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

CHATS WITH THE WEATHER MAN. Friday, February 20, 1931.

ANNOUNCEMENT: And now for another chat with the weather man at the United States Weather Bureau. Every other Friday, our old friend, Ob. Server tells us about weather —— Often it is about the new developments in forecasting —— What's up, this time, Mr. Observer?——

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I guess you heard that the first of this month, the new air route forecasts went into effect for the entire country.

Mr. W. R. Gregg, chief of the aerological division of the United States Weather Bureau, tells me that new system was tried out in an experimental way on the Pacific Coast during the past year. It proved so satisfactory, that now it has been extended to the entire net-work of national airways.

The forecasts are being made from our five regular forecast centers located at Washington, Chicago, New Orleans, Denver, and San Francisco.

The Washington center forecasts for the eastern air-lanes; for example, for the Washington to New York route, and for the Cleveland to New York airway, and the Atlanta to Evansville, just to mention three of the routes.

The Chicago office makes these air forecasts for such routes as those from Chicago to Cleveland, and Chicago to the Twin Cities, and Chicago to Kansas City.

New Orleans takes care of the forecasting for the line from New Orleans to Sanantone, the one from Atlanta to New Orleans, and the one from Dallas to Brownsville.

Denver has just two routes on its lines as yet, that from Salt Lake City to Cheyenne, and the one from Salt Lake City to Great Falls, Montana.

San Francisco, of course, covers such routes as the one from Frisco to Medford, Oregon, the one from San Francisco to Los Angeles, and the one from Los Angeles to Amarillo, Texas.

Definite forecasts are made for each airway or section of airway covering a period of twelve hours after they are issued; that is from ten in the morning to ten at night in the western states or from noon to midnight from the eastern forecast centers.

You see that's a much shorter period than the regular daily State forecasts which are for 24 to 36 hours in advance. The shorter period forecasts can be more detailed and more definite. These airway forecasts also emphasize certain elements not in the general weather forecast.

Of course, they give the general weather. But they also give indications of upper air movements, or winds that pilots may expect to find aloft. And probably most important of all, they give some idea as to the visibility.

As you know, we've had weather forecasts at the principal airports for some time. They were based on the general weather reports sent out from the forecast centers.

The purpose of this new system of route forecasts from the chief Weather Bureau centers, Mr. Gregg tells me, is to enable the Weather Bureau officers at the various airport stations to issue the shorter period forecasts with more accuracy and detail than has been possible heretofore.

These route forecasts are distributed to the different stations along the airways by means of the Department of Commerce's teletype system and the Department of Commerce's radio broadcasting network. There are about 7,000 miles of airways served by the teletype system. As you know, in that system, the message is just written as on a typewriter and is instantaneously and automatically written out on other similar machines at the receiving end.

In a few cases, the forecasts are sent by telegraph, but in a short time, Mr. Gregg says, the newer system will be used for those also.

Well, that gets us the general air route weather forecast to the main airport weather stations. That gives the Weather Bureau officers stationed at those ports the basic information they need for the shorter period or trip forecasts. Those trip forecasts are issued for periods of three hours ahead. Or, in this weather business, the shorter the period, as a rule, the more accurate and detailed the forecast can be made. In addition to the route forecasts, the trip forecaster has supplemental reports received along the airways in between, and also gets reports from pilots as they come in of the conditions they have passed through on the way. Fog, low clouds and thunderstorms, and conditions favoring the formation of ice on the plane while in flight are the four chief dangers the Weather Bureau airway forecasters must watch out for in order to give timely warnings.

At the more important stations, the chief of the aerological division says, the Weather Bureau furnishes a 24 hour forecasting service.

Then at selected points along the airway in between the principal stations, there are observers who take observations and report the conditions and instrument readings, but are not authorized to make forecasts.

The observations are made by means of instrumental apparatus, including ceiling balloons for measuring the height of the clouds in the day time, and the so-called ceiling light for observing at night.

As you may know, the ceiling light is just a beam of light which is projected on a cloud at night at a known distance from the observation point. The light is sighted through a portable tube instrument by means of which the observer can read the angle of the light, and use it in calculating the height of the cloud. ——— And by the way, that little instrument known as a clinometer was invented by Dr. Marvin, the chief of the Weather Bureau.

Clouds, of course, are highly important in the life of an aviator and his passenger; especially if those clouds are not high. In mountainous regions, Mr. Gregg says, the height of clouds becomes especially important for passenger planes, because Department of Commerce regulations do not permit such planes to take off if the clouds are less than 500 feet high.

Well, this airways weather system with its new devices for measuring upper air conditions, its radio and teletype communication, and all its other interesting features is a facinating subject. I'm tempted to go on, but I've already given you a brief sketch of the newest of our old reliable Weather Bureau progressive services as outlined to me by the chief of the Bureau's aerological division.

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ANNOUNCEMENT: You have just heard a short description of the new air route weather forecasts as told by Mr. W. R. Gregg, chief of the aerological division of the United States Weather Bureau. This is one of the regular "Chats with the Weather Man" broadcast once every two weeks by this Station in cooperation with the United States Department of Agriculture.

National Oceanic and Atmospheric Administration

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