

and surrounding stars are photographed on the same plate and the time of the exposure of the moon is recorded on the chronograph. In this way a number of plates were obtained with the 9 in. telescope. The plates have not yet been measured.

The occultation of stars were observed at Wellington on January 30th, February 28th, June 3rd and 30th, July 1st, 24th, 25th, 29th, August 26th, 29th, September 18th, and November 19th.

Auroras.

During the year 1928, the following auroras were observed :—

- May 3—Aurora australis observed from Wellington.
- May 5—Aurora australis observed from Christchurch.
- May 9—Aurora australis observed from Wellington.
- June 16—Aurora australis observed from Temuka.
- July 9—Aurora australis observed from Blenheim, Waimate, Christchurch. Also seen in Sydney.
- July 10—Aurora australis observed from Christchurch.
- October 19.—Aurora australis observed from Auckland.

Meteors.

SUMMARY OF METEORS FOR 1928.

Place.				New Zealand Date.			Notes.
					d.	h. m.	
Wellington	..	..	..	January	18	00 00	Observed by Miss E. Wilson.
Wellington	..	..	..	January	28	11 18	Observed by A. G. C. Crust.
Wellington	..	..	..	February	19	10 25	Observed by A. G. C. Crust.
Feilding	..	..	..	July	20	21 00	Newspaper report.
Napier	..	..	..	November	15	23 00	Bright meteor. Newspaper report.

Precision Pendulum.

The precision pendulum made by Mr. E. C. Isaac, Wellington, was installed in the Observatory in November, 1926. A number of difficulties have arisen in its construction, and alterations have been undertaken by the workshops staff of the Post and Telegraph Department. The pendulum is installed in the cellar, and will be used to operate an electric-impulse dial placed in the transit-room.

Photographs of Moon and Surrounding Stars.

This research was begun at the Lick Observatory in 1915, and has been continued from time to time in Wellington. The method is available for—

- (1) Fundamental determination of the position of the moon, and was undertaken originally in response to an invitation from Professor Ernest W. Brown to provide material for testing his tables of the motion of the moon.
- (2) This method may also be used as an independent one in the determination of longitude.
- (3) In the determination of latitude.

In (2) and (3) the errors are different from those in the determination of longitude by wireless telegraphy and in the determination of latitude by zenith telescope observations.

Comets.

Of the comets reported none was observed, owing to their faintness and difficulty in observation.

Eclipses.

There were two eclipses of the moon visible in New Zealand during the year—on June 3rd and November 27th. These were observed generally in New Zealand. There were no eclipses of the sun visible in New Zealand during 1928.

Summer Time.

The Summer Time Act, 1928, provided for the time in New Zealand being half an hour in advance of New Zealand standard time for the period beginning at 2 a.m., New Zealand standard time, on Sunday, October 14th, 1928, and ending at 2 a.m., New Zealand standard time, on Sunday, March 17th, 1929.

SEISMOLOGY.

The Observatory has three seismographs in use—one Milne and two Milne-Shaws. These are all horizontal component machines, and with them excellent records are obtained. The records from the twin-boom Milne seismograph at Suva, Fiji, are sent to this Observatory for working up, and are valuable in supplementing the records obtained at Wellington.

The number of earthquakes recorded on the Milne machine (east-west component) was 211 ; on the Milne-Shaw (north-south component) 284 ; and on the Milne-Shaw (east-west component) 287