

Outer and inner space present same problems to engineers

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Outer space and inner space present some of the same problems to engineers, says James M. Snodgrass, Research Engineer at The University of California's Scripps Institution of Oceanography.

The oceanographers, who are studying the mysteries of the depths, are borrowing ideas on instrumentation from the men who are sending satellites into space. The seas and the skies offer much the same challenge to instrument makers, Snodgrass says, because any device used to explore them must be compact, strong, and reliable.

Great advances have been made recently in the art of telemetering, Snodgrass points out. This is a method of converting a specific measurement, such as that of temperature, into an electrical signal which can be relayed back to an observation point and viewed or recorded. In rockets, such signals are returned as radio waves. The ocean being relatively opaque to such waves, in oceanographic instruments the signals travel along a wire connecting the measuring instrument to a ship. Many of the advances in telemetering have been made by men working on rockets.