

NOTES, ABSTRACTS AND REVIEWS.

INTERNATIONAL WEATHER TELEGRAPHY.

[Excerpts from *Nature*, London, Dec. 9, 1920, p. 484, and comments by U. S. Weather Bureau.]

The International Commission for Weather Telegraphy, appointed at the general Meteorological Conference at Paris in October, 1919, met at the Air Ministry during the week November 22-27. Maj. Gen. Sir F. H. Sykes, controller general of civil aviation [who welcomed the delegates], emphasized the special need for international agreement in meteorology because nations were more interdependent in respect of that science than of any other.

During the meeting the commission came to an agreement upon the codes for the transmission of surface observations and upper-air observations in land messages and for a new figure code for the transmission of reports from ships at sea.

It also agreed upon a time-table for the issue by radiotelegraphy of data messages for the preparation of synoptic charts and upon the distribution of stations in Europe for the issue from the Eiffel Tower of collective data messages for the whole European réseau.

The principal changes in the new code are:

(a) The number of figures for reporting barometric tendency is reduced from two to one, and the unit for barometric tendency is standardized as the half-millibar per three hours, or, for countries using the millimeter scale, the half-millimeter per three hours.

(b) A two-figure code for reporting the weather takes the place of the old single-figure code, and permits the amount and character of the precipitation to be reported.

(c) Provision is made for reporting visibility up to 30 kilometers, according to a graduated scale.

(d) One figure is allotted to reports of humidity which will be given to the nearest 10 per cent.

* * * * *

(e) One figure group is allotted to reports of the form, amount, and height above ground of the clouds. It may be noted that the height of the clouds above ground and the visibility are at present the two elements of the greatest importance to aviation.

(f) Provision is made for reporting twice a day the hour of commencement of rainfall.

* * * * *

(g) A special group of five figures is allotted to a selection of stations in each country for the purpose of reporting as exactly as possible the direction and relative speed obtained by nephoscopic observations of clouds.

(h) Three special groups are allotted to selected stations in each country for reporting the direction and speed of the upper wind as determined by observations with pilot balloons, shell bursts, kite balloons, and other methods.

(i) Ten groups as a maximum have been allotted to one, two, or three stations in each country where facilities are available for obtaining the temperature and humidity of the upper air to great altitudes by means of aeroplanes or kite balloons.

In connection with the observations of the upper air, the commission was interested to learn from Prof. de Quervain of the proposal to establish a station in Switzerland at an altitude of 3,500 meters, from which barometric observations would be of the highest value in the construction of charts for that level.

The code adopted for the reports by wireless telegraphy from ships at sea provides for the same information as that which is given in the messages on land with the omission of barometric tendency, relative humidity, and the height of clouds.

* * * * *

The commission learned with much interest that meteorological observations were being made this winter on behalf of the Norwegian institute in the island of Jan Mayen, which is situated about 600 miles northeast of Iceland; and that there was a prospect in the not distant future of obtaining meteorological observations from Greenland by radiotelegraphy.

ATTITUDE OF U. S. WEATHER BUREAU.¹

While the unifying of the European code is highly desirable, the matter is not one in which the U. S. Weather Bureau is especially interested. A uniform code is now in use for the international exchange of observations on the North American Continent, i. e., the Weather Bureau code is used in the exchanges between this country, Canada, and Mexico. This code has certain advantages that make it desirable to retain it for American use. It employs words instead of figures. As each word generally represents two or more numbers, and as, in this country, the telegraph companies count every figure in a group as a separate word, the word code entails much less expense for telegraph tolls than would a numerical code. Another advantage of a word code, which is commended to the attention of the European meteorological services, is that minor errors in the transmission of words, such as the transposition of letters, are usually of no consequence, as anybody familiar with the code readily detects the error and can supply the correct word, whereas errors in the transmission of figures can not generally be detected or corrected.

* * * With respect to the interchange of observations between Europe and America, an extremely simple code suffices for this purpose, since only a few meteorological elements need to be reported. The Weather Bureau could readily use for such interchange the appropriate part of any European code that may be eventually adopted.

Marine observers on trans-Atlantic steamers can readily use two codes; one for transmission to America when they are in the western part of the ocean, and the other for transmission to Europe, when they are in the eastern part.—*H. L.*

THE ST. LOUIS OBSERVATORY, JERSEY.

[Reprinted from the *Meteorological Magazine*, London, February, 1921, p. 20.]

The retirement of the Rev. M. Dechevrens, S. J., of St. Louis Observatory, Jersey, and the cessation of meteorological work there, is announced. M. Dechevrens, who had been in charge of the observatory maintained by the Society of Jesus at Zi-ka-wei for many years, organized the St. Louis Observatory for the society in 1894. The equipment included many instruments of his own devising.

¹ Partly abstracted from C. F. Marvin's letter, published in the Report of the Proceedings of the Third Meeting of the Commission for Weather Telegraphy, Met. Off. Circ. 242, London, 1921, appendix xi, pp. 90-91.

M. Dechevrens has carried out suggestive researches in terrestrial magnetism and atmospheric electricity, and has written much on these subjects, on typhoons in the China Seas, on the hydrodynamic theory of cyclones, and on the zodiacal light.

UNIFICATION OF THE FRENCH METEOROLOGICAL SERVICES.

[Reprinted from the *Meteorological Magazine*, London, February, 1921, p. 18.]

In the September issue of the *Meteorological Magazine* we were able to announce that the consolidation of the Meteorological Service of this country had been completed by the incorporation of the Admiralty Meteorological Service in the Meteorological Office.¹ It is now officially announced that the three meteorological organizations in France are being amalgamated in like fashion. By a decree dated November 25, 1920, a National Meteorological Service, attached to the Ministry of Public Works (Under Secretariat for Aeronautics and Aerial Transport), is created by the unification of—

(a) The Central Meteorological Office (hitherto under the Ministry of Public Instruction);

(b) The Central Meteorological Service of the Ministry of War; and

(c) The Meteorological Service of the Service de la Navigation Aérienne.

The National Meteorological Office will deal with all meteorological questions, and will comprise a scientific section and a technical section as well as other sections in touch with the special requirements of the Ministries concerned. An Advisory Committee, including representatives from the Academy of Science and from various Ministries, is being constituted. Col. Delcambre is appointed Director of the National Meteorological Service as from January 1, 1921.

551.5 (471)

THE SCOTTISH METEOROLOGICAL SOCIETY.

[Reprinted from the *Meteorological Magazine* London, February, 1921, pp. 3-5.]

At meetings held in Edinburgh on December 17, 1920, and in London on January 19, 1921, appropriate action was taken to bring about the incorporation of the Scottish Meteorological Society with the Royal Meteorological Society. The Scottish Meteorological Society after a career of 65 years thus ceases to exist as a separate entity.

As may be learned from a paper by Mr. A. Watt in the journal (Vol. XV, No. 28), the foundation of the society in 1855 was due mainly to the exertions of Sir John Stuart Forbes, of Pitsligo and Fettercairn, Bart., and Mr. David Milne Home, of Wedderburn and Milne Graden. The period was one of special significance. The British (now the Royal) Meteorological Society had been founded five years before as a successor to the Meteorological Society of London (1823-1840). The meteorological department of the board of trade—the forerunner of the present meteorological office—was in process of organization. The work of Dove on the distribution of temperature over the globe had stimulated interest in the science, while Leverrier had just organized a daily weather report in France. As regards Scotland itself, the considerable amount of observational work

which had been done by enthusiastic amateurs required coordination.

The society had its birth at a meeting held on July 11, 1855, in the rooms of the Highland and Agricultural Society of Scotland, presided over by the eighth Marquis of Tweeddale. The Duke of Argyll, F. R. S., was elected president, and an influential provisional council was formed. * * *

The activities of the society have been numerous. For some years after its foundation Dr. Stark was secretary, and he virtually created a network of about 50 observing stations. An ozone committee was extremely active for a long period. In 1883 the society erected an observatory on the summit of Ben Nevis for the study of mountain conditions, and in 1890 opened a sea-level station at Fort William to work in conjunction with it. The observatories remained in operation till 1904, and their supervision absorbed much of the energies of the society, but in that year financial difficulties led to their closing. A most valuable series of observations, extending over 20 years, had, however, been obtained, and their discussion by Buchan, Omond, and other authors in the *Transactions of the Royal Society of Edinburgh* is of permanent value.

Throughout its existence the society has regularly published its journal, in which the observations of Scottish observatories and lighthouses have been coordinated and many important papers on Scottish and general meteorological subjects have appeared.

No review, however brief, of the work of the society could be written without mention of the work of Dr. Alexander Buchan, who was appointed secretary in December, 1860. He had previously been a schoolmaster at Dunblane and had made his mark as a botanist. Dr. Buchan became one of the most eminent of meteorologists; his work on "The Mean Pressure of the Atmosphere and the Prevailing Winds of the Globe" has been described by Prof. Hann as epoch making and as constituting a starting point for the newer meteorology. On the return of the *Challenger* expedition the meteorological data were placed in Dr. Buchan's hands for discussion. In 1889 he published an elaborate report on "Atmospheric Circulation," based on these observations and on meteorological statistics from all parts of the world. In addition to other works, a large number of papers were published by him in the journal, and with the cooperation of Dr. A. J. Herbertson he prepared the *Atlas of Meteorology*, which was published by the enterprise of Dr. J. G. Bartholomew. Dr. Buchan retained the secretaryship until his death in 1907, when he was succeeded by Mr. Andrew Watt, who had been his personal assistant for seven years and who has ably carried on the traditions of the society.

* * * * *

In recent years the association between the Society and the Meteorological Office has been very close, and the Edinburgh branch office was located in the society's rooms until a few months ago, when the office took over the responsibility for all the statistical work which had been organized by the society. Fortunately, Mr. Watt, with his 20 years' experience of Scottish meteorology, has been able to accept an appointment on the staff of the Edinburgh office.

The concentration of effort which will result from the incorporation of the Scottish in the Royal Meteorological Society should be of benefit to the study of meteorology throughout the Empire.

¹ See *MO. WEATHER REV.*, Nov., 1920, p. 659.