

GENERAL SCIENCE

Science President Urges Continuance of Research

Acclaiming Lack of Depression in Research, Dr. Campbell Deplores Unsympathetic Attitude of Legislatures

FEAR AND ANXIETY are prevalent in universities and scientific research institutions and scientists are apprehensive as to the continued financial support of research, President W. W. Campbell of the National Academy of Sciences reported to that senate of American science at its annual meeting in Washington last week.

"The deep depression in the curve representing the recent course of financial and economic events in our country is apparently not matched by a similar depression in the curve depicting the output of new knowledge achieved through research in the domain of the physical and biological sciences," Dr. Campbell said in citing the crowded program of scientific papers over which he presided.

But the immediate future threatens to bring conditions that will be very different, he warned.

Legislatures that appropriate funds for the support of universities which conduct research at public expense for public benefit were described by Dr. Campbell as "in most cases unsympathetic and in some cases as severely hostile."

Warning these bodies of the necessity for the continuance of research where it has been sympathetically nurtured and supported through the years, Dr. Campbell paraphrased the Bible: "Where there is no research, the universities perish."

Dr. Campbell urged also that the scientific work of the federal government in Washington should be preserved and continued because the scientific bureaus of the government undertake work of great benefits to the nation which can not be done by universities or other research institutions. How could the state of Nevada, he asked, do its share in surveying the coasts of America except by the indirect support by its citizens through the federal government of the U. S. Coast and Geodetic Survey?

Federal financial support of science has been obtained, Dr. Campbell said,

"upon the basis of need and merit for the most part, and not at all by political log-rolling, not to any extent whatsoever by the threats of an organized minority," tacit or vocal, to the effect that the Congressman or the Senator who does not vote the financial support asked for will be defeated at the next election."

Confidence was expressed by Dr. Campbell that officials of the federal government will not cut appropriations for the support of existing research activities in unjust degree.

By Congressional act passed in 1863 during the Civil War the National Academy of Sciences is an official agency of the federal government, not supported, however, by federal funds, but charged with the duty of reporting to the government on any subject in science upon demand by any federal department of the government. Dr. Campbell implied that if called upon the National Academy of Sciences would willingly give its counsel in the present emergency just as it has many times in years past.

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GEOPHYSICS

Earth, Like Sun, Has Corona, Study of Aurora Demonstrates

THE EARTH, like the sun, has a corona—a luminous gaseous envelope extending far out into space. Its existence has been demonstrated by studies of the aurora borealis, or northern lights, Prof. Lars Vegard of the University of Oslo, Norway, told the American Meteorological Society.

The earth's corona, however, shows some marked differences from the sun's, Prof. Vegard explained. The sun's corona, so far as we know, is generated by the sun's own power; the earth's is a product of the action of the sun on gases in the earth's outer atmosphere.

SEISMOLOGY

Alaska Earthquake "Seen" With Telescope

HOW THE ALASKA earthquake of Wednesday night, April 26, was observed with a telescope, rather than with the usual instrument, a seismograph, was related before the meeting of the American Geophysical Union by Earl L. Williams, observer at the International Latitude Observatory at Gaithersburg, Md.

Mr. Williams was seated at his instrument at about ten o'clock at night, he said, when he noticed that the bubble in the sensitive spirit level by which the position of the telescope is checked was sliding back and forth with a slow, even motion, not accounted for by any ordinary local environmental factors. On checking up against seismographic data, it was discovered that the strange behavior of the bubble coincided in time with the arrival of tremors through the earth's crust from the earthquake epicenter 4,000 miles away.

This earthquake registered itself on a large number of seismographs in the United States and Canada. Reports from these observatories, telegraphed to Science Service, were interpreted by scientists of the U. S. Coast and Geodetic Survey as indicating the epicenter to be northwest of the Kenai peninsula at 61 degrees north latitude, 150 degrees west longitude. The time of origin was 9:36 p. m., eastern standard time.

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Furthermore, the earth's corona is decidedly eccentric, being far more extensive on the side of the earth nearest the sun than it is anywhere else.

Auroral displays, Prof. Vegard said, have been measured at heights of from 70 to 700 or 800 kilometers (43 to 490 or 550 miles) above the surface of the earth. Spectroscopic studies of their light indicate that the glow is due mostly to electrically excited nitrogen gas, which apparently exists at considerable density even at those great heights.

"To explain this fact," the speaker