

High Activity in the Declining Phase of Solar Cycle 23

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In the declining phase of the current solar cycle (23), a large number of major flares were produced. In this cycle, the monthly sunspot number continuously remained below 100 since October 2002. However, during four epochs since then, flare activity became very high. Compared to this, each of cycles 21 and 22 produced only one epoch of high activity in the declining phase. In the declining phase of cycle 20, there were three epochs of high flare activity. It is of theoretical interest to understand why some cycles are very active in the declining phase, and the high level of activity in the declining phase has practical implications for planning solar observations. In this paper, I will report the dependence of solar activity on the solar cycle phase.