EIGHTH PACIFIC SCIENCE CONGRESS

- Meteorology -

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MICROSEISMS AT BAGUIO

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1) Objectivity of Microseisms.

Conditions in the seismograph room may often influence the seismograph. Frigidaire dehumidifiers changed position of zero and spacing of lines on record according as they were on or off until dehumidifiers were placed at sufficient distance from seismographs. If seismograph building is above ground, winds may shake building and cause micros. Also unequal heating of building may cause building to tilt and change position of zero, etc.. Our Baguio vault is underground, temperature practically constant, with the reinforcing iron rods and copperized sisalcraft preventing extrinsic electrical influences. As consequence zero very steady.

Objectivity of microseisms proved by:

a) Appearance of strong short period micros even on long period seismographs, and of strong long period micros. on short period instruments.

b) When vault practically hermetically sealed by additional strong close fitting door at entrance, no change in microseisms.

c) Occurrence of micros only at times when they can reasonably be associated with objective occurrences.

Partial interference from effects of natural periods of seismometer, galvanometer, etc., not yet entirely eliminated.

2) Microseisms and Typhoons:

Our findings can be summarized as follows:

a) Pacific typhoons do not influence our records until storm are quite close to the shore of central and northern Luzon. Hence for finding Pacific typhoons afar off, our micros. are useless. We do not have a tripartite station, hence we can not follow the storm's direction. However,

b) Micros reach maximum just before typhoon center reaches land, become small or die when storm crosses land, and have a second maximum right after storm again hits the sea. There seems also maximum when, in China Sea, center of storm is over sloping ocean bottom.

c) Short period micros. 1 1/2 to 3 sec., differ from long period (4 - 8 sec.) in times of occurrence and times of maxima; hence their causes must be in some way different. The smaller storms seem to favor short period micros. but not exclusively.

d) Micros., especially short periods, can be useful in detecting the start of a depression or typhoon in the China Sea. The detection at times may antedate detection by weather stations. These micros are usually short period at the start of trouble. The direction has not yet been accurately determined.