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UNITED STATES DEPARTMENT OF AGRICULTURE — Radio Service — OFFICE OF INFORMATION

CHATS WITH THE WEATHER MAN — Friday, December 13, 1929.

ANNOUNCEMENT: Here comes something new about the weather!-- at least something new in finding out more about the weather.--Every other Friday, our old friend Ob. Server gives us the results of his chats with the officials of the United States Weather Bureau. From what he says, our forecast service seems to be moving ahead, as well as looking ahead--- Tell us about it, Mr. Ob. Server----

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As you know, radio is playing a big part in weather work these days. Mr. E. B. Calvert, chief of the forecast division of the United States Weather Bureau, says that radio has done more for the development of meteorology in the past twenty-five years than any one thing.

As he explains, the issuance of weather forecasts depends on getting immediate weather reports, from extensive areas; especially to the westward of the place to which the forecast applies.

There was no great trouble getting such observations from land areas that were more or less inhabited, and where there were telegraph facilities. But, as Mr. Calvert puts it oceans and remote land areas have weather the same as inhabited parts of the earth. Storms form and move over them in the same way. In fact, in many cases the storms which affect our inhabited regions form over the ocean or in isolated sections, especially toward the poles.

Prior to the development of radio, it was impossible to get current observations from the oceans and remote regions, because there were no communication facilities. Radio has changed all that. Although Mr. Calvert says that observations from the oceans and isolated regions are not being obtained in the quantity fully needed, every year marks an improvement. It is the dream of meteologists that eventually we will have reports of weather conditions in all parts of the earth, oceans and land areas alike, in as big quantities and as fast as we can now get them from inhabited land areas.

Even now radio plays an important part in getting the observations from Alaska and northern Canada. Nearly all of the observations made in United States territory of Alaska are transmitted by radio to the cable centers and the Canadian observations in the McKenzie Valley and Hudson Bay and other remote regions go by radio to the nearest telegraph offices where they are sent to the United States Weather Bureau at Washington and the Canadian Meterological Service headquarters at Toronto. There is no boundary line between Canada and the United States as far as weather is concerned. There is complete cooperation between the weather services of the two countries.

But it is in reports from ships at sea that radio is used to the greatest extent. More than three hundred ships are now engaged in taking weather observations and in transmitting those observations to our forecast centers at Washington and San Francisco.

These ship reports give the forecaster at San Francisco information vital to forecasts for our western States. You can see how important are those ship radio reports, when you recall that owing to the rotation of the earth, storms move from west to east. Without those ship reports, a storm from the Pacific would strike the coast stations before its existence became known. Now with the ship reports by radio most storms are discovered and their courses followed from 24 to 48 hours before the western States are affected by them.

In a similar way, the hurricanes which form east of the Bahamas and Lesser Antilles, and first move westward, an exceptional characteristic of hurricanes, are, in most cases, first detected by observations from ships. During the hurricane season, the Weather Bureau gets an average of about 60 reports twice a day from ships in those areas.

And while observations from the northern part of the Atlantic on the ship lanes between Europe and America are more important to the European countries than to the United States, they have a tremendous value to our own forecasters; because storms which have passed, often have had a great influence on the pressure areas behind them. Then too, the need for reports from these ship lanes have increased, due to the development in aviation of trans-oceanic flights. Aviators engaged in these enterprises, expect information from the Weather Bureau as to the weather conditions they will experience the whole distance across.

Moreover, merchant and passenger ships are much concerned with north Atlantic weather and every day need full information and forecasts.

Congress granted appropriations to the United States Weather Bureau to extent its North Atlantic service, and the first of July of this year the Weather Bureau arranged with twenty of our passenger ships which have long range radio equipment to send twice a day weather observations during their voyages.

Under the arrangement made, Mr. Calvert says, these ships will transmit their observations direct to this country when west of Longitude 35 and to Europe when East of 35.

When received in Europe, the observations will immediately be broadcast for the benefit of European meterological services and also transmitted to the United States.

Similarly, English, French, and German ships will send observations to their own countries when east of Longitude 35 and to the United States Weather Bureau at Washington when west of that line. These observations will then be re-transmitted to Europe for use of the European services. Some of the details are still in process of being worked out, but by next spring, the full arrangement for the exchange will be affected.

As the chief of our forecast divisions says, meteorology is essentially international in scope. Weather disturbances which affect one country today, may affect another a week hence. For that reason, there must be the closest cooperation of the weather services of the world to insure the exchange of information so vital to all.

But such international cooperation naturally brings up many questions which must be settled. For instance, there must be uniformity in the hours and the character of the reports, and a medium of communication must be arranged to give

the data in brief form so as to be practical for use by all the nations concerned.

Each of the Nations of the world uses a code for the collecting of its own reports. That is not for secrecy, but for economy in sending the reports. Many codes are used. Shipmasters, however, are interested in reports from other ships than those belonging to their own nation. It is often hard for them to decode such reports, because so many different codes are used. The international meterological organization composed of directors of various weather services of the world meets every few years to iron out such differences. One of those meetings was held in Copenhagen last September which Mr. Calvert attended.

One of the important matters taken up was the question of devising a uniform code to be used by ships regardless of nationality. This country has been using a word code and so have some other nations. But most of them use a numerical code. It is obvious that a word code for all the nations would be impractical. Aside from any questions of national pride, no language is sufficient for the purpose. However, there is one language that is common to all; that is the figures zero to nine inclusive. Those figures are in universal use.

That being the case, a numerical code for international purposes was agreed to, by the representatives of the varicus nations including our own. The weather Bureau will continue to use its word code for its domestic work. Weather reports sent by radio from ships of all the nations involved will be in the same numerical language, equally understandable by all. The new universal weather code will go into effect early next year.

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ANNOUNCEMENT: You have just heard about the new international system of ship radio reports of weather conditions at sea as outlined to our Ob. Server by Mr. E. B. Calvert, chief of the forecast division of the United States Weather Bureau. This is one of a series of chats with the weather man presented by this Station---in cooperation with the United States Department of Agriculture.

National Oceanic and Atmospheric Administration

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