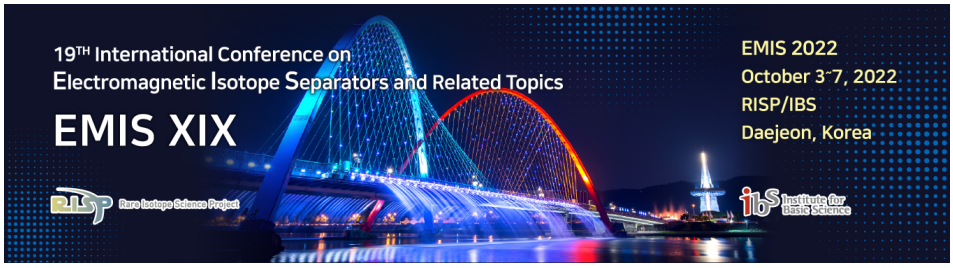

Contribution ID: **146** Type: **Poster Session**

Present Status of Laser Ion Source Development at the RAON ISOL facility

Monday, 3 October 2022 23:10 (8 minutes)

The Resonance Ionization Laser Ion Source (RILIS) system based on Ti:Sapphire lasers pumped by a Nd:YAG laser has been developed for the on-line laser ion source for a new heavy ion accelerator, RAON, in Korea. As a milestone of extraction of rare isotopes produced through uranium fission, double magic nucleus of ^{132}Sn is our first target. Thus, by employing a three-step resonance excitation scheme, the ionized stable isotopes of Sn have been successfully extracted and separated via a mass-separator magnetic system to test the performance of the RILIS setup at the off-line test facility [1] and the RAON ISOL facility. In the commissioning phase, the hot-cavity laser ion source in the ISOL facility will be tested and used to produce RI beams, e.g. Al isotopes using a SiC target with a 70 MeV proton beam.

[1] Sung Jong Park, Jung Bog Kim, Hyperfine Interaction (2020) 241:39.

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