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was conducted in cooperation with Section 5 and local FM broadcast station WASH. A sample field-intensity recording set-up, including a low-noise-figure preamplifier, was also on display.

Stereoscopic aerial photographs were received from the Soil Conservation Service and Production and Marketing Administration of the Department of Agriculture for the area between Washington, D.C. and Fortress Monroe, Va., to be used in the study of the Pentagon-Fortress Monroe Microwave Relay System. Preliminary work indicates that tree and vegetation heights may be derived from these photographs.

Mr. W. Q. Crichlow is conducting an investigation into the relative effects of random and atmospheric noise on the intelligibility of speech as a function of band width.

A meeting on cosmic and solar radio noise phenomena was held in Mr. Norton's office during the visit of Dr. J. L. Pawsey from the Radio Physics Laboratory, Sydney, Australia. Dr. Pawsey reported on the work being done in Australia on solar noise and the investigation of an extremely small source of intense cosmic noise from the region of the constellation Cygnus.

Mr. Norton attended a preparatory meeting for the CCIR conference to be held in Stockholm, Sweden.

Advice was given to Dr. Pawley, Division 13, concerning the choice of a frequency for a system being developed by that Division.

Experimental Ionospheric Research (Section 5).- Experimental observations of the ionosphere produced by meteors were made in December during a meteor shower, and also during a period when only random meteors were expected.

A drive mechanism was completed for one of the Giant Wurzburg antennas used in the UHF radiometer project in which measurements of the radio noise originating on the sun are to be made. The antenna is arranged so that it will automatically track the sun during the daylight hours. Provision is also made for making a rapid adjustment of the initial position of the antenna. Several trips were made during December to investigate the feasibility of designing and constructing a large collector for this project and to learn of the progress being made by other groups working in this field.

A rocket experiment involving the cooperation of the Army Air Forces and the CRPL was carried out during December 1947. In this experiment, pulse transmissions from the Sterling Radio Propagation Laboratory were received in a rocket in flight which was launched at White Sands, N.M. The rocket instrumentation was carried out by Boston University scientists working under contract with the Army Air Forces who used the pulsed emissions from Sterling to make relative transmission-time delays between the pulse emissions received in the rocket and on the ground at White Sands.

for six ionosphere stations for January, April, and July 19¹⁶ and 19¹⁷. These data are to be used in antenna design.

The bulk of the efforts of this Section, during the first half of the month, was expended in helping to prepare report CRPL-1-2, 3-1, "High Frequency Radio Propagation Charts for Sunspot Minimum and Sunspot Maximum," compiled at the request of the Provisional Frequency Board, International Telecommunications Union.

Data from Bocaiuva, Brazil, taken during May 19¹⁷ by the eclipse expedition, were used in the predictions of maximum usable frequencies for May 19¹⁸. Final data from the Falkland Islands were received for August 19¹⁷, for the first time since the station was closed at the end of September 19¹⁶.

The daily and special warnings of ionospheric conditions are now telephoned to RCA Communications, New York, via their Washington office.

Ionospheric conditions for December 19¹⁷ appear to be approaching normal for this season of the year. Through the 25th only three half-day warnings had been broadcast over station WWV.

At the request of the Navy, an increase of 150 copies was made in their order for the CRPL series D publication, "Basic Radio Propagation Predictions." A total of 950 copies is now furnished monthly to the Navy.

Frequency Utilization Research (Section 11).- Mr. W. Q. Crichlow attended a meeting of a RTCM subcommittee assembled to consider the comparing of LF loran with LF omni. At this meeting Mr. Crichlow was appointed to a working committee to study the experimental data on LF loran. The gathering of experimental data on LF omni was postponed pending replacement of transmitting towers blown over by a storm.

Mr. W. Q. Crichlow also attended a conference between members of CRPL and FCC to discuss the development of a universal recorder to obtain automatically percentage of time distribution of recorded noise and field intensities.

Work was begun to determine the antenna characteristics and calibration constants for the experimental recording program in the 88-108 Mc FM band. During the month recordings were begun of the field intensities of new FM broadcast stations; WSAP - Portsmouth, Va., approximately 150 miles distant, and WRAL - Raleigh, N.C., approximately 250 miles distant. Section 5 is cooperating in this program by developing special low-noise-figure preamplifiers for use in recording weak field intensities.

The monthly Division 1¹ meeting was conducted by Mr. Norton. The subject of the meeting was propagation in the FM broadcast band. Following a short talk by Mr. Norton, a demonstration of FM listening