Contribution ID: **105** Type: **Poster**

Quasielastic scattering of 6He, 7Be, and 8B Nuclei by 12C nuclei

Thursday, 3 September 2015 16:30 (1h 30m)

Using the nuclear diffraction model and the high-energy approximation with double-folding potential based on CDM3Y6 interaction [1], the observed cross sections of quasi-elastic scattering of 6He, 7Be, and 8B nuclei by 12C nuclei at intermediate energies were described. The calculations performed using realistic nucleon density distribution for target nucleus [2]. Moreover the Coulomb interaction and inelastic scattering with excitation of low-lying collective states of the target [3] were taking into account. The calculated angular dependencies of cross sections are in good agreement with corresponding experimental data [4,5].

[1] K.V. Lukyanov, Comm. JINR, P11-2007-38 (Dubna, 2007).
[2] V.K. Lukyanov, E.V. Zemlyanaya, and B. Slowinski, Phys. At. Nucl. 67, 1282 (2004).
[3] V.I. Kovalchuk, Nucl. Phys. At. Energ. 14(4), 332 (2013).
[4] J.L. Lou et al., Phys. Rev. C 83, 034612 (2011).
[5] I. Pecina et al., Phys. Rev. C 52, 191 (1995).

Primary author: KOVALCHUK, Valery (Department of Physics, Taras Shevchenko National University of Kiev, Ukraine)

Presenter: KOVALCHUK, Valery (Department of Physics, Taras Shevchenko National University of Kiev, Ukraine)

Session Classification: Poster