Average temperatures and departures from the normal.

Districts.	Number of stations.	Average temperatures for the current month.	Departures for the current month.	Accumulated departures since January 1.	Average departures since January 1.
		°	°	°	°
New England	12	60.6	− 0.1	+13.4	+ 1.5
Middle Atlantic	15	68.4	+ 2.1	+11.1	+ 1.2
South Atlantic	10	75.0	+ 1.8	+ 4.3	+ 0.5
Florida Peninsula*	8	79.6	+ 0.4	− 2.5	− 0.3
East Gulf	11	77.9	+ 3.1	+ 2.1	+ 0.2
West Gulf	10	79.6	+ 4.2	+ 8.6	+ 1.0
Ohio Valley and Tennessee	13	71.0	+ 2.6	+ 1.9	+ 0.2
Lower Lakes	10	62.4	− 0.6	+ 6.7	+ 0.7
Upper Lakes	12	58.5	− 0.4	+18.6	+ 2.1
North Dakota*	8	54.9	− 1.5	+22.1	+ 2.5
Upper Mississippi Valley	14	65.1	+ 0.2	+10.1	+ 1.1
Missouri Valley	12	65.8	+ 0.5	+15.3	+ 1.7
Northern slope	9	56.7	− 0.8	+19.6	+ 2.2
Middle slope	6	70.0	+ 2.4	+17.8	+ 2.0
Southern slope*	8	77.5	+ 4.4	+15.3	+ 1.7
Southern Plateau*	11	77.2	+ 2.9	+14.5	+ 1.6
Middle Plateau*	10	62.5	+ 2.6	+12.8	+ 1.4
Northern Plateau*	9	58.4	− 1.1	+ 8.4	+ 0.9
North Pacific	7	56.2	− 0.7	− 2.9	− 0.3
Middle Pacific	5	62.2	− 2.2	− 4.1	− 0.5
South Pacific	4	68.9	+ 1.6	+ 9.6	+ 1.1

*Regular Weather Bureau and selected cooperative stations.

Average precipitation and departures from the normal.

Districts.	Number of stations.	Average.		Departure.	
		Current month.	Percentage of normal.	Current month.	Accumulated since Jan. 1.
		Inches.		*Inches.*	*Inches.*
New England	11	2.47	78	− 0.7	− 4.0
Middle Atlantic	15	2.52	78	− 0.7	− 4.5
South Atlantic	11	2.92	62	− 1.8	− 5.3
Florida Peninsula*	8	3.27	43	− 4.3	−10.3
East Gulf	11	2.17	56	− 1.7	− 6.2
West Gulf	10	2.66	79	− 0.7	− 6.0
Ohio Valley and Tennessee	13	3.25	114	+ 0.4	− 0.6
Lower Lakes	10	2.87	104	+ 0.1	− 1.8
Upper Lakes	12	3.10	94	− 0.2	− 4.9
North Dakota*	8	1.85	119	+ 0.3	− 6.1
Upper Mississippi Valley	15	3.21	97	− 0.1	− 6.8
Missouri Valley	12	4.46	175	+ 1.8	− 2.6
Northern slope	9	1.45	126	+ 0.3	− 2.5
Middle slope	6	1.04	54	− 0.9	− 5.3
Southern slope*	8	0.83	30	− 1.9	− 9.8
Southern Plateau*	11	0.65	62	− 0.4	− 2.5
Middle Plateau*	11	0.95	146	+ 0.3	− 3.7
Northern Plateau*	10	1.19	134	+ 0.3	− 2.4
North Pacific	7	1.65	65	− 0.9	− 3.9
Middle Pacific	7	0.13	25	− 0.4	− 6.2
South Pacific	4	0.40	200	+ 0.2	− 4.7

*Regular Weather Bureau and selected cooperative stations

RIVERS AND FLOODS.

By Prof. H. C. FRANKENFIELD, in charge River and Flood Division.

Drought conditions continued during the month over that portion of the country extending from Virginia northeastward, seriously threatening the water supply of many cities, and it was not until after the beginning of the third decade of the month that the situation was relieved by substantial rains. Over the remainder of the country the usual seasonal low-water conditions prevailed, except in the lower Rio Grande, where floods occurred from September 15 to 24, inclusive. A tropical disturbance moved westward over the Gulf of Mexico from September 10 to 14, inclusive, reaching the mouth of the Rio Grande on the latter date. It was attended by excessive rains, and by the morning of September 16 the flood was well under way. Warnings were issued on this date, and the crest of the high water reached Brownsville, Tex., on September 23. The flood was not as great by from 4 to 6 feet as that of September, 1909, and no serious damage was done. Some small crops were overflowed and railroad traffic was interrupted for a time, but the total losses were small. At Brownsville the levees prevented the flood waters from entering the town.

Hydrographs for typical points on several principal rivers are shown on Chart I. The stations selected for charting are Keokuk, St. Louis, Memphis, Vicksburg, and New Orleans, on the Mississippi; Cincinnati and Cairo, on the Ohio; Nashville, on the Cumberland; Johnsonville, on the Tennessee; Kansas City, on the Missouri; Little Rock, on the Arkansas; and Shreveport, on the Red.

SPECIAL PAPERS ON GENERAL METEOROLOGY.

JACOB W. BAUER.

By H. E. WILLIAMS, Assistant Chief of Bureau.

Mr. Jacob W. Bauer, whose death at Columbia, S. C., occurred on September 4, 1910, entered the service on July 23, 1883. He attained the rank of Sergeant in the Signal Corps of the Army and afterward the position of Section Director in the Weather Bureau. He served as assistant at Boston, Mount Washington, and New York City, and Official in Charge at Thatchers Island, Mount Washington, Duluth, and Columbia, S. C., which latter assignment he held from November 2, 1893, until the time of his death. He was a faithful and conscientious official and had a good record in the Bureau for the efficient performance of duty.

RECENT ADDITIONS TO THE WEATHER BUREAU LIBRARY.

C. FITZHUGH TALMAN, Librarian.

The following have been selected from among the titles of books recently received, as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies. Anonymous publications are indicated by a ——.

Alfani, Guido.
L'osservatorio Ximeniano e il suo materiale scientifico. I. (Sezione meteorica). Pavia. 1910. 38p. 8°.

Bartholinus, Erasmius.
De figura nivis dissertatio. Hafniæ. [1661]. [6], 42p. 24°.

Belgium. Observatoire royal (Service astronomique).
Liste des observatoires magnétiques et des observatoires séismologiques, par E. Merlin et O. Somville. Bruxelles. 1910. x, 192p. 8°.

Borchardt, H.
Zur Theorie der Himmelshelligkeit. Kiel. [1909]. 8°. (S.-A., Schriften Nat.-wiss. Ver. Schleswig-Holstein. Bd. 14, Hft. 2, p. 386–396.)

Brounov, P. [I.].
Über die Abhängigkeit einiger geographischen Elemente von dem barischen Relief der Erdoberfläche. n. p. n. d. 12p. 8°. (Reprinted from Neuvième cong. internat. de géographie, Genève, 1908. C.-r., T.2.

Carthaus, Emil.
Die klimatischen Verhältnisse der geologischen Vorzeit vom Präcambrium an bis zur Jetztzeit, und ihr Einfluss auf die Entwickelung der Haupttypen des Tier- und Pflanzenreiches. Berlin. 1910. v, 256 p. 8°.

Coellen, Ludwig.
Die Gegensatz in den aussertropischen Klimaten der continentalen West- und Ostküsten auf der Nordhemisphäre. Wien. 1901. 52p. 4°. (S.-A., Abhdl. K. k. Geogr. Gesell., Wien, Bd. 3, 1901, No. 3.)

Conservation of natural resources. Meeting of engineers called jointly in ... New York City, March 24, 1909. [New York]. [1909]. 56p. 8°.

Crammer, Hans.
Eishöhlen- und Windröhren-Studien. Wien. 1899. 62p. 4°. (S.-A., Abhdl. K. k. Geogr. Gesell., Wien, Bd. 1, 1899. p. 19-76.)

Dörr.
Die Beobachtungsergebnisse der meteorologischen Stationen niederer Ordnung im Herzogtum Braunschweig für die Jahre 1908 und 1909. [Braunschweig]. [1910]. 18p. f°. (S.-A., Beitr. Stat. Hzgtm. Braunschweig. Hft. 24. 1910.)

Ebert, H[ermann].
Über Luftelektrizität. [Berlin]. n. d. 8°. (S.-A., Denkschr., Erste Internat. Luftschfft. Ausstell., Frankfurt, 1909. Bd. 1. Wissensch. Vortr. p. 11-29.)

Exner, Felix M.
Zum Klima von Palästina. Mit einem Vorwort von M. Blanckenhorn. Leipzig. 1910. 60p. 8°. (S.-A., Zeitschr. Deutsch. Palästina-Ver., Bd. 33, p. 107.)

Geiger, Ludwig.
Herdbestimmung bei Erdbeben aus den Ankunftszeiten. n. p. 1910. 19p. 8°. (S.-A., Nachr. k. Gesell. Wiss., Göttingen, Math.-phys. Kl., 1910.)

Great Britain. Meteorological office.
Fifth annual report of the meteorological committee, 1909-10. London. 1910. 147p. 8°.
The trade winds of the Atlantic Ocean.—Contributions to the study of the northeast and southeast trade winds, comprising:
A comparison of the changes in the temperature of the water...and ...strength of the trade winds, by **M. W. Campbell Hepworth.**
Climatological table for St. Helena,...1892-1907, by **J. S. Dines.**
Note on periodic variation of wind velocity and pressure, by **E. Gold.** London. 1910. xii, 45p. f°. (M. O. 203.)

Holland. Expédition polaire néerlandaise, 1882-1883.
Rapport. Utrecht. 1910. [9], 141, cviii p. f°.

International solar commission.
A. Acts of the meeting of the [International] solar commission in London, June, 1909. *B.* List of stations to represent the meteorology of the globe. Comprising...not more than 2 (low level) stations for each 10-degree square. n. p. n. d. 16p. 8°.

Kaufmann, Josef.
Untersuchungen über den radioaktiven und elektrischen Zustand der Atmosphäre nach Beobachtungen an der k. Bayerischen meteorologischen Hochstation Zugspitze. München. 1908. 38p. f°. (Inaug.-Diss.—Tech. Hochsch. München.)

Kurz, Karl.
Radium, Thorium, und Aktinium in der Atmosphäre und ihre Bedeutung für die atmosphärische Elektrizität. München. 1909. 56p. 4°. (Abh. K. Bayer. Akad. Wiss., Math.-phys. Kl., Bd. 25, Abh. 1.)

Kassner, C[arl].
Die meteorologischen Grundlagen des Städtebaues. (Städtebauliche Vorträge. Bd. 3, 1910. Hft. 6.) Berlin. 1910. 26p. 4°.

Maillet, Edmond.
Supplément au manuel hydrologique du bassin de la Seine. Paris. 1909. viii, 56p. 4°.

Martin, Carl. (1838-1907).
Landeskunde von Chile...für den Druck durchgesehen von Prof. Dr. Paul Stange, mit einem Lebensumriss...Porträt,...56 Tafeln und einer Karte von Chile. Hamburg. 1909. xxvii, 777p. 8°. (Climate discussed, p. 177-230.)

Mazelle, Edoardo.
Meteorologia ed oceanografia. Trieste. 1910. 2a. edizione rifatta. iii, 216p. 8°.

Pericle, Gamba.
Risultati dei lanci di palloni-sondi effettuati nel Regio osservatorio geofisico di Pavia nel 1907. Roma. 1910. 83p. f°.
Sulla velocità e direzione delle correnti aeree alle diverse altitudini determinate a mezzo dei palloni-sondi e piloti. Appendice: Confronto fra la direzione e velocità del vento misurati al Monte Rosa (capanna "Regina Margherita") ed alla stessa altitudine sulla pianure Lombarda. Milano. 1910. 72p. f°. (Mem. r. ist. Lomb. sci., let., Cl. sci.-mat., v. 21, fasc. 2.)

Réthly, Anton.
Das Erdbeben von Mòr am 14. Januar 1810. (S.-A., Földtani Közlöny, Bd. 40, 1910.) n. p. [1910]. p. 227-253. 8°.

Rohlf, Ernst.
Bestimmung des Verhältnisses der beiden specifischen Wärme c_p/c_v für die Hauptbestandteile der atmosphärischen Luft. Marburg. 1909. 64p. 8°. (Inaug.-Diss.—Marburg.)

Rudolph, H[einrich].
Ergebnisse und fernere Ziele der wissenschaftlichen Drachen- und Ballonaufstiege. Jena. 1910. 19p. 8°. (S.-A., Naturwiss. Wochenschr., Berlin, 1910, N. F., Bd. 9, p. 369-376.)
Die Magnetfelder der Sonnenflecken und die Kathodenstrahlung der Sonne. Stuttgart. 1909. 30p. 8°. (S.-A., "Gaea", Leipzig, 1909, Hft. 10-11.)

Sieglerschmidt, Reinhold.
Das Klima der Neider-Guinea-Küste und ihres Hinterlandes. Berlin. 1910. 59p. 4°. (Inaug.-Diss.—Berlin.)

Spain. Instituto central meteorológico.
Resumen de las observaciones meteorológicas efectuadas en la peninsula y algunas de sus islas adyacentes durante el año. 1906-1909. v. 1-4. Madrid. 1908-1910. 8°.

Teisserenc de Bort, L. & Rotch, Lawrence.
Travaux scientifiques de l'observatoire de météorologie dynamique de Trappes avec la collaboration de l'observatoire de Blue Hill.—Étude de l'atmosphère marine par sondages aériens. Atlantique moyen et région intertropicale. Paris. 1909. 241p. f°.

Wiener, Christian.
Die Helligkeit des klaren Himmels und die Beleuchtung durch Sonne, Himmel, und Rückstrahlung. Herausgegeben von H. Wiener und O. Wiener. Theile I, II, III. Halle a. S. 1900, 1909. xviii, 239p.; xv, 212p. f°.

Wehrli, Hans J.
Über Dürren in Britisch-Indien. Ein Beitrag zur Wirthschaftsgeographie Indiens. Zürich. 1909. 36p. 8°. (S.-A., Geogr.-Ethnog. Gesell., Zürich, Jhrbrcht. 1908-1909.)

Weber, L[eonhard].
Resultate der Tageslichtmessungen in Kiel, 1905-1908. Kiel. [1909]. p. 352-385. 8°. (S.-A., Schriften Nat.-Wiss. Ver. Schleswig-Holstein, Bd. 14, Hft. 2.)
Meteorologische Beobachtungen an schleswig-holsteinischen und benachbarten Stationen 1906-1908. [Kiel.] [1909]. p. 320-351. 8° (S.-A., Schriften Nat.-Wiss. Ver., Schleswig-Holstein, Bd. 14. Hft. 2.)

Wilson-Barker, D[avid].
Clouds and weather signs. Illustrated with original photographs. London. n. d. 31p. 8°. (Reprinted from "Knowledge".)
A sketch of ocean meteorology. London. 1909. 36p. 8°.

Zi-ka-wei. Observatoire magnétique et météorologique.
Code de l'observatoire...[Code of signals: Time, weather, pressure; International storm code. (from March 1, 1911)]. Zi-ka-wei. [1910]. letter-press and sheet 73 x 50. 5 cm.

RECENT PAPERS BEARING ON METEOROLOGY AND SEISMOLOGY.

C. FITZHUGH TALMAN, Librarian.

The subjoined titles have been selected from the contents of the periodicals and serials recently received in the Library of the Weather Bureau. The titles selected are of papers or other communications bearing on meteorology or cognate branches of science. This is not a complete index of the meteorological contents of all the journals from which it has been compiled; it shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau. Unsigned articles are indicated by a ——.

Electrical world. New York. v. 56. October 17, 1910.
Fowle, Frank F. A study of sleet loads and wind velocities. p. 995-1002.

Geographical journal. London. v. 36. October, 1910.
Martin, Edward A. Further experiments on dew-ponds. p. 439-464.

India. Meteorological department. Memoirs. Simla. v. 20, pt. 8. 1910.
Simpson, George C. On the electricity of rain and its origin in thunderstorms. p. 141-332..

Meteorological society of Japan. Tokio. 29th year. August, 1910.
Fujihara, S. About kites and kite-strings. (English.) p. 1-9.

Nature. London. v. 84. October 20, 1910.
Mathematics and physics at the British association. p. 513-517. [Gives abstract of several meteorological papers, including a discussion on rain-making.]

Scientific American. New York. v. 103. 1910.
Rotch, A. Lawrence. The atmospheric ocean. p. 324-325. (Oct. 22.)
——Forests in relation to climate and floods. p. 334. (Oct. 29.) Abstract of report by Prof. W. L. Moore.]
——The measurement of smoke in the air. p. 338. (Oct. 29.)

Scientific American supplement. New York. v. 70. October 22, 1910.
——The Eiffel aerodynamic installation. p. 265-266. [Illustrated.]

Scottish geographical magazine. Edinburg. v. 26. October, 1910.
Bonney, T. G. Some aspects of the glacial history of western Europe. p. 505.

Sunset. San Francisco. v. 25. 1910.
McAdie, Alexander [G]. Frost, snow, and dew. III. Dew. p. 463-465. (Oct.)
French, Harold. Forecasting storms. The Weather Bureau's businesslike helpfulness to western fruit-growers and seafarers. p. 529-532. (Nov.). [Illustrated.]

Archives des sciences physiques et naturelles. Genève. Tome 29. 15 septemtembre, 1910.
Vercelli, Francesco. Les seiches du lac de Garde. p. 255-274. [With general conclusions as to the causes of seiches.]
Rosselet, —. Notice biographique sur Henri Dufour. p. 283-288. [Abstract.]
Gautier, Raoul. Le retour de froid en juin. p. 314-316. [Abstract.]

Ciel et terre. Bruxelles. 31 année. Octobre, 1910.
Lüdeling, G. Observations d'électricité atmosphérique effectuées à bord de la "Belgica," en 1907, pendant la croisière arctique du Duc d'Orléans. p. 395-407. [With historical sketch of investigations of ionization over the oceans, by E. L[agrange]. p. 407.]

France. Académie des sciences. Comptes rendus. Paris. Tome 151. 1910.
Besson, Louis. Observation de l'arc bitangent supérieur du halo de 46°. p. 693-695. (17 oct.)
Störmer, Carl. Sur la situation de la zone de fréquence maximum des aurores boréales d'après la théorie corpusculaire. p. 736-739. (24 oct.)