

Secular variations in the absolute brightness of some short-period comets

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The character of the secular brightness fading of the periodical comets is very important for the understanding of physical evolution of comets. On the basis of new observational data we determined the values of secular fading for 18 short-period comets. The variations in the absolute magnitude H_{10} of these comets are discussed as a function of time. An influence of 11-year solar activity cycle on these variations was shown. For comets Borrelly, d'Arrest, Giacobini-Zinner, Grigg-Skjellerup, Kopff, Tempel 1, Tempel 2 and Encke a correlation of the secular brightness variations with 90-year solar cycle was found. The variations in absolute brightness of these comets occur in antiphase to the variation of the power level of 11-year maximums of solar activity.