

ABSTRACT

Considering H-like atom, breakup probability for ${}^8\text{B}$ Halo nucleus has been studied under the influence of laser field to get the controlled emission of proton. Nuclear transition is caused by oscillating charge density of electron which is subjected to time dependent laser field in non-relativistic regime. First order approximation of time dependent perturbation theory has been used to derive the expression for nuclear transition or breakup probability. Probability for breakup of a single ${}^8\text{B}$ Halo nucleus having one proton Halo is calculated of the order of $\sim 10^{-11}$. Probability increases by increasing the intensity and frequency of the laser.