptible trace.

NATURE OF THE MOTION.

i=(impetus)=abrupt beginning.
e=(emersio)=gradual appearance.
T=(period)=twice time of oscillation.
A=amplitude of earth's movement, reckoned from the zero line. E, N, or Z attached to a symbol signifies the E–W, the N–S, or the vertical component, respectively, thus:
P_E is the E–W component of P.
P_N is the N–S component of P.
P_Z is the vertical component of P.
μ=micron, $\frac{1}{1000}$ mm.

INSTRUMENTAL CONSTANTS.

T_0=period of instrument.
V=magnification of instrument.
ϵ=damping ratio.