

## Solar cycle length and solar activity

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Average of solar cycle length is approximately 11 years. However, length of solar cycle varies from 9 to 13 years during past 23 solar cycles. According to the recent result of cosmic ray variation using carbon-14, solar cycle length was longer than 11 years during the Maunder Minimum. This suggests relation between solar cycle length and magnitude of solar activity.

In this study we analyze relation between solar cycle length and maximum sunspot number. As a result we found anti-correlation between maximum sunspot number and length of previous cycle. Using this result, we estimate maximum sunspot number of cycle 24 as 94. A sunspot group with reverse polarity suggesting start of cycle 24 appeared in the northern hemisphere in the beginning of January, 2008. According to our result, cycle 24 is smaller than cycle 23 with maximum sunspot number: 120.8.