

METEOROLOGY AND COMMERCIAL AVIATION IN THE PHILIPPINES. ..

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From the mere title of this paper no one can say whether I am going to praise the meteorological conditions of our islands as ideal for flying or to repudiate them as unfavorable to commercial aviation. The object of the present paper is to bring to your attention a few features of our weather, some of which enhance the aptitude of our climate for commercial aviation, while others stand out as a true source of hazard against which due precautions are to be taken. Both pilots and managers of air-transport companies admit today that, while engine and structural problems have been fairly well solved, the outstanding difficulty confronting safe flying is weather.

Temperature.- The problems arising from temperature conditions are very simple in our country, but of great concern to the aviator of high latitudes. Throughout the Philippines, from the surface up to the usual level of commercial aviation, the temperature is comfortable and calls for no special apparel or clothing, as protection against cold. As a result of 150 ascents with army airplane, equipped with special recording apparatus, it has been ascertained that the rate of decrease of temperature with height, in the vicinity of Manila, is approximately 6°C . per thousand meters. Even in the heart of what we call our winter, the temperatures are far above the freezing point of water, and our pilots are never worried over the possibility of snow, freezing rain and sleet. In higher latitudes, planes flying through snow and freezing rain, are apt to be coated with ice, which sets up terrific vibrations on the struts and wires and may even weigh the plane down and force it to the ground in a very short time.

Visibility and ceiling.- With the advent of the airplane the problem of visibility has assumed a very important place in Meteorology. Instruments have been designed to measure it, scales have been devised to express it and codes have been introduced in the International System to report it. Likewise, ceiling or the height of the base of the lowest cloud, is a meteorological element, the knowledge of which is required by every aviator and for whose determination ceiling lights or ceiling balloons are used.

In the Philippines, four major meteorological processes control the amount of cloudiness, the degree of visibility and the ceiling. First, forced ascending currents of moist air over mountain ranges produce the greatest amount of cloudiness and the greatest variance in height of ceiling, on the windward side, while the leeward side enjoys far greater visibility and much less cloudiness. From November to February, the mean