

The Influences of Geocoronal Variability

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The Solar Stellar Irradiance Comparison Experiment (SOLSTICE) instrument on board the Solar Radiation Climate Experiment (SORCE) spacecraft makes daily measurements of the ultraviolet spectrum. Within this particular section of the spectrum lies the Lyman-alpha line. This incoming solar radiation scatters throughout the Earth's geocorona, the extended atmosphere comprised of neutral hydrogen atoms, resulting in airglow. SORCE was launched near the maximum of solar cycle 23 and continues relaying data through the solar minimum. This fortunate time period allows us to observe the airglow signal with a rather convenient dataset. By comparing the observations from SOLSTICE with other parameters such as Lyman-alpha flux and Ap index, a measure of geomagnetic activity, we should be able to determine several influences on the geocorona.