Contribution ID : **85** Type : **Oral talk**

Single and double charge exchange reactions in 12C fragmentation at 300 MeV/nucleon

Wednesday, 30 November 2022 11:30 (15)

This work presents the results of single and double charge exchange reactions measuring in the fragmentation of carbon ions at the energy of 300 MeV/nucleon. Experimental data were collected at the FRAGM facility and the ITEP-TWAC multi-purpose accelerator complex on a thin beryllium target [1, 2]. The search was made for the following set of isotopes that carried out with nucleon charge exchange: 11Be, 12B, 12N, 12Be. The differential cross sections for the production of these isotopes considered as functions of the fragment momentum [3]. These measurements of the charge exchange processes in this energy range were performed for the first Time. Additionally the upper limit of the 12N ions production was also estimated. The obtained data are considered with a comparison of the theoretical ion-ion interaction models. These presented results expand the database on nuclear fragmentation processes that occur with nucleon charge exchange and provide new material for testing the theoretical models.

1. B.M. Abramov *et al.*, Phys. At. Nucl. 78, 373 (2015)
2. B.M. Abramov *et al.*, EPJ Web Conf. 138, 03002 (2017)
3. A.A. Kulikovskaya *et al.*, Yad. Fiz. 85, №5, 339 (2022)

Primary author(s) : Ms. KRUTENKOVA, Anna (NRC «Kurchatov Institute», Moscow, 123182 Russia); Ms. KULIKOVSKAYA, Anna (NRC «Kurchatov Institute», Moscow, 123182 Russia); Mr. ABRAMOV, Boris (NRC «Kurchatov Institute», Moscow, 123182 Russia); Ms. TURDAKINA, Elena (NRC «Kurchatov Institute», Moscow, 123182 Russia); Mr. DUKHOVSKOY, Igor (NRC «Kurchatov Institute», Moscow, 123182 Russia); Mr. MARTEMIANOV, Maxim (NRC «Kurchatov Institute», Moscow, 123182 Russia); Mr. MATSYUK, Mikhail (NRC «Kurchatov Institute», Moscow, 123182 Russia); Mr. BULYCHJOV, Sergey (NRC «Kurchatov Institute», Moscow, 123182 Russia); Dr. KULIKOV, Viacheslav (NRC «Kurchatov Institute», Moscow, 123182 Russia); Mr. BORODIN, Yury (NRC «Kurchatov Institute», Moscow, 123182 Russia)

Presenter(s) : Ms. KULIKOVSKAYA, Anna (NRC «Kurchatov Institute», Moscow, 123182 Russia)

Session Classification : Nuclear Physics

Track Classification : Nuclear physics