METEOROLOGICAL SUMMARY FOR BRAZIL, JANUARY, 1925

By J. de SAMPAIO FERRAZ

Six anticyclones affected the country in this month. Generally, their tracks continued abnormal, running in the east northeasterly direction, with centers delayed off the coast. The continental depression was particularly active from the 7th to the 14th and from the 17th to the 19th, more so in the first period.

Rainfall distribution corresponded to the abnormal aspects of the synoptic charts. Except Rio Grande do Sul, well in the tracks of the highs, all the other southern and central States had abundant rainfall. The lagging of anticyclonic centers off the coast, from Rio up to S. Catharina, with the continental depression in contact with them brings heavy precipitations between the two systems and well within the area of low pressures.

From Bahia northward, rainfall was generally scarce except in Maranhao. From the Amazon no observations were received in time for the summary.

The weather in Rio de Janeiro was very unsettled throughout the month, with frequent showers. Maximum temperatures were unusually low, two degrees on the average under normal value. On the 16th and 24th the city was struck by fresh southern winds.

Crops generally did well but lack and excess of rainfall have not been favorable to many of them. Wheat suffered most from excessive precipitation and consequent rust.

A CORRECTION

About "Fluctuations in the values of the solar constant" (Mo. Wea. Rev., **53:** 519–521): Dr. Götz, of Arosa, draws my attention to my not having mentioned his note in the *Astronomische Nachrichten* 221, 335, No. 5300, which, I am sorry, so far has remained unknown to me and which reports about extraordinary atmospheric-optical observations of the 22nd and 23rd January 1922 (telluric solar corona, abnormal distribution of illumination, upper-cirri, diminished solar radiation) and brings them into relation with the observations summarized by Prof. Wolf in the *Astronomische Nachrichten*, 5249, as possible consequences of the Chilean volcanic eruption.—*C. Dorno.*

BIBLIOGRAPHY

C. FITZHUGH TALMAN, in Charge of Library

RECENT ADDITIONS

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.

Baur, Franz.
Grundlagen einer Vierteljahrstemperaturvorhersage für Deutschland. Braunschweig. 1926. 39 p. 31 cm.

Carnegie institution of Washington. Dept. of terrestrial magnetism.
Ocean magnetic and electric observations, 1915–1921. Magnetic results, by J. P. Ault. Atmospheric-electric results, by J. P. Ault and S. J. Mauchly . . . Washington. 1926. vii, 430 p. illus. 15 plates (incl. front., maps). diagrs. 30 cm. (Researches of the Department of terrestrial magnetism. v. 5.)

Čzechoslovakia. Hydrologická služba.
Přehledná zpráva o pozorování sněhu . . . za zimní období 1924–1925. Rapport général des observations nivométriques dans la République Tchécoslovaque pendant l'hiver 1924–1925. Praze. 1925. unp. plates. map (fold.) 25½ cm.

Gibbs, William Edward.
Clouds and smokes, the properties of disperse systems in gases and their practical applications . . . London. 1924. xiii, 240 p. illus. plates. diagrs. 22½ cm.

Grabham, G. W., & Black, R. P.
Report of the mission to Lake Tana 1920–1921. Cairo. 1925. xix, 207 p. plates (part fold.) 34 cm. (Min. pub. works, Egypt.)

Great Britain. Meteorological office. International meteorological organization.
Commission for the exploration of the upper air. Report of the meeting in London, April 16–22, 1925. London. 1925. 79 p. fig. plates. 24½ cm. (M. O. 281.)

Gregg, Willis Ray.
In the aerial ocean. p. 8–10. illus. 30 cm. [Western flying, v. 1, no. 2, Feb., 1926.]

Guitton, Raoul.
Étude sur le climat de Bastia. p. 234–277. figs. 25 cm. [Bull. de la Soc. sci. hist. & natur. de la Corse. Bastia. 1924. 44e année. 3d trim. 1924.]

Hurst, H. E.
Lake plateau basin of the Nile. Cairo. 1925. v, 75, 4 p. plates (part fold.) map. 28½ cm. (Min. pub. works, Egypt. Phys. dept. paper no. 21.)

International geodetic and geophysical union. Section of terrestrial magnetism and electricity.
Transactions of Madrid meeting, October, 1924, edited by Louis A. Bauer . . . November, 1925. Baltimore. [1925.] viii, 180 p. figs. 25 cm.

Italy. Servizio idrografico.
Osservazioni pluviometriche raccolte nel quinquennio 1916–1920. Roma. 1925. viii, 155 p. 34 cm. (Pubbl. N. 1, Serv. idrog. v. 5. Bacino del Po. Ordinate Filippo Eredia.)

Kidson, Edward.
1. Some periods in Australian weather. 2. Observations of visibility at various Australian stations during 1923 and 1924. 3. Atmospheric pollution: observations with the Owens' dust-counter during 1923 and 1924. [Melbourne. 1925.] 50 p. figs. 31 cm. (Comm. of Australia. Bur. of met'y, Melbourne. Bull. no. 17.)

McAdie, Alexander George.
War weather vignettes. New York. 1925. 62 p. front. plates. 22½ cm.

Marinelli, G[iuseppe.]
La meteorologia e la unificazione delle rotte transatlantiche. Roma. 1925. 29 p. charts. 24½ cm. (Estr.: Rivista marittima. Dic., 1925.)

Niblack, A. P.
Summary of data on uniformity in storm warning signals. Cannes. 1925. 17 p. plates. 27½ cm.

Poisson, Ch.
Normales météorologiques de Tananarive. p. 59–63. 28½ cm. [Bulletin économique.]
Un problème de météorologie tropicale. Louvain. 1925. 30 p. 25 cm. (Extr.: Revue des questions scientifiques, juil., 1925.)

Rossby, Carl-Gustaf.
Den Nordiska aerologiens arbetsuppgifter. En återblick och ett program. p. 364–376. figs. 23½ cm. (Svenska sällskapet för antropologi och geografi. Ymer. Årg. 1923, H. 3.)

Schmid, Josef.
Klima, Boden und Baumgestalt im beregneten Mittelgebirge. Ein Beitrag zum Wasserhaushalt und zur Oberflächengestaltung. Neudamm. 1925. 133p. illus. plates (part fold.) 24 cm.

Schulz, Bruno.
Hydrographische Untersuchungen. B. Beiträge zur Kenntnis der Gezeiten an der flandrischen Küste und auf der unteren Schelde. Hamburg. 1925. 63 p. illus. plates (part fold.) 29 cm. (Deutsche Seewarte. Aerol. und hydrog. Beobacht. der deutschen Marine-Stationen während der Kriegszeit 1914–1918. H. 2.)

Sherwood, George H.
Big tree and its story. The Sequoia and the history of biological science. New York. 1924. 31 p. illus. 25 cm. (Amer. mus. nat. hist. Guide leaflet no. 42.) [Climate and history as recorded by the big trees, p. 25 fig.]

Slettenmark, Gustaf.
De Svenska flodernas vattenmängder. Stockholm. 1925. 56 p. plates. 31½ cm. (Meddelanden från Statens meteorologisk-hydrografiska anstalt. Bd. 3, No. 5.)

Störmer, Carl.
Aus den Tiefen des Weltenraums bis ins Innere der Atome. Leipzig. 1925. 195 p. illus. 19½ cm.

Van den Broeck, A.
Het weerbericht van het Koninklijk meteorologisch instituut van België in 1925. Brussel. 1925. iii, 22 p. illus. 32 cm. (K. Met. inst. van België. Verhandelingen. Boekd. 1.)

RECENT PAPERS BEARING ON METEOROLOGY

The following 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 and other communications bearing on meteorology and cognate branches of science. This is not a complete index 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

American botanist. Joliet. v. 32. January, 1926.
Frost-weeds. p. 18–21. [Abstr. art. by Humphreys.]

American meteorological society. Bulletin. Worcester, Mass. v. 7. January, 1926.
Alexander, W. H. A droughty year (1925) with bumper crops (in Ohio). p. 14–16. [Astract.]
Fergusson, S. P. Strongest wind on record in the United States. p. 17–19.
Flora, S. D. Tornadoes of the Middle West. p. 13–14. [Abtract.]
Gregg, W. R. Upper air winds of central and eastern United States. p. 10–11. [Abstract.]
Pitman, Geo. W. Weather and potatoes in Wyoming. p. 14. [Abstract.]
Riley, John A. The wind factor and the air mail southward from Kansas City. p. 11–12. [Abstract.]
Woolard, Edgar W. Thermodynamics for the meteorologist. p. 19–20.

American society of heating and ventilating engineers. Journal. New York. v. 32. February, 1926.
Hartman, F. E. Has air a vital property? p. 67–72.

Annalen der Hydrographie und maritimen meteorologie. Berlin. 53. Jahrgang. Oktober, 1925.
Arnold-Alabieff, W. Die Eisverhältnisse im Finnischen Meerbusen während den Winter 1922 bis 1925 in Verbindung mit der Eisbrechertätigkeit. p. 312–318.
Petersen, P. Die Eisverhältinisse des Winters 1924/25 in den ausserdeutschen europäischen Gewässern. p. 319–326.
Speerschneider, C. J. Eisbildung und Eismeldedienst in dänischen Fahrwassern. p. 305–312.

Astronomie. Paris. 40. an. Janvier 1926.
Cabannes, J., & Dufay, J. Mesure de l'altitude de la couche d'ozone dans l'atmosphère. p. 34–36. [Repr. Comptes rendus.]

Astrophysical journal. Chicago. v. 63. January 1926.
Menzel, Donald H. The atmosphere of Mars. p. 48–59.

British association for the advancement of science. Report of the 93d meeting. Southampton. 1925.
Brunt, D. Periodicities in weather. p. 300. [Abstract.]
Johnson, N. K. A study of the vertical gradient of temperature in the atmosphere near the ground. p. 300. [Abstract.]
Shaw, *Sir* Napier. Trigger action in the atmosphere. p. 298. [Abstract.]
Simpson, G. C. The new ideas in meteorology. p. 15–29.

France. Académie des sciences. Comptes rendus. Paris. t. 182. 1926.
Buisson, H., & Jausseran, C. Sur les variations de l'ozone de la haute atmosphère. p. 232–234. (18 janv.)
Dufay, Jean. Polarisation de la lumière du ciel nocturne. p. 331–333. (1 fév.)

Franklin institute. Journal. Philadelphia. v. 201. February, 1926.
Swann, W. F. G. The origin of the earth's electric and magnetic phenomena. p. 143–176.

Geografiska annaler. Stockholm. Årg. 7. H. 3. 1925.
Afzelius, Gretl. Vieljährige Niederschlagsschwankungen im Umkreis der Alpen. p. 222–246. [Finds a period of about 34 years.]

Hygeia. Chicago. v. 4. March, 1926.
Hinsdale, Guy. A change of climate. p. 130–132.

Japanese journal of physics. Transactions and abstracts. Tokyo. v. 4. no. 1. 1925.
Nisi, Hisamitu. Experimental studies on eddies in air. p. 1–11.

Journal of geophysics and meteorology. Moscow. v. 1. no. 2. 1924.
Federov, E. Some results of hourly observations of cloudiness in Slutzk. p. 164.
Fredrics, G. The probable cause of the force of gravity. p. 194.
Isvekov, B. A new proof of the theorem of Bjerknes on circulation. p. 198.
Kalitine, N. On the possibility of application of Violle-Richards actinograph adapted as an integrator of solar and diffusive energy of radiation. p. 118.
Keller, L. Einige Betrachtungen über die Untersuchung des täglichen Ganges des spezifischen Volumens der Luft p. 105–106.
Khanevsky, W. Das gesammte System der Winde zwischen dem Aequator und dem 70ten Grade nördlicher Breite. p. 155–156.
Petelin, M. Numerical prediction of barometric values by means of isallobaric charts. p. 202.
Roschdestwensky, A. Ueber die Veränderung des Reductionskoeffizienten für die Windgeschwindigkeit an der meteorologischen Station des Physikalischen Zentral Observatoriums zu Leningrad nach Beobachtungen von 1903 und 1919. p. 128.
Wegener, Kurt. Ueber künstliche Regenerzeugung. p. 165–167.
Weinberg, B. De l'application de la formule de M. A. Velikanoff (donnant la distribution de la vitesse d'un courant d'eau dans un canal d'après la verticale) à la distribution de la vitesse du vent d'après la hauteur. p. 96.
Welikanoff, M. Ueber die turbulente Strömung zäher Flüssigkeiten. p. 186–188.

Journal of scientific instruments. London v. 3. January, 1926.
Ower, E. A low speed vane anemometer. p. 109–112.

Marine observer. London. v. 3. March, 1926.
Garbett, L. G. Upper-air observations over the sea. p. 45–48.

Meteorological magazine. London. v. 61. February, 1926.
Bilham, E. G. The optics of the sunshine sphere. p. 1–5.
Brooks, C. E. P. Climatic changes in America. p. 11–13.
The deterioration of climate in Greenland. p. 13–14.
G[lobe], E. Wireless weather reports from Greenland. p. 10–11.
Ping, A. Wentworth. Smoking snow. p. 8–9.
Portable receiver for the electric cup anemometer. p. 14.
Russell, Spencer. "A red sky at night . . ." p. 15–17.
Salter, Mortyn J. Possible errors in annual rainfall totals obtained by the summation of daily records. p. 9–10.

Meteorologische Zeitschrift. Braunschweig. Band 42. Dezember 1925.
Albrecht, Fritz. Das geheizte Haarhygrometer als Messgerät des Wassergehaltes von Wolken und Nebeln. p. 468–477.
Conrad, V. Homogenitätsbestimmung meteorologischer Beobachtungsreihen. p. 482–485.
Ficker, H. v. Zur Austrocknung Innerasiens. p. 481–482.
Götz, F. W. Paul. Der Trübungsfaktor getrennter Spektralbereiche. p. 477–481.
Groissmayr. Über die Erhaltungstendenz der mittleren monatlichen Temperaturanomalien. p. 489–491.
Köhler, Hilding. Über Tropfengruppen und einige Bemerkungen zur Genauigkeit der Tropfenmessungen, besonders mit Rücksicht auf Untersuchungen von Richardson. p. 463–467.
Kölzer, Joseph. Die Schallausbreitung in der Atmosphäre und die äussere Hörbarkeitszone. p. 457–463.
Korselt, E. Über die Störungen der regelmässigen täglichen Luftdruckschwankungen durch Sonnenfinsternisse. p. 485–487.
Peppler, W. Extremwerte der relativen Feuchtigkeit und die Schichtung in der Troposphäre. p. 487–489.
Pödder, Arnold I. Die durchschnittliche Wanderungsgeschwindigkeit der barometrischen Minima in Siberien. p. 491–492.

National academy of sciences. Proceedings. Washington, D. C. v. 12. January, 1926.
Millikan, R. A. High frequency rays of cosmic origin. p. 48–55.
Roebuck, J. R. The Joule-Thomson effect in air. p. 55–58.