

PHYSICS

Thermometer Uses Noise In Taking Temperatures

➤ SCIENTISTS AT the National Bureau of Standards in Washington are investigating a noise-sensitive thermometer with an eye toward setting it up eventually as a standard for measuring high temperatures.

E. W. Hogue of the NBS heat and power division told the Instrument Society of America meeting in Washington that no satisfactory thermometer has been developed yet which can measure temperatures in the order of 2,000 degrees with high accuracy.

A thermal thermometer, which uses the electrical noise generated by heat in a fine platinum wire, seems to offer promise. However, the desired degree of accuracy has not been obtained as yet.

First built at the University of Chicago in 1948, the thermometer compares the noise in two conductors, one of which is held at a known temperature.

The noise is generated by movements of electrons in the two wires. Agitated by heat, the moving electrons create several millionths of a volt which is amplified to a measurable quantity. A comparison of the two different noise levels and voltages can be made to yield the temperature of the object under study.

Science News Letter, February 7, 1953

Do You Know?

Some kinds of fish catch *birds* that flutter too close to the water.

A new *filter*, although all metal, can separate water from gasoline.

Cracked or chipped *china* or pottery cannot be kept sanitary by ordinary dish washing methods.

About 50% of all two- and three-year-old children in Michigan have some degree of *dental decay*, a study shows.

Through research, a maple *syrop* has been developed with a flavor intensity four to six times greater than that of syrups produced by usual methods.



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