

## LOCARNO MEETING OF THE METEOROLOGICAL COMMITTEE, OCTOBER, 1931

By C. F. MARVIN

During the first week of October, 1931, meetings were held at Locarno, Switzerland, of the International Meteorological Committee, under the chairmanship of Dr. Van Everdingen, including a meeting of the council and of the subcommission organization of meteorological reports over the oceans, under the chairmanship of General Delcambre. The Chief of the U. S. Weather Bureau is a member of each of these groups, and attended the meetings in person.

The matter of first importance in connection with the meeting at Locarno was the fact that the so-called executive council, consisting of representatives of five nations, one of these representatives being the president of the International Meteorological Organization, held its first meeting after it was created at the conference of directors at Copenhagen, in 1929. This was, therefore, its organization meeting. In addition to deciding upon necessary rules and regulations for accomplishing the work of the council, decisions were reached in regard to the budget and funds for the maintenance of the office of the secretariat during the forthcoming year, and the projects tentatively under way were approved. With some modifications these rules and regulations were subsequently approved by the International Meteorological Committee, and they have now become the permanent guide for this new feature of the work of the International Meteorological Organization.

The major part of the sessions of the committee was devoted to the reading of reports by the president of the Upper Air Commission, which held its meeting in Madrid recently, and the president of the Polar Year Commission, following the meeting of that and some other commissions at Innsbruck, Austria, in September. The committee devoted considerable time to discussion of the numerous

resolutions that resulted from the reports mentioned, and these resolutions, with such modifications as were deemed necessary, were approved or indorsed by the International Committee.

Also meetings were held of the subcommission on organization of the meteorological work of the oceans, more particularly with reference to the ship report work from selected ships on the North Atlantic. Some of the difficulties in connection with the reception and distribution of reports were discussed, and agreements were reached with a view to realizing more uniform and better and more valuable service in the future.

Almost coincidentally with the meetings at Locarno, in connection with ship reports from the oceans, an international conference of radiomarine organizations was held in New York, at which particular consideration was given to the agreement between all radio organizations to transmit meteorological reports from ships at sea free of cost for what is called the "ship tax," in view of the important benefits that navigation, including radio interests, receive from the free dissemination by meteorological services of forecasts, warnings, and important meteorological information.

Perhaps one of the most important actions taken at the Locarno meeting was the decision that, notwithstanding the difficulty confronting the various nations at the present time, the program of intensive observational work which had been previously planned and provided for by nearly all nations for the so-called polar year, beginning with August, 1932, and extending to August, 19, 1933, should be carried through, although it was recognized that the critical situation might make it impracticable to carry out all the features of the program originally contemplated.

## WHITE LIGHTNING VERSUS RED AS A FIRE HAZARD

By W. J. HUMPHREYS

Mr. Seley W. Moore, of Darby, Mont., says, in a letter dated October 14, 1931, that he spent the summers of both 1930 and 1931 on a lookout, that is, a place commanding a wide view from which watch is kept for forest fires, and that it was his observation that red lightning, though often tearing trees to pieces, seldom starts a fire. Now, it is well known that many forest fires are started by lightning, especially by that of "dry" thunderstorms—the thunderstorms whose rain, being all evaporated in mid-air, does not reach the earth. We therefore infer that if it be generally true that red lightning seldom starts a fire then the lightning of a dry thunderstorm must not be red. Indeed since in this case those portions of the electric discharges which are clearly seen occur out in the open and rainless air their light must be owing almost entirely to the two gases oxygen and nitrogen, and therefore contain too little red for that color to become conspicuous even when the lightning is a long ways off.

Essentially it is white lightning or even bluish white. On the other hand, a lightning discharge through heavy rain may well dissociate some of the water, or water vapor, along its path, and thereby produce also the hydrogen spectrum, which is brilliantly red, in addition to those of the chief gases of the atmosphere, oxygen and nitrogen. In this way the lightning would, and doubtless does, become distinctly red. Apparently, then, lightning through rain is, or may be, red while that through the air where there is no rain is not red, but commonly white. Hence red lightning, being through rain, strikes only wet objects and therefore seldom starts a fire, while white lightning may, and often does, strike dry fuel which is far more easily fired than is the same sort of duff or other material when wet. In short it is not the difference between white lightning and red lightning that makes the one a greater fire hazard than the other, but the condition, wet or dry, of the combustible when struck.