

Heavy ion linac for nuclear physics.

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The high intensity heavy ion linac is an attractive instrument for the nuclear investigation. The high energy linac can be effectively used for the rare isotope production (for example –FRIB facility in MSU, USA and SPIRAL2 in GANIL, EU). The low energy linac (~ 7 MeV/nucleon) can be used for multi-nucleon transfer reactions investigation. In particular, the reactions study is important for understanding the so-called 3rd peak of the distributions of the astrophysical p-process. The project of the room temperature heavy ion cw-linac is based on the technology which is under development in framework of compact accelerator driven neutron source DARIA setup, it could be useful also for the other constructions [1,2]. The talk presents the linac structure and results of the cw RFQ and DTL development.

1. “Дорожная карта” в области ядерной физики, Ред. Л.В. Григоренко, М.: РАН, 2021. ISBN 978-5-907366-33-6.
2. Развитие физики и технологии ускорителей заряженных частиц, Ред.-сост. Б.Ю. Шарков, И.Н. Мешков, М: РАН, 2021. ISBN 978-5-907366-27-5.

Section

Design of new experimental facilities

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