

SPACE

New Method for Tracking Space Vehicles

► **SPACE VEHICLES** and satellites moving through the ionosphere, the earth's electrically charged high atmosphere, cause electromagnetic waves, it was reported in Berkeley, Calif.

This discovery suggests that much of the elaborate radar equipment now used to track spaceships in flight is unnecessary. A beam of radar waves is sent spaceward and reflected back when it hits a space vehicle.

Prof. Floyd V. Schultz of Purdue University analyzed the behavior of the ionosphere in mathematical terms. His theoretical results are now being confirmed experimentally at other laboratories.

He studied the flow of the ionosphere into the void left in the wake of a moving object, and what happens immediately after its passage. Prof. Schultz found that an ionized atmosphere, such as the ionosphere, oscillates briefly. While it oscillates, it sends out electromagnetic waves that reach the earth. He concluded that the object causing the oscillation could be tracked with only an antenna and receiver. Radar transmitters could be entirely eliminated, he reported to a symposium on engineering aspects of magnetohydrodynamics meeting.

• Science News Letter, 83:255 April 20, 1963

CHEMISTRY

Silicone Defoamers For Food Processing

► **NEW SILICONE** defoamers effective in concentrations as low as one part per ten million have been developed for food processing by the General Electric Company in Waterford, N. Y. The antifoams can be used for such foods and pharmaceuticals as instant coffee, jellies, pickles, vegetables, juices, oils and antibiotic fermentations.

Silicone antifoams are being used increasingly in the food industry because of certain important characteristics, which include non-toxicity, inertness and the fact that they can be added directly to the food without affecting its quality.

• Science News Letter, 83:255 April 20, 1963

Do You Know?

Shrews, tiny mammals, do not weigh more than a dime.

A specialized *dictionary* of more than 600 terms has been compiled to define the language of computers and computer programming.

During the *balloon fly* mating season a male may often bring the female a present of food to prevent himself from being eaten by an aggressive female.

A new distillation technique which permits reuse of *water* from the city's sewage disposal plant could increase a water supply three to seven times its previous amount.

• Science News Letter, 83:255 April 20, 1963

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BY HERMAN GOODMAN, M.D.

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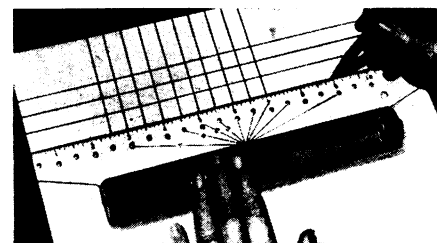
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