

Relationship between Solar and Seismic Activities

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Solar activities play significant roles in electromagnetic coupling of the sun-earth system. By investigating the previous events of sunspot numbers and earthquake events, it is possible to reveal the correlation of solar activities and seismic events. In the present paper, we are comparing the monthly values of sunspot numbers for four most recent cycles which are from year 1963 to 2009 and variations of earthquake events at different magnitude scales extracted from Advanced National Seismic System (ANSS) database, and are looking into possible coupling mechanisms in solar and geomagnetic activities. The occurrence of geomagnetic storms and the effect of Sq induced currents in the lithosphere during this observational period also have been discussed. The statistical analysis results show a significant possible correlation between the solar and seismic activities.