# Jesuits in Meteorology

*From the earliest times of the Society, Jesuits both institutionally and as individuals, have dedicated great efforts to meteorological observation and research in the many observatories they founded throughout the world. This scientific work flourished particularly in the period 1870-1950. In 1930 there were more than 40 Jesuit observatories around the world, most of which had meteorological sections. As part of this work, Jesuits were notable in developing the science of the forecasting of hurricanes.* ***Augustín Udías S.J.*** *recounts the history of this branch of Jesuit science.*

The history of the contribution of Jesuits to meteorology is not very widely known. However, since early times Jesuits institutionally and as individuals have dedicated great efforts to meteorological observation and research in the many observatories they founded throughout the world. This interest in the observation of atmospheric phenomena must be framed within their general interest in the natural sciences. The beginning of Jesuit colleges and universities coincided in the 16th century with the development of modern science. Their early work in mathematics and astronomy is well known; but as a matter of fact, the meteorological observations also occupied an important place in the scientific work of early Jesuit scientists. Later, in the middle of the 19th century when modern meteorology was developing, Jesuits created a notable number of meteorological observatories, many of them located in Asia, Africa and America which were among the first installed in these countries. It is in this time that their main contributions to meteorology were made.

In the old Society, about the middle of the eighteenth century, in some Jesuit colleges, especially those of Lyon, Marseille, Prague, Milan and Vienna, programmes of regular meteorological observations were started. In France, Laurent Beraud (1702-1777) and Esprit Pezenas (1692-1776) in Lyon and Marseille founded observatories dedicated to astronomical and meteorological observations including instrumental measurements of temperature, atmospheric pressure, humidity and rainfall. Joseph Stepling (1716-1778) created in 1750 in the College of Prague an observatory where from 1752 to 1774 observations of atmospheric pressure, temperature and humidity were made more or less regularly. In the mission lands we must mention the early descriptions of the climate conditions of the newly discovered American territories by José de Acosta (1539-1600) which were published in 1590. Jesuits introduced the thermometer and barometer in China in the late 17th century and Joseph M. Amiot (1718-1793) carried out from 1757 to 1763 a series of systematic meteorological observations, probably the first of this kind made in China, which were published later in France. This early work in meteorology was soon interrupted by the suppression of the Jesuit order in 1773.

Restored in 1814, Jesuits resumed their scientific work in new observatories and at about 1930, there were more than forty in different parts of the world. Some were primarily astronomical or geophysical, but in most of them meteorological sections were established. The most important from the point of view of meteorology were 29; 12 in Europe, 11 in North and South America, 4 in Asia and 2 in Africa. Except 4, all started before 1910 and 14 did before 1890. Greater interest must be attached to the observatories installed in mission lands where they were in some instances for many years the only existing scientific institutions. In many countries present meteorological services have as predecessors the stations run by Jesuits where continuous and meticulous observations were done. The most important were those whose main work was related to the observation, prediction and study of tropical hurricanes, namely, those of Belen (Cuba), Manila (Philippines), Zikawei (China) and Tananarive (Madagascar).

In Asia and Africa there were only 6 observatories, but their importance was very great. The Manila Observatory, Philippines, founded in 1865 by the Spanish Jesuits, was the first meteorological station working regularly in the Far East. In 1884 the Spanish government gave the