

Characterization of the C-layer using the SAVNET Network

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Below 70 km the Earth ionosphere is governed by galactic cosmic rays. At sunrise a transient region appears for about 90 minutes at altitudes below the D-region. This region known as the C-layer has been poorly studied so far. In particular its characteristics and time variations on long timescales (month, year) are not known. The project SAVNET (South America VLF Network) is composed of several receiver stations distributed throughout South America and uses the propagation properties of VLF waves (3 - 30 kHz) within the earth-Ionosphere waveguide. One of the SAVNET's main goals is the indirect monitoring of the solar radiation using its influence in the low ionosphere. In the present study we investigate the properties of the C-layer at sunrise and show that it could serve as an indicator of solar activity conditions.

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