

RADIO PROPAGATION LABORATORY  
Stanford University  
Stanford, California  
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FOR IMMEDIATE RELEASE

VLF noise and man-made signals from Naval radio station NSS, Annapolis, at 15.5 kc will be received by Explorer VI and telemetered to the ground. Group delay, relative phase and relative amplitude will be measured.

NSS group delay and amplitude data will aid in defining transmission loss across lower boundary of ionosphere, VLF coverage of outer ionosphere, trapping of VLF signals by postulated columns or shells of ionization aligned with earth's field, gyro-frequency cut-off effect expected at about three earth radii, location of postulated regions of traveling wave amplification, and integrated plasma frequency along propagation path to satellite.

NSS phase data will define location, magnitude, and physical size of irregularities in electron density. Noise data will aid in determining relative importance in outer ionosphere of terrestrial lightning and ionospheric sources such as Cerenkov and synchrotron radiation. Beyond predicted gyro-frequency cut-off, evidence of noise originating in the interplanetary medium may be found.

VLF Payload and ground equipment was produced for Stanford University by Stanford Research Institute and Develco, Inc.

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