

ASTRONOMY

Van Allen Says Belts Kill Solar Batteries

THE EARTH'S radiation belts will destroy solar batteries used to power instruments in satellites, Dr. James A. Van Allen, the discoverer of the belts, reported.

The batteries, which convert sunlight into electricity, would probably last only a few days or weeks in a satellite that orbited continuously within the outer radiation belt, Dr. Van Allen told a banquet sponsored by the D. C. Council of Engineering and Architectural Societies and the Washington Academy of Sciences, Washington, D. C.

The radiation will also make manned space stations in the belts impossible for many years. The tons of shielding required is too great to be practical now, Dr. Van Allen said. Man, however, can pass through the belts safely or remain in them for short times with relatively thin shielding.

The radiation apparently kills solar batteries in two ways: It changes the vital structure of the semi-conductors that are the heart of the battery and it blackens the quartz windows that are designed to let the sun's light in.

Dr. Van Allen, a key figure in America's space work, is the head of the State University of Iowa physics department. He described the Van Allen belts (named for him) as "halos" of charged particles.

Science News Letter, March 5, 1960

Questions

GEOLOGY—In which two ways are icebergs formed, or "born"? p. 154.

MEDICINE—What are some of the dangers in the use of tranquilizers? p. 148.

ROENTGENOLOGY—Why is the improved procedure for X-rays of the heart of special importance to very young cardiac patients? p. 150.

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