

APPENDIX II

RESEARCH IN PHYSICAL SCIENCE AT THE MANILA OBSERVATORY

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Accepting the statement of UNESCO, "A nation's economic, social and cultural life is directly related to the level of its basic sciences... mathematics, physics, chemistry, biology, geology... and their application," and that of Dr. Vannevar Bush, "A nation which depends upon others for its own basic scientific knowledge will be slow in its industrial progress and weak in its competitive position in world trade," Philippine science-conscious people realize the need for a strong program in basic science. Anything less than a total program embracing education as well as research fails to provide for the long-range needs of development.

Principles

The century-old Manila Observatory — a claimant for the title of the earliest extant Observatory in the Orient — is striving to participate in the effort for basic Philippine physical science. In selecting its areas of research it has adopted two dominant operating principles: (a) basic research should be done in those areas which can only be done or can best be done in the Philippines, and (b) the current economic feasibility must be evaluated in terms of the successes hoped for the Philippines. Other principles of selection apply but these two will guide the way to an enduring productive community of science scholars within the nation. A brief enumeration of the present scientific projects of the Observatory will indicate how the principles have been applied in the choice of projects.

Projects

A. Seismology — the study of earthquakes.

At each of its two stations, one in Baguio City and the other at Davao, the Observatory has six instruments for participation in the world wide network of earthquakes studies. At its Quezon City site another set of instruments records earthquakes not only for a study of Philippine seismicity but also to help in the seismic sea wave warning system. All of this data accumulation is preparatory for the studies which are the principal source of our knowledge of