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First beams at the new RIBs facility at Dubna – ACCULINNA-2

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An significant part of the upgrade of the Dubna Radiactive Ion Beams facility is the replacement of the ACCULINNA fragment separator with a new high acceptance device - the ACCULINNA-2. The project of a new in-flight facility for low energy 30-60 AMeV primary beams with $3 \le Z \le 36$ has been started in 2011. The new device is destined to add considerably to the studies of drip-line nuclei performed with the use of variety of direct reactions known to be distinctive to the 15 –50 AMeV exotic secondary RIBs. An overview of the design, construction and commissioning studies of the ACCULINNA-2 device will be presented.
Secondary beam profiles as well as production rates were measured for 15N (49.7 AMeV) primary beam and Be (2 mm) target. Example dE-ToF identification spectra and calculated beam purity for 6He 31.5 AMeV and 12Be 39.4 AMeV as a main components of secondary beams will be demonstrated. Measured isotope yields agrees with LISE++ simulations. Future upgrades of ACCULINNA 2 setup (zero degree spectrometer, RF-kicker) and prospects of new experiments achievable in next years are presented.

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