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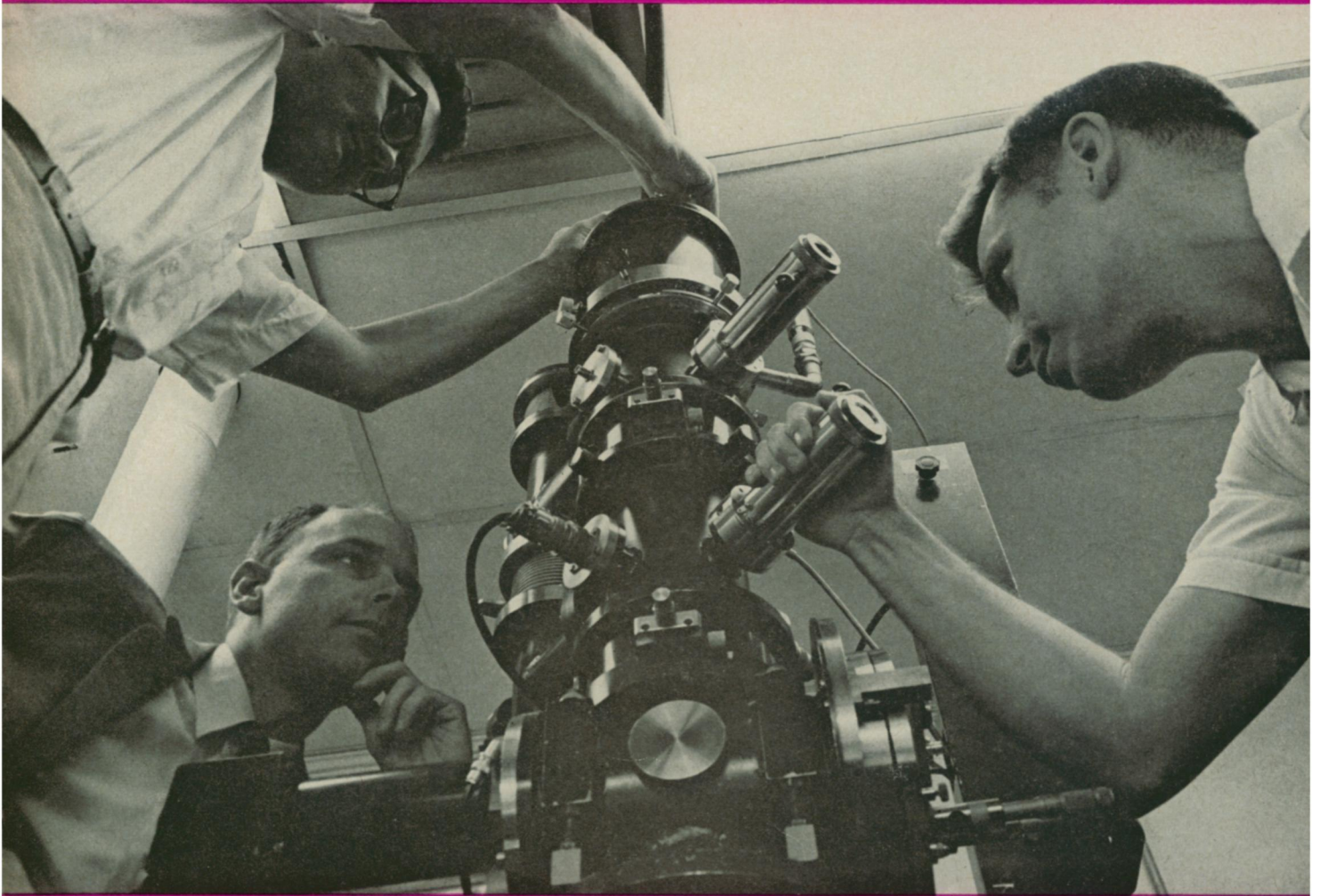
November 9, 1963

VOL. 84, NO. 19 PAGES 289-304

# SCIENCE NEWS LETTER

®

THE WEEKLY SUMMARY OF CURRENT SCIENCE



Westinghouse

Submicroscopic 'Eye'  
See Page 292

A SCIENCE SERVICE PUBLICATION

## MELTING UNDER PRESSURE (at 100,000 atmospheres)

Most substances expand as they melt. A few—such as ice and bismuth—take up less volume as they become liquids. Employing pressures up to 100,000 atmospheres, scientists at the General Motors Research Laboratories have added three tellurium compounds to a small list of remarkable materials that seem to do both—expand as they melt at low pressures, become more dense in liquid form at high pressures.

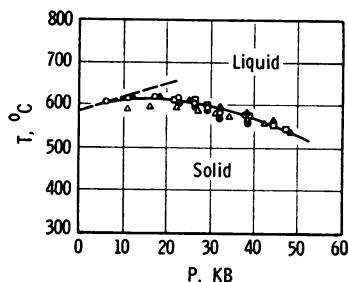
The materials in this new group exhibit a maximum melting point—a puzzling deviation from normal melting curves. They challenge the theorist to interpret such macroscopic behavior in terms of microscopic structural changes. Perhaps one clue is the decrease in electrical resistance when they melt. But how then does the structure of the liquid differ from that of the solid? And do new solid structures produced at high pressures have unusual or useful properties that can be preserved at one atmosphere?

These and other intriguing aspects of solid-liquid interactions formed the starting points for discussion at a recent international symposium on the structure, properties, and theories of liquids. Sponsored by the Research Laboratories, this seventh in a series of annual world gatherings is another way General Motors is furthering the understanding of important, unresolved areas of science.

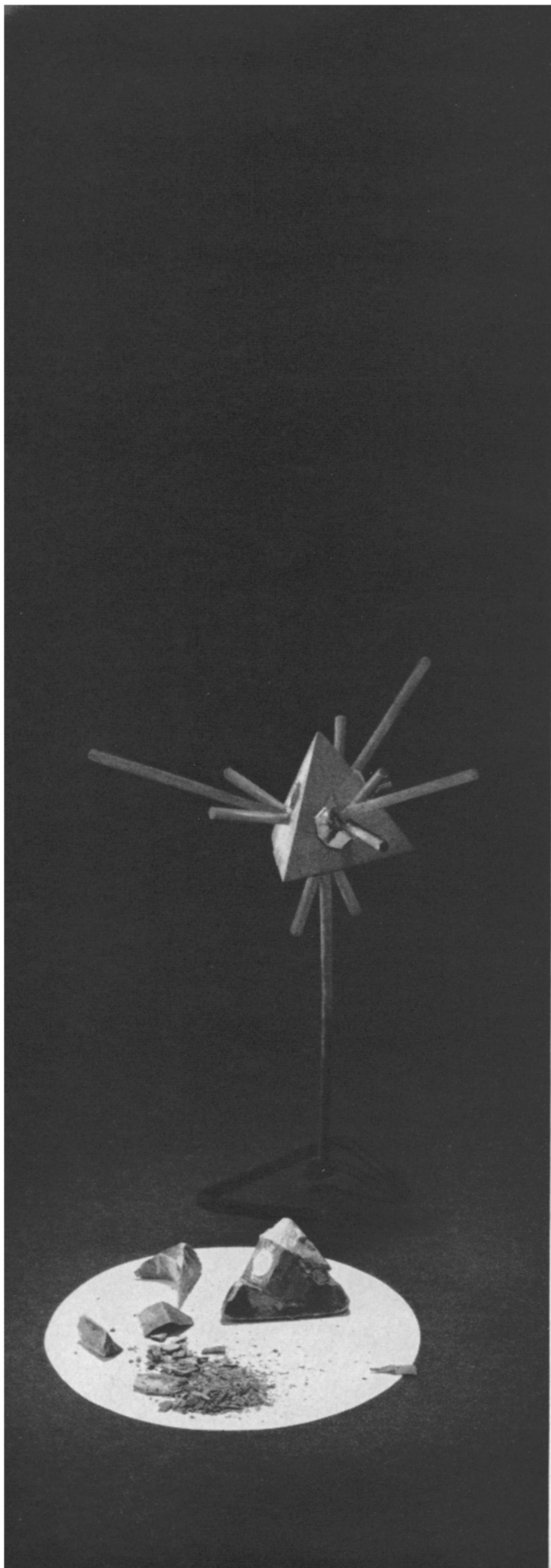
### General Motors Research Laboratories

Warren, Michigan

Tetrahedrons are sample holders used in the Laboratories' 600-ton tetrahedral anvil apparatus. Force on four sides is transmitted to cylindrical specimen inside.



Melting point curve for  $\text{Bi}_2\text{Te}_3$



GET READY FOR THE SPACE and SCIENCE ERA! SEE SATELLITES, MOON ROCKETS

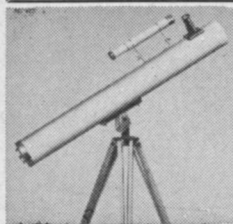
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## Make Your Own Astronomical Telescope

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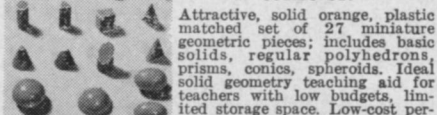
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