

collection of data relating to ice movements in which it may be possible in time to recognize some periodicity in occurrence.

#### RARE LUNAR HALO PHENOMENA

Mr. P. Connor, in charge of the United States Weather Bureau station at Kansas City, Mo., reports that at 8:20 p. m., April 16, 1924, a bright paraselene was observed on a segment of a 22° lunar halo for about 15 minutes. The colors presented by the paraselene varied from bright white to pink, the latter on the side next the moon. Between 2 and 3 a. m., on April 17, Mr. John Macy, of Woodston, Kans., observed a very bright paraselenic circle and the upper half of the 22° halo, together with bright 22° and 120° paraselenæ; neither the halo nor the paraselenic circle extended beyond their points of intersection; otherwise they were complete.

#### BALL LIGHTNING

The phenomenon of ball lightning is believed to have been observed by Mrs. R. V. Zimmerman at her home

about 10 miles northeast of Charles City, Iowa, at 9 p. m. March 28, 1924. Mr. E. G. Larson, in charge of the Charles City Weather Bureau office, transmits Mrs. Zimmerman's account of the phenomenon, which is substantially as follows:

On Friday evening, March 28, about 9 o'clock, I saw in the southwest a light which at first was thought to be a reflection from the electric lights of Charles City, but it seemed brighter than those lights. After watching it for a time, I called my 14-year-old daughter and we agreed that it might be a fire. The fire, if it were such, would rise and fall, then suddenly it shifted to one side for as much as a rod and started to come toward the house; as it kept coming closer, I again called my daughter and she again confirmed my impression. By this time it was almost to our lane and moving slower; it stopped in the road just outside the lane for perhaps a minute and a half or two minutes. It appeared to be a globe of white light about the size of an ordinary lantern globe. The light from it was reflected perhaps 3 rods, and it seemed to rest about 2 or 3 feet above the ground. By this time we were both thoroughly frightened. As quickly as it had come it began to recede to where it was first seen. We watched it for a short time longer; it would come toward us a little way and then recede—A. J. H.

### BIBLIOGRAPHY

C. FITZHUGH TALMAN, Meteorologist 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.

#### Beveridge, W. H.

British exports and the barometer. pt. 1-2. diagr. 24½ cm. [pt. 1. Photostated: Economic journal, London, v. 30, March 1920. pt. 2. Repr.: Economic journal, London, v. 30, June 1920.]

#### Linke, Franz.

Ein Universalaktinometer. Leipzig. 1924. p. 59-62. illus. 27 cm. (Sonder-Ab.: Zeits. für. tech. Physik. Nr. 2, 1924.)

#### [Liverpool. University.]

Configuration and climate of northwest England. n. p. 1924. [7 p.] 25½ cm. [Manifolded.]

Rainfall of southwest Scotland and the Solway district. [8 p.] figs. 25½ cm. [Manifolded.]

#### MacIntire, W. H., & Young, J. B.

Sulfur, calcium, magnesium, and potassium content and reaction of rainfall at different points in Tennessee. p. 205-227. illus. 25½ cm. (Repr.: Soil science, v. 15, no. 3, March, 1923.)

#### Moore, Henry Ludwell.

Origin of the eight-year generating cycle. 29 p. figs. 23½ cm. (Repr.: Quart. Journ. econ., v. 36, Nov., 1921.)

#### Olbricht, K.

Klima und Entwicklung. Versuch einer Bioklimatik des Menschen und der Säugetiere. Jena. 1923. 74 p. plates (fold.) 24½ cm.

#### Spitaler, Rudolf.

Aufzeichnungen des Anemometers im dritten Jahrfünft Jänner 1916 bis Dezember 1920. Windrichtung und Windgeschwindigkeit. Prag. 1923. 115 p. tables. 32 cm.

#### Uberti, Guglielmo degli.

Che tempo fara. Meteorologia pratica alla portata di tutti per prevedere, a breve o lunga scadenza, quali saranno le condizioni del cielo, del mar, dell'atmosfera. . . Roma. 1924. 128 p. illus. 16 cm.

#### RECENT PAPERS BEARING ON METEOROLOGY AND SEISMOLOGY

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.

France. Académie des sciences. Comptes rendus. Paris. t. 178. 1924.

Gabriel, Jules. Sur la périodicité des orages. p. 1020-1022. (17 mars.)

Gorczyński, Ladislas. Sur un pyréliomètre thermo-électrique à lecture directe ou enregistreur. p. 1200-1201. (31 mars.)

Butorik, A. Sur le rayonnement de l'atmosphère. p. 1303-1304. (7 avril.)

Nodon, Albert. Relations entre le magnétisme et l'état de l'atmosphère. p. 1378-1379. (14 avril.)

Meteorologische Zeitschrift. Braunschweig. Band 41. März 1924. Conrad, V. M. Bäumler, Das gleichzeitige Auftreten luftelektrischer Störungen. p. 97-98.

Friedmann, A., & Tamarkin, J. Über eine Methode der Bestimmung der vertikalen Windgeschwindigkeit. p. 90-91.

Hellmann, G. "Serein" ist Beschlag. p. 98.

Hellmann, G. Temperaturmessungen nahe dem Meeresstrande p. 91-93.

Kofler. Wissenschaftliche Erforschung der Atmosphäre. p. 94-96. [Abstracts of papers published by Moscow aerological observatory.]

Kofler. Zwanzigjährige Messungen der Sonnenstrahlung in Warschau. p. 96-97.

Linke, Franz. Die angeblichen Schwankungen der Solarkonstanten. p. 74-78.

Markgraf, H. Gesetzmäßigkeiten der luftelektrischen Elemente in Potsdam. p. 65-71.

Maurer, H. Tägliche Periode der Regendauer in Potsdam und Batavia. p. 86-88.

Maurer, J. Die strengen Winter Süddeutschlands und der Schweiz, bewertet nach den grossen Seegefröhrnen seit 1400. p. 85-86.

Meyer, R. Arbeiten des III. Kongresses der Russischen Assoziation von Physikern in Nischni-Nowgorod vom 17. bis 22. September 1922. p. 88-90.

Das physikalisch-meteorologische Observatorium Prof. Dr. C. Dorno, Davos. p. 81-85.

Range, Paul. Über neuere meteorologische Beobachtungen auf der Sinaihalbinsel. p. 79-81.

Süßringl. Koelzer, Einfluss von Temperatur und Wind auf die Schallausbreitung in der Atmosphäre. p. 93-94.

Wiedenhoff, S. Ionenzahlmessungen an der Versuchsfunkstelle Strelitz(Alt-). 72-73.

Reale accademia dei Lincei. Atti. Roma. Rendiconti. v. (5)33, fasc. 2. 1924.

Grablovitz, Giulio. Legge armonica di propagazione dei telesismi. p. 74-76.

Royal aeronautical society. Journal. London. v. 159. March, 1924.

Scott, G. H., & Richmond, V. C. A detailed consideration of the effect of meteorological conditions on airships. p. 189-221.