

GENERAL

Astronomy.—Daily sunspot records were made with the 5 in. refractor of the Royal Society up to October, when this work was again officially taken over by the Carter Observatory.

Partial Solar Eclipse, 14th January, 1945.—A programme of observations of this eclipse with the Royal Society's 5 in. telescope was planned. Owing to cloudy weather, only one observation was obtained. The results of this were sent to the Royal Observatory, Greenwich.

Experimental Work.—Towards the end of the year some equipment was obtained for experiments on the application of electronic methods to various seismograph and time-service apparatus.

DOMINION PHYSICAL LABORATORY

Director : Dr. E. R. COOPER

Advisory Committee.—Professor T. D. J. Leech (Chairman); Mr. G. W. Wyles (representing New Zealand Standards Institute); Dr. E. Marsden; Mr. W. M. G. Colquhoun (Munitions Controller); Messrs. J. G. Lancaster and R. M. Campbell (representing New Zealand Institute of Engineers); Dr. D. B. McLeod (Acting), *vice* Professor F. C. Chalklin (representing New Zealand University Colleges—Physics Departments); Mr. J. A. D. Nash (Secretary).

The present annual report covers the seventh year of establishment of the Dominion Physical Laboratory.

The Radio Development Laboratory, which operated under War Expenses as a separate section of the Department of Scientific and Industrial Research during the war, has been incorporated into the Dominion Physical Laboratory as from 31st March, 1946. The 1946-47 estimates are therefore designed to cover the needs of the Radio Development Laboratory as well as the Dominion Physical Laboratory.

The Research Amendment Act, 1945, was passed during the year, and the responsibility for maintaining the legal standards of physical measurement in New Zealand now devolves on the Dominion Physical Laboratory. Provision is being made to send officers to the National Physical Laboratory, Great Britain, so that the initial planning of the Standards Laboratory shall be along correct lines. The Metrology Laboratory at the Dominion Physical Laboratory, which functioned during the war with a staff of seventeen members, has been reduced to a staff of four members, who will form the nucleus of the future Standards Laboratory.

The tool-room staff has been reduced from forty-five to twenty-five members, who are engaged on the construction of scientific equipment and special tools for industry, Government Departments, and public institutions.

A complete staff plan covering the following peace-time activities has been prepared, indicating the Laboratory's future activities under the following titles: Electrical, Electronics and Acoustics Laboratory; Radar Laboratory; Radio Laboratory; General Physics, Heat and Light, Materials-testing Laboratories; Instruments Testing and Development Section; Standards Laboratory; Engineering Laboratory; Design and Draughting Section; Library and Technical Files; Workshops Planning Unit; Precision Metal Workshop; Fine Instruments Workshop; Patternmaking Workshop; Glassworking Section; Electrical Instrument Workshop; and Clerical and Stores Section.

The Air Department (Civil) has loaned a large portion of the mechanical testing equipment and instruments-testing equipment, previously installed at the Air Inspection Department Test House, Miramar, to the Dominion Physical Laboratory. An arrangement has been concluded whereby the Laboratory shall undertake such mechanical tests as are required by the Civil Aviation Branch of Air Department.