

vaders, and in all ways a lowered existence level.

"At the University of Kansas," he continued, "there is now in progress a study showing a lower order of cerebration in

animals kept under conditions of moderate difficulty of heat loss,—greater difficulty in mastering the intricacy of a maze and in performing other feats of animal learning."

Science News Letter, November 23, 1940

SEISMOLOGY

Rumania Not Known As Seismically Active Region

Ruinous Earthquake Came as Surprise to Seismologists; Aftershocks May Be Expected To Do Further Damage

RUMANIA'S ruinous earthquake, first shocks of which occurred on Sunday, Nov. 10, came as a complete surprise to scientific watchers of the uneasy earth in the United States. Although the Balkans have long been known as a seismically active region, most of the earthquakes there have been reported from other countries — Bulgaria, Yugoslavia and Greece, Capt. N. H. Heck of the U. S. Coast and Geodetic Survey informed Science Service. Turkey has been an especially badly afflicted sufferer from earth shocks, last year's Anatolian quakes being among the most violent and deadly in recorded history.

Rumania's last great earthquake, that shook Bucharest on Oct. 22, 1802, was by no means an exclusively Rumanian affair, Capt. Heck explained. In a listing of great quakes drawn up about thirty years ago, and covering all recorded shocks from the beginning of the Christian era until the end of the nineteenth century, this disturbance is reported as having been strongly felt all the way from Hungary to the Dardanelles.

Since Rumania has been swept into the Nazi sphere of power, it is inevitable that this natural disaster will be looked at from the viewpoint of possible military significance. A full-dress earthquake can do more damage, both in extent and severity, than hundreds of bombing raids. It is reasonable to assume, therefore, that rail communications through the stricken area, vital artery of oil and other supplies from Russia through Constanza on the Black Sea, may have been seriously crippled—something decidedly not to Germany's liking at this particular moment.

Furthermore, the relief of thousands of injured and of homeless persons with winter just ready to begin, must inevi-

tably make it extremely hard for Rumania to deliver to Germany all of the supplies contracted for, but now suddenly needed at home.

Half-a-dozen American and Canadian earthquake observatories, reporting by wire through Science Service to the U. S. Coast and Geodetic Survey and the Jesuit Seismological Association, have confirmed the location of the Rumanian earthquake's epicenter at or near Focsani, 100 miles north of Bucharest. Its location is given tentatively as in about 46 degrees north latitude, 26 degrees east longitude. It was a deep quake, with focus about 150 kilometers down.

Since this area of greatest earth motion is in the heart of Rumania's prized oil

field, the real effects on Rumania's oil production for the Nazi war machine only begin to be felt with the reported wrecking and firing of refineries and storage tanks. Oil wells after all are mere wormholes in the earth, and the thrust of the quake may have choked a great many of them completely shut.

Furthermore, an earthquake of this violence is almost always followed by numerous aftershocks, sometimes distributed through many months. There is no guarantee that a re-drilled well will not be shut off at any time, without notice.

The blue flashes reported as occurring at the beginning of the quake were not unique to this particular event. They are recorded from other earthquakes in the past, although scientists have never been able to find a satisfactory explanation for them.

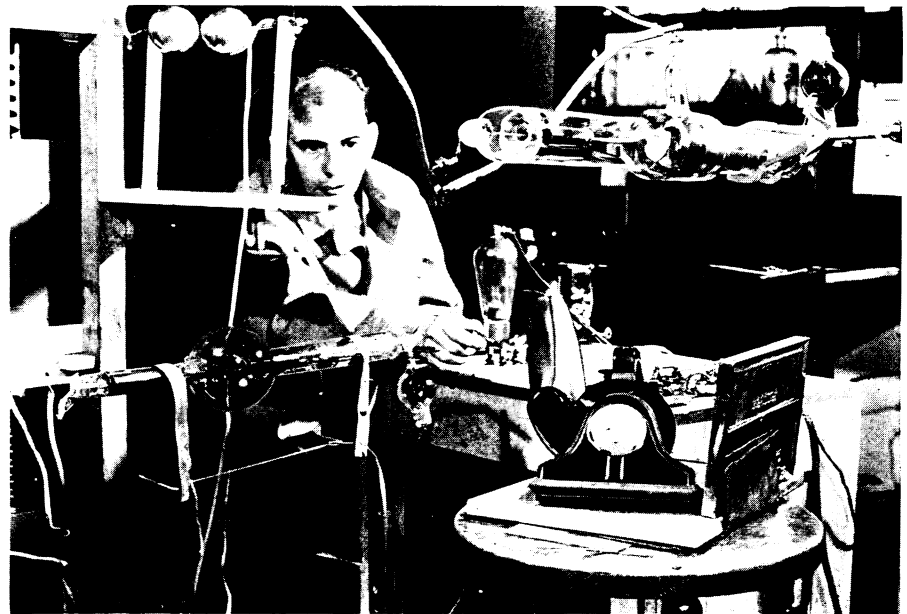
Science News Letter, November 23, 1940

PHYSICS

High-Speed X-Ray Photos Show Working of Machines

See Front Cover

BY means of X-ray photographs taken in a millionth of a second engineers of the Westinghouse Lamp Works have been able to show what is happening inside rapidly moving machinery. One of the first applications was to study the



TAKING X-RAYS

Dr. C. M. Slack, of the Westinghouse Lamp Research Laboratories, with the apparatus for high-speed X-rays of a vacuum cleaner. One tube is above, the other to the left. With them two pictures are made at right angles to each other.