Contribution ID: **309** Type: **Oral**

Recent results and prospects for research with radioactive beams at the FLNR

Wednesday, 29 November 2023 12:30 (15 minutes)

A significant part of the upgrade of the Dubna Radioactive Ion Beams facility was putting in operation a new high acceptance device - the ACCULINNA-2 fragment separator, http://flerovlab.jinr.ru/accullina-ii/. It's the new in-flight facility for operating with low energy 30-60 AMeV primary beams with $3 \le Z \le 36$ delivered by U-400M cyclotron. The new separator provides high quality secondary beams what opened new opportunities for experiments with RIBs in the intermediate energy range 10÷50 AMeV. Since 2018 a few experimental studies have been carried out at the ACCULINNA-2 setup [1-4]. Recent experimental results on 6,7H, 7He will be presented. A new experimental program with RIBs at the FLNR starting in 2024 and potential of using additional equipment as radio frequency filter, zero angle spectrometer, cryogenic tritium target and new detectors development will be discussed.

1. G. Kaminski, et al., "Status of the new fragment separator ACCULINNA-2 and first experiments", Nucl. Instrum. Methods Phys. Res. B 463 (2020) 504-507.
2. A.A. Bezbakh et al., Evidence for the first excited state of 7H", Phys. Rev. Lett. 124 (2020) 022502.
3. I.A. Muzalevskii, et al., "Resonant states in 7H: Experimental studies of the 2H(8He,3He) reaction", Physical Review C 103 (2021) 044.
4. E.Yu. Nikolskii, et al., "6H states studied in the 2H(8He,4He) reaction and evidence of an extremely correlated character of the 5H ground state", Physical Review C 105 (2022) 064605.

Attendance Type

In-person

Primary authors: KAMINSKI, Grzegorz (Flerov Laboratory of Nuclear Rections, Joint Institute for Nuclear Research); FOR ACCULINNA-2 COLLABORATION

Presenter: KAMINSKI, Grzegorz (Flerov Laboratory of Nuclear Rections, Joint Institute for Nuclear Research)

Session Classification: Session 2

Track Classification: New Facilities and Instrumentation