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Odd-even staggering in the yields of intermediate mass fragments from p+Ag collisions at $E_p=480$ MeV

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The experimental total production cross sections of intermediate mass fragments (isotopes of Li, Be, B, C, N, O, F, Ne, Na, and Mg) were extracted by the integration of $d\sigma/d\Omega dE$ data measured at several angles for p+Ag collisions at proton beam energy of 480 MeV. The total cross sections show typical odd-even staggering (OES) when presented as a function of the atomic number Z of ejectiles. The effect is the strongest for products with $T_3=(N-Z)/2 = 0$ and 1. Similar behavior is observed for theoretical cross sections evaluated in the two-step model in which the first stage of the reaction is described by intranuclear cascade INCL++ and the second stage by GEMINI++ model. The OES seems to be even more pronounced for theoretical than for the experimental cross sections.

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