

REACTION CROSS SECTIONS FOR 10,11,12Be BEAM IONS ON 28Si, 59Co, 181Ta TARGETS

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Total reaction cross section (σ_R) values for interaction 10,11,12Be cocktail beam particles with 28Si, 59Co, 181Ta target nuclei in the energy range 12–48 A·MeV are presented. Experimental method of direct measuring of σ_R is based on detection of prompt n, γ radiation by 12 CsI(Tl) detectors γ -spectrometer [1] was used. A comparison of the two methods for calculating the total cross sections of reactions will be presented. The first technique involves the use of averaged multiplicity. The second technique takes into account the experimental values of the registration efficiency of gamma radiation for various multiplicity of the spectrometer detectors [2].

1. Yu.E. Penionzhkevich, Yu.G. Sobolev, V.V. Samarin, M.A. Naumenko, Phys. Rev. C 99, 014609 (2019);
2. Yu. G. Sobolev et al., Bull. Russ. Acad. Sci.: Phys., 2020, V. 84, No. 8, p. 948 (2020).

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