

Chart VI.—Percentage of clear sky between sunrise and sunset. The average cloudiness at each Weather Bureau station is determined by numerous personal observations between sunrise and sunset. The difference between the observed cloudiness and 100 is assumed to represent the percentage of clear sky, and the values thus obtained are the basis of this chart. The chart does not relate to the nighttime.

Chart VII.—Isobars and isotherms at sea-level, and prevailing wind directions. The pressures have been reduced to sea-level and standard gravity by the method described by Prof. Frank H. Bigelow on pages 13-16 of the REVIEW for January, 1902. The pressures have also been reduced to the mean of the 24 hours by the application of a suitable correction to the mean of the 8 a. m. and 8 p. m. readings at stations taking two observations daily, and to the 8 a. m. or the 8 p. m. observation, respectively, at stations taking but a single observation. The diurnal corrections so applied will be found in the Annual Report of the Chief of the Weather Bureau, 1900-1901, volume 2, Table 27, pages 140-164.

The isotherms on the sea-level plane have been constructed by means of the data summarized in chapter 8 of volume 2 of the annual report just mentioned. The correction $t_0 - t$, or temperature on the sea-level plane minus the station temperature as given by Table 48 of that report, is added to the observed surface temperature to obtain the adopted sea-level temperature.

The prevailing wind directions are determined from hourly observations at the great majority of the stations. A few stations having no self-recording wind-direction apparatus determine the prevailing direction from the daily or twice-daily observations only.

Chart VIII.—Total snowfall. This is based on the reports from regular and cooperative observers and shows the depth in inches of the snowfall during the month. In general, the depth is shown by lines inclosing areas of equal snowfall, but in special cases figures are also given. Chart VIII is published only when the general snow cover is sufficiently extensive to justify its preparation.

Chart IX.—Micrological conditions over the North Atlantic Ocean.

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.

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, 1919.

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.....	44.5	- 1.2	2 stations.....	77	1	St. Bernard.....	-11	4	5.84	+1.07	Cochrane.....	11.11	Tuscumbia.....	3.33
Arizona.....	37.6	- 4.8	Sentinel.....	80	25	Chin Lee.....	-32	12	0.47	-0.95	Childs.....	2.20	4 stations.....	0.00
Arkansas.....	41.4	+ 0.1	Cardabelle.....	75	13	2 stations.....	- 3	4	3.09	-1.23	Sheridan.....	7.80	Rogers.....	0.32
California.....	46.3	+ 0.5	Indio.....	85	22	Alturas.....	-18	1	2.73	-2.68	Upper Mattole.....	22.92	4 stations.....	0.00
Colorado.....	21.0	- 3.5	Canon City.....	65	24	3 stations.....	-39	1	0.16	-0.85	Savage Basin.....	1.07	14 stations.....	0.00
Florida.....	57.8	- 0.8	Homestead.....	85	25†	Garniers (near).....	-14	4	2.32	-0.56	Garniers (near).....	6.45	Ritta.....	0.05
Georgia.....	47.1	+ 0.8	Brunswick.....	79	2	2 stations.....	- 2	4	1.79	+0.93	Tallahassee.....	3.03	Waycross.....	1.67
Hawaii (December).....	69.7	+ 0.1	Waianae, Oahu.....	90	28†	2 stations.....	- 4	5	11.09	+2.50	Honokaaue, Hawaii.....	44.53	Kula Sanitarium.....	0.03
Idaho.....	26.0	+ 1.8	4 stations.....	62	21†	New Meadows.....	-23	1	1.64	-0.64	Wallace.....	8.29	2 stations.....	0.01
Illinois.....	31.7	+ 4.8	Carbondale.....	66	17†	Morrison.....	-23	4	0.46	-2.11	Palcatine.....	1.77	2 stations.....	T.
Indiana.....	33.2	+ 4.3	Rome.....	65	29	La Porte.....	-14	4	1.02	-2.09	Rome.....	2.29	Veedersburg.....	T.
Iowa.....	26.8	+ 8.5	Centerville.....	64	19	Maquoketa.....	-32	4	0.24	-0.81	Nora Springs.....	0.86	6 stations.....	T.
Kansas.....	30.2	+ 0.8	Ellsworth.....	69	29	Salina.....	-25	3	0.07	-0.68	Wamego.....	0.49	28 stations.....	0.00
Kentucky.....	37.9	+ 2.7	3 stations.....	68	19†	Marion.....	- 1	4	3.62	-0.77	2 stations.....	7.10	Louisville.....	1.63
Louisiana.....	48.7	- 2.1	Ihouma.....	82	1	Newellton.....	- 6	4	6.33	+1.97	Napoleonville.....	8.80	Ruston.....	3.19
Maryland-Delaware.....	34.2	+ 3.2	College Park, Md.....	66	21	Oakland, Md.....	-19	5	3.50	+0.10	Seaford, Del.....	4.70	Westernport, Md.....	1.45
Michigan.....	26.2	+ 5.5	3 stations.....	59	18†	Sidnaw.....	-31	4	0.87	-1.21	Marquette.....	2.21	Omer.....	0.10
Minnesota.....	18.5	+10.2	Worthington.....	55	24	Itasca State Park.....	-45	3	0.38	-0.34	Redwood Falls.....	1.60	Tracy.....	0.05
Mississippi.....	44.9	- 2.2	2 stations.....	78	17†	Louisville.....	- 3	3	5.46	+0.78	Edwards.....	8.83	Pontotoc.....	1.35
Missouri.....	34.0	+ 3.6	Marble Hill.....	70	12	Maryville.....	-23	4	0.40	-1.88	New Madrid.....	4.47	Avalon.....	0.00
Montana.....	29.2	+10.6	Choteau.....	79	16	2 stations.....	-35	3	0.62	-0.48	Heron.....	5.91	4 stations.....	0.00
Nebraska.....	30.2	+ 8.6	Weeping Water.....	71	30	Ainsworth.....	-28	3	0.10	-0.47	Atkinson.....	0.75	25 stations.....	0.00
Nevada.....	30.0	+ 0.3	3 stations.....	70	12†	Owyhee.....	-24	1	0.17	-0.99	Marlette Lake.....	1.43	5 stations.....	0.00
New England.....	25.9	+ 4.8	Cavendish, Vt.....	81	17	Enosburg Falls, Vt.....	-27	12	3.11	-0.34	Kingston, R. I.....	5.96	Newfield, Vt.....	1.02
New Jersey.....	34.1	+ 4.3	2 stations.....	63	2	Cutvers Lake.....	- 9	5†	3.51	-0.28	Atlantic City.....	4.44	Layton.....	2.24
New Mexico.....	26.0	- 7.4	3 stations.....	70	31	Dulce.....	-37	2	0.16	-0.51	Cloverdale.....	1.33	32 stations.....	0.00
New York.....	37.9	+ 5.1	New York City.....	60	1	North Lake.....	-27	11	2.01	-0.84	Adams Center.....	6.79	Avon.....	0.23
North Carolina.....	42.5	+ 1.6	Newbern.....	77	23	Banners Lk.....	- 7	4	4.75	+1.09	Highlands.....	8.53	Edenton.....	2.30
North Dakota.....	18.7	+13.8	Beach.....	66	25	Steele.....	-44	1	0.16	-0.38	Colgate.....	0.60	6 stations.....	0.00
Ohio.....	32.9	+ 4.4	Peebles.....	72	22	Villport.....	- 9	5	1.60	-1.62	Portsmouth.....	4.13	North Bass Island.....	0.45
Oklahoma.....	37.8	- 0.8	2 stations.....	72	11	Kenton.....	-20	1	0.74	-0.50	Antlers.....	3.45	Mutual.....	0.00
Oregon.....	35.7	+ 0.6	Grants Pass.....	71	22	Austin.....	-25	1	4.2	+0.76	Deadwood.....	24.63	Hampton.....	0.16
Pennsylvania.....	32.0	+ 4.1	Uniontown.....	64	1	Ebensburg.....	-15	5	2.51	-0.84	Somersets.....	4.54	Lawrenceville.....	1.00
Porto Rico.....	73.8	+ 0.6	San Salvador.....	97	12	3 stations.....	-53	2†	3.56	0.00	Arecibo.....	7.85	2 stations.....	0.80
South Carolina.....	47.1	+ 1.6	Oaks.....	80	2	Laurin.....	- 8	4	4.15	+0.71	Liberty.....	8.59	Paris Island.....	0.30
South Dakota.....	27.3	+11.5	Bellefleur.....	66	18	Pollock.....	-39	3	0.12	-0.39	Harveys Ranch.....	1.40	14 stations.....	0.00
Tennessee.....	39.3	+ 0.5	Newport.....	74	1	2 stations.....	- 8	4	5.39	+0.88	Celina.....	8.23	Union City.....	2.49
Texas.....	45.3	- 3.1	McKinney.....	84	13	Dalhart.....	-17	1	3.09	+1.85	Anahuac.....	8.97	5 stations.....	0.00
Utah.....	24.5	- 1.0	Springdale.....	66	23	Hanksville.....	-35	2	0.09	-1.41	Silver Lake.....	0.72	27 stations.....	0.00
Virginia.....	38.4	+ 2.7	2 stations.....	71	21	Burkes Garden.....	-16	5	3.97	+0.67	Clarksville.....	6.04	Winchester.....	1.92
Washington.....	33.8	+ 3.3	Kennewick.....	68	23	2 stations.....	-10	1	6.17	+1.31	Wind River.....	23.82	Sunnyside.....	0.63
West Virginia.....	34.1	+ 1.1	Clennell.....	69	23	Terra Alta.....	-16	5	3.79	-0.18	Pickens.....	6.06	Upper Tract.....	1.60
Wisconsin.....	22.2	+ 7.8	Prairie du Sac.....	59	26	Hillsboro.....	-42	4	0.57	-0.64	Geotco.....	1.38	Solon Springs.....	0.10
Wyoming.....	24.3	+ 4.5	2 stations.....	64	17†	Sheridan Creek.....	-33	1	0.16	-0.66	Moran.....	1.36	16 stations.....	0.00

† Other dates also.