

Abstract Submitted
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Development of a Polarized ${}^6\text{Li}^{3+}$ Ion Source at RCNP A. TAMII, K. HATANAKA, K. FUJITA, H. MATSUBARA, S. MORINOBU, S. NINOMIYA, Y. SAKEMI, Y. SHIMIZU, Y. TAMESHIGE, RCNP Osaka Univ., T. UESAKA, T. WAKUI, CNS Univ. of Tokyo, H. OKAMURA, CYRIC Tohoku Univ., T. WAKASA, Dep. of Phys. Kyushu Univ., T. NAKAGAWA, RIKEN — Nuclear spin-isospin excitations show rich features in various nuclei. One of key points to study such excitations is to use a selective probe for the reactions relevant to the physics of interest. Our plan is to develop a new polarized ${}^6\text{Li}^{3+}$ ion source for producing ${}^6\text{Li}^{3+}$ beams at 100 MeV/U at the Research Center for Nuclear Physics (RCNP). Polarized ${}^6\text{Li}$ atoms are produced by the optical pumping method. The atoms are injected into an 18GHz ECR ionizer for producing 3+ ions, directly or after being stripped of an electron by using a surface ionizer. Several depolarization processes should be cared, such as the ones due to inhomogeneous magnetic field, ECR effect in the RF field, excitation and de-excitation processes of ions, etc. We will report on the design of the ion source and recent results of feasibility tests.

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