

# **Ionospheric climatology at South American sector using scintillation indexes**

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Scintillations are caused by ionospheric irregularities and can affect trans-ionospheric radio signals. One way to understand and predict such irregularities is through ionospheric climatology using scintillation indexes during different periods of times of solar cycle in different regions, including the Equatorial Ionospheric Anomaly (EIA) and the South Atlantic Magnetic Anomaly (SAMA) regions. Preliminary results show a significant intensification of ionospheric fluctuation at northern and southern crest of EIA, especially during the southern hemisphere's spring/summer seasons, with a higher increase during solar maximum. In the SAMA region, where the intensity of field magnetic lines is lower, the fluctuation is much higher during the spring/summer months of solar maximum.

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