

The following information was received in this way during the calendar year 1927 :—

- (1) Discovery of new comet by Blathwayt, magnitude 9·0, 13th January.
- (2) Discovery of new comet by Reid, magnitude 8·0, 26th January.
- (3) Discovery of new comet by Stearns, magnitude 10·0, 10th March.
- (4) Parabolic elements of comet Stearns, by Cunningham.
- (5) Discovery of a comet by Gale, magnitude 8·0, 7th June.
- (6) Observation of comet Gale, 10th June, by Gonnessiat.
- (7) Discovery of a comet by Schwassmann Wachmann, magnitude 14·0, 15th November.
- (8) Discovery of a nova by Schwassmann Wachmann, magnitude 10·0, 18th November.
- (9) Discovery of comet 1927κ, by Skjellerup, magnitude 3·0, 3rd December.
- (10) Observation of comet 1927κ, by Maristany, 6th December.
- (11) Elements of comet 1927κ, by Wood.
- (12) Parabolic elements for comet 1927κ, by Dawson.

A number of these objects were observed throughout New Zealand by members of the Observatory staff and of the New Zealand Astronomical Society, and reports of the observed positions were sent to the Observatory and published in the monthly notes of the New Zealand Astronomical Society.

#### *"New Zealand Nautical Almanac."*

An article on the Dominion time-service arrangements, giving full particulars of all the time signals supplied by the Observatory, was prepared for and published in the "New Zealand Nautical Almanac."

#### *International Longitude Determinations.*

The results of the international longitude determinations made by the Dominion Observatory, Wellington, were published in Bulletin No. 69. As a result of this work, the value of the longitude of the Observatory adopted in the past, of 11 h. 39 m. 4·27 s. east,\* is altered to 11 h. 39 m. 4·03 s. east.† A check value of the longitude was determined from almucantar observations, and was 11 h. 39 m. 4·04 s. east.

A report on the work was presented to the International Astronomical Union at its meeting at Leiden, Holland, in July, 1928.

#### *Occultations.*

In response to a request from Professor E. W. Brown, F.R.S., for more observations of occultations, the following New Zealand observatories have expressed their willingness to make the necessary observations: Christchurch, Dunedin, Hawera, Nelson, New Plymouth, Wanganui, Wellington. Accurate time signals are sent out from the Dominion Observatory on two evenings a week at 9 h. G.M.T., and every day at 23 h. G.M.T. It will be necessary to supply additional time signals to obtain the required accuracy in these observations. In addition to the ordinary occultation observations, a photographic method is in use at the Wellington Observatory by means of which the moon and surrounding stars are photographed on the same plate and the time of the exposure on the moon is recorded on the chronograph. In this way six plates were obtained with the 9 in. telescope. The plates have not yet been measured, as there is no staff available for this duty.

The occultations of stars were observed at Wellington on 4th and 30th September, and 1st and 2nd October.

#### *Auroras.*

During the calendar year 1927 the following auroras were observed :—

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| January  | 9—Aurora australis observed from Ashburton.  |
| January  | 28—Aurora australis observed from Christchurch.                                    |
| January  | 29—Aurora australis observed from Wellington and Christchurch.                     |
| May      | 5—Aurora australis observed from Christchurch and Ashburton.                       |
| May      | 19—Aurora australis observed from Christchurch.                                    |
| June     | 12—Aurora australis observed from Christchurch.                                    |
| July     | 22—Aurora australis observed from Christchurch.                                    |
| August   | 21—Aurora australis observed from Christchurch.                                    |
| October  | 22—Aurora australis observed from Dunedin, Invercargill, Christchurch, Wellington. |
| December | 29—Aurora australis observed from Wellington.                                      |

#### *Meteors.*

##### SUMMARY OF METEORS FOR 1927.

Place.		New Zealand Date.		Notes.
			d. h. m.	
Oamaru	..	January	9 21 00	Newspaper reports.
Rotorua	..	May	3 19 30	Newspaper reports.
Auckland	..	June	2 03 30	Radiant from 8 meteors (R. A. McIntosh).
Auckland	..	June	3 03 45	Radiant from 7 meteors (R. A. McIntosh).
Oamaru	..	July	5 00 00	Newspaper report.
Foxton	..	July	6 17 30	Newspaper report ; direction N.
New Plymouth	..	July	6 17 30	Newspaper report ; direction E.
Cambridge	..	July	(Not given)	Newspaper report ; direction S. to S.E.
Palmerston North	..	August	4 06 00	Newspaper report.
Gisborne	..	August	19 22 05	Newspaper report.
Auckland	..	November	(Not given)	Newspaper report.

\* Observatory Bulletin No. 66.

† Observatory Bulletin No. 69, p. 26.