Space Studies of the Upper Atmospheres of the Earth and Planets including Reference Atmospheres (C)
Multi-Scale Wave Coupling and Energetics from the Troposphere to the Ionosphere (C22)
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A COMPARATIVE STUDY OF AIRGLOW INTENSITY AT TWO DIFFERENT SITES WITH THE SAME GEOMAGNETIC LATITUDE: SOUTHEASTERN (22.7°S, 45°W, -34°DIP LAT) AND SOUTHERN BRAZIL (29°S, 53°W, -33° DIP LAT)

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A comparative study of airglow intensity nocturnal variations of the OI 630nm and OI 557.7nm emissions at two different sites in Brazil but with a same geomagnetic latitude: Southeast (Cachoeira Paulista: 22.7°s, 45°w, -34°dip lat) and South (São Martinho da Serra: 29°s, 53°w, -33° dip lat) has been carried out. The data for the South of Brazil were obtained at the Brazilian Southern Space Observatory – CRS/CIE/INPE-MCT. The two sites are located in the central region of the South Atlantic Magnetic Anomaly - SAMA. Monthly averaged nocturnal variations of the two emissions are compared each other and studied the difference between the two sites. The principal focus of this work is to obtain and to compare the typical nocturnal variations of the OI 630nm and OI 557.7nm emissions along the last 6 years, since 2001. The data showed a strong seasonal variation, with maxima in the equinox seasons (March-April

and September-October) and with minima in the solstices (June-July and December-January). The OI 630.0nm intensity depletions caused by plasma bubbles along the magnetic field line were seen. The depletions were observed more frequently in the period from September to March during the summer seasons. Comparing the emission intensities from the two sites, an asymmetric variation was observed. An interpretation for this fact is presented.