The United States Weather Bureau at its observatory on Mount Weather, Va., began the systematic exploration of the upper air with kites on June 20 of the present year. Since that time ascents ranging from one to four miles above the station have been made daily, except on Sundays and holidays. On October 3, 1907, an altitude of 23,111 feet above sea level, or a little over four miles above the station, was reached, this being, so far as known, the greatest elevation hitherto reached with kites. At the above-named height the temperature was found to be 5.4° F. below zero. The details of this remarkable flight will be communicated to this Congress by Dr. Wm. R. Blair, of the Mount Weather staff.

The valuable information secured by the kite observations is telegraphed daily to the Central Office of the Weather Bureau in Washington, and is there used in the forecast service for the Middle Atlantic and New England States.

Meteorological stations on Pikes Peak and on Mount Washington in the United States, and on Ben Nevis, in Scotland, have been abandoned, especially as the data secured at those places were found to be of little or no use in the making of weather forecasts, largely because of the disturbing influence of radiation from the mountain itself; but now that the kite has been developed to such a high state of efficiency that at Mount Weather but one observation was mist in three months, it will be possible to reopen these stations and get readings of instruments far above the peaks, which will be more useful to the weather forecaster than any surface observations.

COLLIERY EXPLOSIONS AND BAROMETRIC PRESSURE

Many years ago the English Commission on Prevention of Explosions in Collieries, showed that the combustible gases escape from every crack and crevice into the mine most freely when the external barometric pressure is falling and lowest. The escape diminishes as the barometer rises, and is at its minimum when the pressure is highest. Therefore our ordinary range of pressure (1 inch either side of the average) is an important matter to the miner and the "lows", or storm centers, are still more important.

The London weather predictions always mention the approach of "falling barometer", and the mining industries take proper precaution. In the United States we forecast the approach of a storm center and mention rain, wind, and temperature without using the specific words "low barometer" or "falling pressure", since this is the regular feature of the storm center or "low".

However, local and general forecasters might do well to include this word in their messages to coal mining districts, so that there be no reason to accuse the Weather Bureau of neglecting their interests.

The "fire damps" or combustible vapors and gases are always present in coal mines and the miner who strikes a match, or strikes a spark with his pick, or carries an unprotected light runs an awful risk. The Davy lamp is still the miner's best friend; but even this should not be carried into poorly ventilated mines during very low barometric pressures.

RECENT ADDITIONS TO THE WEATHER BUREAU LIBRARY.

H. H. KIMBALL, Librarian.

The following titles have been selected from among the books recently received, as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies. Most of them can be loaned for a limited time to officials and employees who make application for them.

Aachen. Meteorologisches Observatorium.
Die öffentliche Wetterdienstelle Meteorologisches Observatorium Aachen. Auf der Wanderausstellung der Deutschen Landwirtschafts-Gesellschaft Düsseldorf 1907 ... Aachen. 1907. [13] p. f°.

Allahabad. Meteorologist.
Administration report ... 1906–7. Allahabad. 1907. 4 p. f°.

Bates, D. C.
The climate of New Zealand. Wellington. 1907. 7 p. 8°.

Bulgaria. Institut météorologique central.
Bulletin sismographique. No. 1. Sofia. 1907. 56 p. 8°.
Same. No. 2. Sofia. 1907. 34 p. 8°.
Tremblements de terre en Bulgarie. No. 7 .. 1906. Sofia. 1907. 56 p. 8°.

Fitzner, Rudolf.
Die Regenverteilung in den deutschen Kolonien. Berlin. 1907. iv, 115 p. 8°.

Grablowitz, G.
Weltkarte der Azimute und der Entfernungen für Hamburg. Laibach. 1907. 3 p. 8°.

Mauritius. Royal Alfred observatory.
Results of the magnetical and meteorological observations ... 1905. London. 1907. xxxiii, lxv p. f°.

Prussia. Königl. preussisches meteorologisches Institut.
Ergebnisse der Niederschlags-Beobachtungen im Jahre 1904. Berlin 1907. lii, 162 p. f°.

Roumania. Institutul meteorologic al Romaniei.
Analele. Tomul XVIII, Anul 1902. Bucuresti. 1907. v. p. f°.

St. Petersburg. Observatoire Constantin.
Étude de l'atmosphere. Fascicule II. Sondages aériens par cerfs-volants en 1902 et 1903 et par ballons en 1901, 1902 et 1903, exécutes à Pavlovsk et à St. Pétersbourg. St. Pétersbourg. 1906. ix, (45), 92 p. f°.

St. Petersburg. Université. Cabinet de géographie physique.
Travaux. 3me fasc. St. Pétersbourg. 1906. 121 p. f°.

Shaw, W. N.
Air currents and the laws of ventilation ... Cambridge. 1907. x, 94 p. 8°.

Ziegler polar expedition 1903-1905.
Scientific results obtained under the direction of William J. Peters ... Edited by John A. Fleming. Washington. 1907. vii, 630 p. f°.

RECENT PAPERS BEARING ON METEOROLOGY.

H. H. KIMBALL, 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 ——

American journal of science. New Haven. 4 ser. v. 24. Oct., 1907.
Barus, C. Successive cycles of coronas. p. 309–312.

Meteorological society of Japan. Journal. Tokyo. 26th year. Aug., 1907.
Akakura, K. The temperature of sea water in the harbor of Yokohama. (Jap.)
Okada, T. On the velocity of a falling raindrop (in English).

Nature. London. v. 76.
—— Meteorological observations. (Sept. 12, 1907.) p. 509.
—— International seismological congress. (Sept. 19, 1907.)
—— The Kingston earthquake. (Sept. 19, 1907.) p. 535.

Science. New York. New series. v. 26. Oct. 18, 1907.
—— Influence of forests upon wind velocity. [Abstract of article by Murat.] p. 518.

Scientific American. New York. v. 97.
—— A remarkable acoustic phenomenon. (Oct. 19, 1907.) p. 279. [Abstract of a paper by Alippi on "brontidi".]

Scottish geographical magazine. Edinburgh. v. 23. Oct., 1907.
Brown, Charles W. The Jamaica earthquake. p. 535–543.

Terrestrial magnetism. Baltimore. v. 12. June, 1907.
Homma, Y. Distribution of electricity in the atmosphere. p. 49–72.
Dike, P. H. Paulsen's résumé of recent theories of polar lights. [Abstract of paper by Paulsen.] p. 84–86.

Aérophile. Paris. 15 année. Août 1907.
Rotch, A. Lawrence. Les conditions météorologiques au-dessus de Saint-Louis et le Coupe Gordon-Bennett. (16 juil. 1907.) p. 223–245.

Ciel et terre. Bruxelles. 27 année.
Dubois, Eug. Quelle est l'importance du transport atmosphérique de sel marin? p. 223–245.
—— Les "bandes d'ombre" des éclipses totales de soleil. [Abstract of memoir by E. Holmes, with discussion.] p. 250–252.
Dobrowolski, A. Les cristaux de glace aériens et le phénomène des halos. (16 sept. 1907.) p. 336–342.

France. Académie des sciences. Paris. Tome 145. 16 sept. 1907.
Nodon, Albert. Observations sur l'action électrique du soleil et de la lune. p. 521–523.

Revue néphologique. Mons. Sept. 1907.
Mémery, Henri. Nuages, pluies, incendies. p. 161–162.
Bracke, A. Direction des nuages à Munich. II. Les cirro-cumulus et alto-cumulus. p. 162–164.
Shedd, J. S. L'évolution du cristal de neige. p. 164–166.

Annalen der Hydrographie und maritimen Meteorologie. Berlin. 25 Jahrgang. Heft 9. 1907.
—— Die Forschungsreise S. M. S. "Planet". p. 388–390.
Mecking, L. Die Treibeiserscheinungen bei Neufundland in ihrer Abhängigkeit von Witterungsverhältnissen. p. 396–409.