

Status of Activities on Space Weather Research in Ica-Peru

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Measurements for space weather research are being performed at San Luis Gonzaga University, located in the south of Peru (14.09°S, 75.74°W, 402 m.a.s.l.), since 2009. In this work, we focus on atmospheric electric field (AEF) and very low frequency (VLF: 3-30 kHz) radio wave measurements. Variations in the AEF are used to study global and local atmospheric electric field changes due to the solar activity. VLF waves are used to study the behaviour of the lower ionosphere (~60-90 km) under quiet and disturbed solar conditions. Both the AEF and the lower ionosphere can be disturbed not only by solar forcing but also by atmospheric or meteorological forcing. We show AEF monthly, seasonal, and annual diurnal curves in fair-weather conditions and discuss their discrepancies. These curves are important to use as background level to calculate the deviations caused by the different solar phenomena. On the other hand, using amplitude and phase of the recorded VLF signal, a seasonal analysis is performed. In addition, a preliminary statistic of solar flares is discussed. Finally, other instruments for space weather research at San Luis Gonzaga University are also presented.

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