

INVESTIGATION OF SPECTRAL STRUCTURE OF ^{11}Be IN BREAKUP REACTIONS WITHIN QUANTUM-QUASICLASSICAL APPROACH

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We investigate the breakup of the ^{11}Be halo nuclei on a light (^{12}C) target within quantum-quasiclassical approach in a wide range of beam energy (5–67 MeV/nucleon) including the low-lying resonances of ^{11}Be . The obtained results are in good agreement with existing experimental data at 67 MeV/nucleon. The developed computational scheme can potentially be used for interpretation of low-energy breakup experiments on different targets in studying spectral properties of nuclei. In particular, the region around 20–10 MeV/nucleon is of great interest, since this is the energy range of HIE-ISOLD at CERN and the future ReA12 at MSU, it has hardly been investigated theoretically so far.