peratures in the temperate zones find some of their most urgent problems in the adequacy or inadequacy of the summer heat for the ripening of cereal crops.

THE SUPPLY OF METEOROLOGICAL INFORMATION.

By Lieut. Col. H. G. LYONS.

[Abstracted from Aeronautics, Apr. 17, 1919, pp. 412-415.]

While aviation has come to be looked upon as the most important recipient of meteorological information, the fact remains that it is only one of many branches of human activity closely dependent on weather. Observations made for a certain specialized purpose, in the hands of the trained meteorologist, may often be used to further our knowledge of a branch of the science quite different from that for which it was originally intended. So it was with war meteorology—our observations of pilot balloons, of shell-bursts, etc., made for the immediate use of the army may now be employed to contribute to our knowledge of the processes at work in the atmosphere.

With stations so widely distributed as are those of the British Empire, it is absolutely essential that the closest cooperation be maintained. Not only should the methods of observation employed at each station and the instruments used for measurements be absolutely uniform, but as much information as possible should be acquired concerning the local characteristics of each individual station. Hand in hand with the idea of close cooperation among stations goes that of rapid transmission of information and the careful filing and indexing of it. Without the former it will fail in its immediate purpose; and without the latter it will lead to duplication of work, as well as other hinderances to the most efficient consideration of information.—*C. L. M.*

BRITISH EMPIRE METEOROLOGICAL CONFERENCE.

[Abstracted from Aeronautics, New York, Oct. 9, 1919, p. 344.]

The first conference of representative meteorologists from the Dominions held in London the last week in September under the presidency of Sir Napier Shaw included representatives from all the Dominions except Newfoundland, from Ceylon, India, and Egypt.

Col. L. F. Blandy read a paper on arrangements for transmission of meteorological information by wireless. He outlined a scheme covering the whole of Europe, the Mediterranean, and north Africa. The afternoon discussion was directed to the transmission of observations by wireless from ships at sea.

A. D. Spiers opened a discussion on the aerial routes Cairo–Karachi and Cairo to the Cape. The subject was considered from a meteorological standpoint. Subsequently Sir R. F. Stupart (Canada) raised the question of instruments and equipment for upper-air observations by means of pilot balloons. A decision was also reached on the best form of report for aviation purposes. The afternoon was devoted to the selection of stations for the general study of climatology of the globe.

AEROLOGICAL OBSERVATIONS IN POLAR REGIONS.

The Norwegian Meteorological Institute has suggested, in connection with the polar expedition of Roald Amundsen, that various Governments whose territories extend into polar regions, cooperate during the years 1920 to 1922 in the making of certain observations. These observations should comprise, in addition to regular surface meteorological information, pilot-balloon ascents, cloud observations, kites and captive balloon flights, observations of terrestrial magnetism, and photographic observations of aurorae. The stations should be as numerous as possible, and, whenever possible, should be connected by telephone or have radio apparatus, in order that observations of such phenomena as aurorae might be made simultaneously.

THE COMPUTER'S HANDBOOK.

By CAPTAIN E. H. CHAPMAN, R. E.

(Abstract.)

SECTION V. Computations related to the theory of probabilities. 3. A collection of correlation coefficients from Meteorological Papers and a note on the partial correlation coefficient.[1]

In 1915 there appeared subsections 1 and 2 of section V. Subsection 1 dealt with "Errors of observations and variations due to accidental causes with an application to errors of means and normals," by R. Corless, M. A.; and subsection 2, with "The practical application of statistical methods to meteorology," by W. H. Dines, F. R. S. The present subsection is a logical and very valuable continuation of the first two. An introduction by Sir Napier Shaw briefly reviews the history of correlation as applied to meteorology, and states that in order to avoid recomputing the same data all correlation coefficients available that are based on a sufficient number of observations are here brought together. Capt. Chapman has adopted 25 as the normal minimum of the number of pairs of figures to be correlated, although in a few instances, a smaller number has been accepted. In all cases the number of observations is given in the tables. It is pointed out that a preliminary investigation is necessary to determine whether or not the relationship approximates a straight line before the correlation method can be accepted as a proper measure of that relationship. The coefficients are arranged according to subject in the following groups:

1. Upper air.
2. Seasonal correlations.
3. Atmospheric pressure.
4. Temperature.
5. Rainfall.
6. Sunspots.
7. Weather and crops.

Section 7 contains, among others, the results of studies in the United States by T. A. Blair, J. Warren Smith and J. F. Voorhees. A subject index makes it possible quickly to find values in which the reader is most interested and a note at the end of the work describes an alternative method of obtaining partial correlation coefficients to that already given by Dines in subsection 2.—*W. R. G.*

[1] Published by the authority of the Meteorological Committee. London, 1919.