

The study of Coulomb breakup of ^{11}Be

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This work is devoted to a theoretical study of the Coulomb breakup of halo nuclei in a quantum mechanical approach. Exotic nuclei are the subject of intensive experimental and theoretical research. Coulomb breakup are relevant for interpretation and planning of experiments in radioactive beams.

The ^{11}Be nucleus is regarded as a neutron halo consisting of ^{10}Be core and one neutron. Energy levels of ^{11}Be were calculated solving Schrodinger equation by means of numerical methods. This work is the initial stage of the work on the investigation of the breakup of halo nuclei. A detailed investigation is planned to research the breakup of the halo nucleus, using the numerical method for solving the nonstationary Schrodinger equation.

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