

25. Forecasting Radio Receiving Conditions. (15 min.) (Lantern.) J. C. Jensen, Nebraska Wesleyan University, Lincoln, Nebr.

26. The Naval Post Graduate Course in Aerology and Meteorology. (5 min.) F. W. Reichelderfer, Bureau of Aeronautics, Navy Dept., Washington, D. C.

27. Application of the Correlation Periodogram to the Sunspot Data. (15 min.) (Lantern.) Dinsmore Alter, University of Kansas, Lawrence, Kansas.

Annual Business Meeting.

Report of Tellers.

Reports of Secretary, Treasurer, and Committees.

Report on Meeting of the Council.

Resolutions.

WEATHER OBSERVATIONS FOR AUTO TESTING

The great General Motors Proving Ground, covering 1245 acres, is situated five miles west of Milford, Michigan, in Oakland and Livingston Counties, and forty-two miles northwest of Detroit. The importance of accurate meteorological data is pointed out in the following letter from Mr. R. L. McNeal, Head of the Technical Data Section:

"The chain of hills running through the southern part of the Proving Ground gives us one of the highest points in southern Michigan, and quite a range of elevation. The highest point is about 1200 feet above sea level, and the lowest on the property is about 970 feet. The combination of hills and valleys with the large area covered makes quite a bit of duplicate meteorological apparatus necessary, as we are interested in performance occurring at points considerably separated in distance and elevation.

"When the Proving Ground was first started, we purchased a Friez combination thermograph and hygrograph and a barograph, and these were installed near the office in a standard shelter. As our work and facilities increased in extent it became evident that this equipment was not enough, our special need being a wind direction and velocity recorder. No one who has not been engaged in the actual test work can appreciate the effect of the wind on automobile performance. It is our greatest trouble here in getting consistent performance results. Last spring a fund of \$5000 was made available for purchase of meteorological instruments and erection of a house and tower. The house, now about one-third built, will be 15x45 feet inside, and have a 30-foot tower about 10 feet square at the top. This building will ultimately house a lot of additional testing equipment which is the reason for its large size. To date we have purchased the following equipment, and have it in operation at temporary or permanent locations, as follows:

"Temporary station near main gate on hill line—

1 Thermograph—daily.

1 Hygrograph—daily.

1 Whirling Psychrometer.

1 Set of Maximum and Minimum thermometers.

1 Fergusson Weighing and Recording Rain Gauge.

1 Standard Shelter.

"In office—

1 Mercurial Barometer—Tycos.

1 Recording Barograph—weekly.

"East and West Straightaway near closed road—

1 Combination Thermograph and Hygograph—weekly.

1 Barograph—weekly.

1 Set of Maximum and Minimum Thermometers.

1 U. S. Weather Bureau Std. Rain Gauge.

1 Standard Shelter.

"The following apparatus is on hand or ordered, but will not be installed until the house is completed—

1 Combination Sunshine and Rainfall Recorder.

1 Sunshine Duration Transmitter.

1 Tipping Bucket Rain Gauge.

1 3-Cup Anemometer, dial registering, mile transmitting with buzzer.

"We issue a daily report, to all persons using the Proving Ground for test work, of the weather for each hour from 8 A. M. to 8 A. M. the following day, getting the report out about 10 to 11 o'clock each morning. We also keep a log of the weather by each hour on separate forms from midnight to midnight to agree with the calendar day. We have also a number of summary forms made up to summarize each item over the month and year, but of course have not much data as yet.

"We have secured the services of an observer with several years' experience at the Detroit office of the Weather Bureau who devotes a good share of his time to the meteorological work. I think you will agree with me that when we get our house built and our wind direction and velocity recorder installed we will be in a position to obtain some very interesting and valuable meteorological data, and also the effect of weather on car performance, in a location whose topography makes it rather interesting from a meteorological standpoint.

COOPERATIVE OBSERVERS' DEPARTMENT

The first order station at San Luis Obispo, Calif., was closed at the termination of September 30, 1927. A cooperative station is continuing, for the locality, such records as a station of that class can handle.

Dr. Frank P. Norbury, head of the Norbury Sanitorium at Jacksonville, Ill., and Cooperative Observer, contributed an article to the *Monthly Weather Review* for June, 1927, on the Destruction of a Tulip Tree by Lightning. Only one of his photographs of the tree was printed, but this was so remarkable that it is to be regretted the *Monthly Weather Review* omitted the others.

Rev. Martin S. Brennan, of St. Louis, charter contributing member of the American Meteorological Society, died October, 3, 1927.

ATMOSPHERIC PRECIPITATION

Moisture that is condensed out of the atmosphere and deposited on the earth is described by meteorologists as "precipitation." It assumes a greater variety of forms than most people suppose.

The commonest liquid form is rain, and the commonest solid form, snow. Each flake of the latter consists of one or more tiny, ice crystals. Hail, properly so called, falls almost exclusively in connection with thunderstorms, and hence is very rare in cold weather. It consists of ice and compact snow, generally in concentric layers. Little pellets of snow, like tiny snowballs, falling chiefly in early spring and late autumn, but also in winter, sometimes mixed with ordinary snowflakes, are called