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WAVE PROPAGATION AND GROUP VELOCITY—Leon Brillouin—*Academic*, 154 p., \$6. For physicists and radio engineers.

Science News Letter, February 20, 1960

ASTRONOMY

Earth Bacteria Could Survive Moon's Heat

EARTH-VARIETIES of bacteria are rough and tough enough to survive extreme temperatures on the moon, two researchers have reported.

Thus man-made rocket ships might carry bacteria to the moon where they will thrive, Drs. Stephen Zamenhof and Sheldon B. Greer, biochemists at Columbia University's College of Physicians and Surgeons, said.

They found that many types of bacteria can survive heat as intense as that presumed to exist in sunlight on the surface of the moon. Many scientists believe this temperature to be well above the boiling point of water on earth.

The two men found that many bacteria survived in a vacuum when the heat reached 275 degrees Fahrenheit, 63 degrees above the normal boiling point of water at sea level.

Many bacteria should be able to survive in the dry state of a vacuum on the moon's surface, the scientists believe. Dr. Zamenhof's report appears in the Proceedings of the National Academy of Sciences, 46:101, 1960.

It was previously assumed by most scientists that only bacteria spores survived high temperatures. Spores are forms of bacteria extremely resistant to heat, chemicals and radiation.

"But now we see that in space—a vacuum—dry bacteria can be almost as hardy as spores," Dr. Zamenhof said.

This information could mean that earth-bacteria are now growing on the moon if the decontamination processes of the Russians failed. U.S. scientists assume, however, that the Russian rocket that crashed on the moon last September was sterile.

If the Soviet missile was not sterile, it may spoil chances of determining whether any organisms found on the earth's satellite originated during the early stages of the development of the solar system.

Science News Letter, February 20, 1960

PUBLIC HEALTH

More Males Have Impaired Hearing

MORE THAN 5,800,000 Americans have some degree of hearing loss, including nearly 110,000 who are totally deaf. Forty of every 1,000 males have impaired hearing, a rate one-third higher than that for females, data from the Metropolitan Life Insurance Company show.

This higher rate among males is attributed to their more frequent involvement in accidents and their greater exposure to prolonged intense noise in industry.

Science News Letter, February 20, 1960

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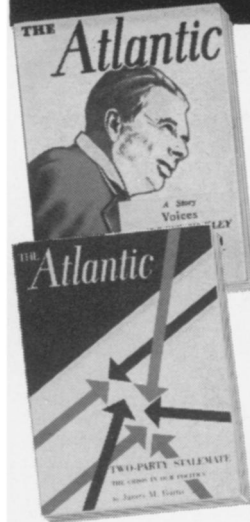
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