

Abstract

Halo nucleus is studied under super-intense laser field. ${}^8\text{B}$ having a proton halo is considered within the non-relativistic region. This halo proton enables us to probe the nucleus indirectly in the intense laser field. Time dependent field is generated by the oscillation of laser driven halo proton. We have considered just electric field generated by the oscillating particles and analyze its interaction with nuclear dipole in order to study AC Stark shift in the nuclear levels. The energy variation in the nuclear levels with the change in frequency and intensity of the incident laser has been shown graphically.