

Solar Radiation.

The solar radiation has been measured on all clear days on a Gorczynski pyrheliometer. The International Union of Geodesy and Geophysics awarded Apia a second pyrheliometer, which arrived in June, 1926. Unfortunately, the instrument was so badly broken in shipping that it had to be returned to the makers, necessitating a long delay before experiments can be undertaken. The measurements have so far been limited to the whole spectrum, but it is hoped that before long it will be possible to investigate the energy-distribution in the spectrum.

Outside Stations.

A valuable station has been established at Fakaofu, Union Islands, latitude 9.4° S., longitude 171.2° W., which sends a daily weather report to Apia. Since numerous cyclonic disturbances have originated near the Union Group, which later proved destructive, this new station should afford better opportunity for giving warning of the approach of cyclones to islands in higher latitudes.

The South Pacific weather-report system, for which Apia Observatory is the co-ordinating centre, includes the following stations: Papeete, Tahiti; Avarua, Rarotonga; Niue; Nukualofa and Vavau, Tonga; Suva, Fiji; Norfolk Island; and Ocean Island. During the dry season a wireless report from these stations is broadcasted by the local wireless station at 10 p.m., and an additional report is broadcasted at noon during the wet season. These reports are now published in the New Zealand newspapers.

Weather report stations of the third order have been established in the Gilbert and Ellice Groups; Haapai, Tonga; and Atafu, Union Islands. In Samoa rain reports are received from nine stations.

Miscellaneous Activities.

A time signal was given to the Post Office Department daily at 9 a.m., and to the Harbourmaster weekly, for firing the gun at noon on Saturdays. The Observatory standard clock was rated by twenty transit observations and by the Malabar wireless time signal. Seven chronometer ratings were given gratis to shipmasters.

All ships calling at Apia were encouraged during their subsequent voyage to throw over bottles containing drift papers. Forty drift papers were afterwards found and returned, of which seventeen had floated distances greater than one thousand miles.

Continuous records of the diurnal variation of the tide have been obtained throughout the year at the lagoon station referred to in connection with atmospheric electricity. The tide records, after partial reduction, have been forwarded to the United States Coast and Geodetic Survey for final analysis of the tidal components.

FINANCE.

REVENUE.

The statement hereunder shows the amount of revenue received during the financial year ended 31st March, 1927, including a subsidy contributed by the New Zealand Government. There is also shown, for purposes of comparison, the revenue for the preceding financial year:—

Head of Revenue.	1925-26.	1926-27.
	£	£
1. Native taxes	20,032	17,849
2. Customs, taxes, and Marine—		
(a) Customs and taxes	76,730	64,923
(b) Harbour Department	2,488	2,398
(c) S.S. "Lady Roberts"	3,585	1,752
3. Fees and charges (Court, hospital, &c.)	8,149	11,988
4. Post Office and Savings-bank	5,379	6,441
5. Radio station	5,441	2,970
6. Miscellaneous (rents, interest, &c.)	6,834	5,491
7. Subsidy, New Zealand Government	21,400	20,000
Totals	150,038	133,812

NOTE.—Under item 1 is included a Native medical levy of £1 per adult male Samoan, which produced the sum of £7,292. The poll-tax of £1 4s. and £1, for chiefs and men respectively, realized £9,140.