



On the apparent mystery of the extended in the time 23rd solar cycle period

Krivodubskij Valery

Astronomical Observatory of Kyiv National University, Solar Activity and Solar-Terrestrial Connections Division, Kyiv, Ukraine (krivod1@observ.univ.kiev.ua, 380 44 2162630)

The explanation of the extended 23rd solar cycle duration in the alpha-omega dynamo model is proposed. We had taken into account the up-to-date observed data on the essential increase (about 13%) of averaged annual module of magnetic fields of large-scales sunspots in the first half of the 23rd cycle, and the calculated by us the magnetic quenching of the alpha effect, which is application-dependent with this observed fact. The dynamo-period of the solar cycle depends on the intensity of the alpha effect. Therefore, the calculated 23rd cycle dynamo-period will be about 13 years in accordance with observations.