

Abstract

Laser-induced breakup of ^{11}Be neutron halo has been studied theoretically by taking direct laser-nucleus interaction into account. The direct interaction of intense laser field can make the ^{10}Be core to oscillate about its center of mass, which can cause the strong interaction between the core and halo to vary and thus, can lead to the breakup. Keeping it in view, the breakup probability has been calculated, and its relationship with the laser parameters has been discussed.