

Observatory joins IGY int'l studies

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The Manila Observatory was the forerunner of the Weather Bureau. It started out in a chicken coop at the Ateneo Municipal building in Intramuros in 1865 — two years less than a century ago.

Second of a Series

It was started by Fr. Federico Faura and it made and recorded weather observations. The Observatory was one of the pioneer institutions in the study of typhoons or

tropical cyclones.

The Manila Observatory warnings were invaluable to commercial shipping and steamship lines have learned to rely upon them. The work done by the institution was so valuable that it was continued and helped by the United States and later the Commonwealth government.

Before the war, the Observatory conducted studies on astronomy, seismology and geomagnetism. The war destroyed the Observ-

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atory then housed in copula-like building on the Ateneo campus on Padre Faura street.

After the war, the Weather Bureau was organized with the old Observatory personnel as the nucleus.

In 1952, the work of the Observatory was resumed at the foot of Mt. Mirador in Baguio City. Since the Weather Bureau had taken over the meteorological studies, the Observatory concentrated on the study of earthquakes, the upper atmosphere and the sun.

The Mt. Mirador Observatory was one of the cooperating agencies in the International Geophysical Year which officially started in July, 1957.

The International scientific cooperative venture that was the IGY actually lasted 18 months. In that period observatories all over the world made a concentrated study of the earth, the sun and the relations between the two.

All observational data were sent to AGIWARN, a sort of clearing house for the venture at Ft. Belvoir, Virginia. If an observatory expects an unusual phenomenon to happen, it warns AGIWARN who in turn warns the rest of the observatories of the world to look out for it.

The IGY coincided with period of maximum activity of the sun. The data gathered during that period are still being

died and interpreted. However some of the early results of these investigations have given us a new picture of the earth.

For example, it is now known that the earth is not shaped like a ball slightly flattened at the poles but rather like a pear.

Also, it was shown that the equator of the earth is not a perfect circle. Scientists studying the course of the US satellites Vanguard I and Vanguard II have discovered that if a line were inserted through the equator at a point on the Atlantic Ocean just off Brazil to an opposite point on the equator at the Pacific Ocean just off the Admiralty Islands, this line will be 1,400 feet longer than a line passed through a point on the equator just south of Iran to a point opposite this on the equator near Southern California.

IGY observations also resulted in the discovery of the Van Allen radiation belts, named after James A. Van Allen who led a team of scientists at the University of Iowa who examined and analyzed the Gieger counter data sent back to earth by the US satellites Explorer I and Explorer II.

According to Van Allen's findings, the magnetic field of the earth traps charged particles from the sun and from space consisting of protons and

form two doughnut shaped belts of radiations around the earth's equator. The inner belt is about 2,500 miles above the earth and the outer belt about 10,000 miles.

The contribution of the Manila Observatory then placed at Mirador Hill during the IGY was so outstanding that it was one of the research centers visited by George Gamow, an internationally known scientist who has done so much to popularize the facts and speculations of science.

His two books, *The Birth and Death of the Sun* and "One, Two, Three Infinity" have done much in bringing modern science concepts nearer the man on the streets.

Although IGY officially ended in December, 1958, the cooperation among international scientists engendered by it still continues. It was such a success that another cooperative geophysical study would start next year.

This will be the International Quiet Sun Year (IQSY) or "eck-see" as it is now commonly called.

While IGY was timed at a period of the most activity of the sun, IQSY is timed at a period of least activity on the sun. This comes about once in 11 years.

Again the Manila Observatory is getting ready to cooperate in this interna-