

IONOSPHERIC ELECTRON TEMPERATURE ROCKET MEASUREMENTS WITH
LANGMUIR PROBE OVER NATAL, BRAZIL, IN 1985

by

Ivan J. Kantor, Polinaya Muralikrishna, Mangalatayil A. Abdu

Instituto de Pesquisas Espaciais - INPE
São José dos Campos-SP, Brazil

ABSTRACT

A SONDA III rocket was launched from Natal on 11 December 1985, at 2030LT, carrying a Langmuir probe that measured the kinetic electron temperature of the E and F equatorial ionospheric region over Natal, Brazil. The electron temperature was determined through the derivative of the current versus voltage characteristics of the Langmuir probe and through the floating potential value, giving compatible results, on the altitude range between 300 and 524 Km. Measurements seem to yield higher values than IRI model. The divergence is discussed.