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21a NAME OF RESPONSIBLE INDIVIDUAL R. Sprague	21b TELEPHONE (include Area Code) (619) 553-3064	21c OFFICE SYMBOL Code 542

Some First Results With The New Digital Ionosonde in San Diego

A.K. Paul and R.A. Sprague

Ocean and Atmospheric Sciences Division
Research, Development, Test and Evaluation Division
Naval Command, Control and Ocean Surveillance Center

The new digital ionosonde (Dynasonde) became operational in early March 1992. The system takes ionograms in five minute intervals and the data are processed, extracting F-region profile and propagation parameters (A.K. Paul, NOSC Tech. Doc. 529, 1982) on a routine basis. The data verify earlier findings that a minimum sampling rate of twelve ionograms per hour is necessary to avoid aliasing. The most surprising result to date is the the observation of large variations of the height of the F-region maximum (of the order of 100 km) during the nighttime hours of otherwise undisturbed days in late March and early April. The observed height variations are quasi-periodic, with periods of two to three hours and appear to have little effect on the F-region maximum electron density.

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