

AN OVERVIEW OF THE IONOSPHERIC RESEARCH AT INPE

by

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ABSTRACT

At INPE the ongoing ionospheric research activities concern mainly: the dynamics and electrodynamics of the equatorial and low latitude ionosphere with particular reference to the equatorial electrojet and spread F processes; global ionosphere coupling involving magnetospheric and high latitude processes; aeronomic effects from atmosphere-magnetosphere interaction in the region of the south Atlantic magnetic anomaly; and lower ionosphere chemistry and dynamics. The investigations are based on (1) data collected from a network of ground based instruments (ionosondes, airglow photometers, V F electronic polarimeters, riometers VLF receivers and Magnetometers etc) operated at different equatorial and low latitude sites in Brazil, (2) experiments conducted on board SONDA rockets launched from the equatorial launch base in Brazil (3) participation in international cooperation projects and observational campaigns, and (4) theoretical modelling of the ionospheric processes. INPE is building a coherent VHF radar to be installed shortly at a location near the magnetic equator. In the present overview we will plan to discuss briefly the existing facilities, future plans and some recent results.