AN INVESTIGATION ON NEUTRON SKIN THICKNESS OF FINITE NUCLEI BY STUDYING DIPOLE POLARIZABILITY USING FINITE RANGE EFFECTIVE INTERACTION

B. SAHOO1*, S. CHAKRABORTY2, M. PAL3 AND S. SAHOO4*

The dipole polarizability $\alpha_D$ is analyzed by using Droplet Model (DM) in finite range effective interaction for two different splitting of exchange strength parameters $E_{ex}^l = E_{ex}/2$ and $E_{ex}^{ul} = E_{ex}/2$ where $E_{ex}$ is the exchange parameter of the interaction. The role of density derivatives of symmetry energy and neutron skin thickness on $\alpha_D$ is studied and the value of $\alpha_D$ is found to be 24.10 fm$^3$ and 26.43 fm$^3$ for $E_{ex}^l$ and $E_{ex}^{ul}$ respectively.