Seismology.

The Observatory is equipped with a 1,000 kgm. Wiechert seismograph for recording horizontal earth-movements, and a 180 kgm. Wiechert seismograph for recording vertical movements. From the 1st January to the 9th February, and from the 9th to the 24th June, the larger seismograph was out of action through the breakdown of its driving-clock. Except for these periods, a complete record was obtained from both instruments throughout the year.

The two seismographs recorded a total of 269 earthquakes during the year, of which twenty-one were reported felt by people living in the vicinity of Apia. More than half (144) of the earth-movements recorded were exceedingly small tremors which originated within seventy-five miles of Apia. The amplitude of the earth-movement during the tremors rarely exceeded $\frac{1}{500}$ in., and the vibration continued less than five minutes.

The most severe earthquake of the year at Apia occurred on the 4th August, which was just violent enough to shake some articles off shelves. (Intensity 4 on the Rossi-Forel scale.)

Meteorology.

Continuous records were obtained of atmospheric pressure, temperature, wind force and direction, sunshine, humidity, and rainfall.

Month.	Pressure.	Temperature.	Rainfall.	Humidity.	Sunshine.	Wind.
	In.	°F.	In.	Per Cent.	Hours.	Miles per Hour
January	29·705	80·04	24·22	96	111·3	4·65
February	29·789	79·48	14·97	82	88·8	2·60
March	29·808	79·58	11·85	82	181·1	3·15
April	29·820	80·82	2·03	76	274·2	1·78
May	29·840	79·72	4·51	73	224·8	2·41
June	29·877	79·52	3·77	75	175·3	4·34
July	29·871	78·42	2·95	74	213·2	2·28
August	29·882	75·58	2·89	74	244·8	4·31
September	29·869	78·68	2·29	74	221·3	2·29
October	29·848	79·81	12·58	80	205·3	3·73
November	29·750	80·42	9·43	78	205·3	3·03
December	29·727	80·61	18·52	82	133·5	3·30
Mean or total ..	29·822	79·64	110·01	78	189·9	3·17

The mean temperature for every month in the year was above normal, April being 1·93° F. in excess; June, 1·72° F.; and November, 1·73° F. It generally occurs in the Southern Pacific that when the temperature continues persistently high the barometric pressure remains lower than normal. The barometric pressure was accordingly below the average throughout the year, with a mean value of 29·822 in., or 0·018 in. less than normal. The yearly rainfall slightly exceeded the normal, amounting at Apia to 110·01 in. From February to September the rainfall continued less than normal but heavy falls in January, October, and December produced an excess for the year.

Although six cyclones were reported during the rainy season in the south-western Pacific, only the cyclone on the 17th–18th January caused damage to the plantations in the Territory. The barometer dropped to 29·492 in. on the 18th January, while the wind-velocity in gusts reached a velocity of forty-eight miles per hour. The violent winds blew for only brief periods, and the resulting financial loss, which arose largely from bananas being blown down, was small.

South Pacific Weather System.

The Observatory prepares a report of weather conditions prevailing at 9 a.m. and 4 p.m., which is sent to the radio-station for broadcasting and to the Harbourmaster's office. Owing to the settled weather conditions occurring in the South Seas from May to October, the morning report is not sent out by wireless during these months.

The following stations now issue daily reports in co-operation with the Apia Observatory: Papeete, Tahiti; Norfolk Island; Vila, New Hebrides; and Ocean Island. These reports, which during the year number about 2,900, render useful service to shipping in those waters by giving timely warning of the development and progress of cyclones.

Upper-air Work.

The observation of winds at high altitudes has been carried on. Sixty pilot balloons were released, of which thirteen were followed to heights of 10 km. or more. These long flights invariably disclosed the presence of strong westerly winds at great heights moving contrary to the south-east trades blowing at levels below 10,000 ft. The advent of aerial travel makes it most desirable to secure further data of upper winds, not limited, as hitherto, to days with unclouded skies.