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Annual variations of the ^{214}Po , ^{213}Po and ^{212}Po half-life values

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Results of a comparative analysis of the ^{214}Po ($T_{1/2} = 163.47 \pm 0.03$ mcs), ^{213}Po ($T_{1/2} = 3.705 \pm 0.001$ mcs) and ^{212}Po ($T_{1/2} = 294.09 \pm 0.07$ ns) half-life annular variation parameters are presented. It is shown that two independent sequential sets of the ^{214}Po τ -values ($\tau \equiv T_{1/2}$) obtained in the spaced laboratories can be described by sinusoidal functions. A sine function approximates a set of the ^{214}Po τ -values with a time duration of ~ 973 days obtained at the BNO INR RUS has an amplitude $A = (5.0 \pm 1.5) \cdot 10^{-4}$, a period $\omega = (365 \pm 8)$ days and a phase $f = (170 \pm 7)$ days relative to the 1st January, 2012 year. The function approximates a set of τ -values with a time duration of ~ 1460 days obtained at the KhNU has an amplitude $A = (4.9 \pm 1.8) \cdot 10^{-4}$, a period $\omega = (377 \pm 13)$ days and a phase $f = (77 \pm 10)$ days. The ^{213}Po τ -value set with a time duration of ~ 1700 days can be described by a sinusoidal function with an amplitude $A = (3.9 \pm 1.2) \cdot 10^{-4}$, a period $\omega = (370 \pm 13)$ days and a phase $f = (130 \pm 9)$ days. The ^{212}Po τ -value set with a time duration of ~ 670 days can be described by a sinusoidal function with an amplitude $A = (7.5 \pm 1.6) \cdot 10^{-4}$, a period $\omega = (375 \pm 13)$ days and a phase $f = (40 \pm 10)$ days.

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