

Forecasting of solar activity

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The width of the valley in the curve depicting annual change in sunspot number (SSN) is noticed to be proportional to the amplitude of the following solar activity. This observation led us to find that the rate of decrease of the SSN in the last several years before the minimum as well as the rate of increase in the first several years after the minimum is well correlated with the succeeding maximum amplitude of the SSN. Based on the rate of decrease of the SSN in three years until January 2008, it is predicted that the amplitude of cycle 24 will be smaller than that of the preceding cycle - similar in size to cycle 15 with a peak smoothed SSN of around 105. This prediction is concordant with that obtained using the empirical relationship between the minimum aa index and the maximum SSN in the succeeding cycle and agrees with the estimation derived from the minimum monthly SSN.