Comparison of the Different Types of Sporadic E-Layers (ES) Over Brazilian Sector During the Solar Minimum (2006 AND 2007).

Bertollotto, T.O.[1];Resende, L. C. A. [1]; Denardini, C. M.[1];Chen, S. S.[1]; Moro, J.[2]; Schultz, V. V. [2]

[1] National Institute for Space Research (INPE),
Av. Dos Astronautas, 1758, S. J. Campos-SP, Brazil -CEP: 12.227-010;
[2] Southern Regional Space Research Center (CRS/INPE),
Av. Roraima, 5021, Universidade Federal de Santa Maria –UFSM, Santa Maria, RS –97.110-970;

Sporadic layers are ionization enhancements in the E-region at altitudes between 90 and 130 km.These Es layers are classified as they appear in ionograms in several types, but also based on thedifferent mechanisms of formation and locations of observation. In equatorial regions ionosondesdetect a diffuse and non-blanketing Es trace (Es_qlayer) commonly observed on daytime ionograms as a scattering of the radio signal that covers most of the frequency scaleof the ionograms.The Es_qlayersare associated to the Equatorial Electrojet (EEJ) plasma instabilities. In low latitudes regions it is observed other Es layer types as "l", "f", "c", and "h"thatare due to the wind shear mechanism. In the present work we show an analysis of the different types of Es layers for anequatorial region, São Luís-MA(22° 31' S, 44° 16' O) and a low latitude region, Cachoeira Paulista-SP(22° 39' S, 45° 00' O),observed during the solar minimum (2006 and 2007) classified by seasons. Also, we present a study about the frequency parameters of the Es layers:*fl*Es (top frequency) and *fb*Es (blanketing frequency),for both regions in the same period. The results show interesting differences between the two Brazilian regions regarding the Es layers.