

GEOPHYSICS

Earth Satellite Will Stay Up for Nine Years

► THE FIRST earth satellite will stay up for nine years.

This estimate of the lifetime for a 20-inch, 22-pound spherical moonlet was reported to the American Astronomical Society meeting by Dr. Theodore E. Sterne of the Smithsonian Astrophysical and Harvard College Observatories, Cambridge, Mass.

The new earth-circling lifetime is considerably longer than previous figures, which have ranged from a few days to perhaps a year or two. Dr. Sterne bases his nine-year prediction on the expected density of the earth's atmosphere at heights from 200 to 800 miles above the earth's surface. These are forecast to be the near and far limits in the satellite's globe-girdling orbit.

He found the air densities at these heights by extending the "U. S. Standard Atmosphere" from its top limit of 324 miles to 800 miles using mathematical methods. The standard atmosphere is a model devised by the U. S. Air Force that appears to agree with experiments at all altitudes where data have been collected, Dr. Sterne said.

From observations of the satellite's distance at its farthest points, accurate adjustments can be made of the air density at the lower levels.

If observations do not fit the atmospheric model drawn by Dr. Sterne for heights to 800 miles, simple multiplication by one factor at all altitudes should solve the problem, he believes.

As part of his calculations, Dr. Sterne found the density of matter in interstellar space would be about one gram for every million billion billion cubic centimeters, which is in close agreement with presently accepted figures.

Science News Letter, June 1, 1957

NUTRITION

Tests Show Ulcer Patients Can Eat Many Spices

► ULCER patients can safely eat cinnamon, allspice, thyme, mace, sage, paprika and caraway seed without experiencing discomfort or altering the healing time of their ulcer craters.

They should not eat black pepper, mustard, chili pepper, cloves and nutmeg.

This was shown in a test of 50 ulcer patients at the Peter Bent Brigham Hospital of the Harvard University Medical School, Boston, by Drs. Max A. Schneider, Vincent DeLuca Jr. and Seymour J. Gray.

"One of the problems in diet therapy in peptic ulcer disease is the impalatability of the diet with resultant lack of patient co-operation," the doctors explained.

They hope the use of prescribed spices will speed the recovery of ulcer patients by overcoming their reluctance to adhere to the usual bland diet.

Science News Letter, June 1, 1957

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By Julian D. Corrington

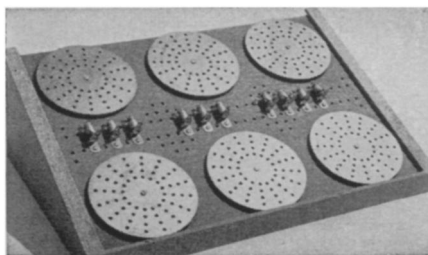
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