Contribution ID: **52** Type: **not specified**

Search for eta-mesic nuclei with WASA-at-COSY facility

Wednesday, 10 March 2021 16:10 (30 minutes)

The existence of eta-mesic nuclei in which the eta meson is bound in a nucleus by means of the strong interaction was postulated more than 30 years ago, however, it has not been yet confirmed experimentally. The discovery of this new kind of an exotic nuclear matter would be very important as it might allow for a better understanding of the eta meson structure and its interaction with nucleons. The search for eta-mesic helium is carried out with high statistics and high acceptance with the WASA detector, installed at the COSY accelerator in the Research Center Juelich. The search is performed via the measurement of the excitation function for selected decay channels of the 4He-eta and 3He-eta systems. The talk will include a description of the experimental method used at WASA and the status of the data analysis.

Presenter: SKURZOK, Magdalena (Jagiellonian University)