## **Optical and Double Folding Analysis for 6Li+160 Elastic Scattering**

Authors : Abd Elrahman Elgamala, N. Darwish, I. Bondouk, Sh. Hamada

**Abstract :** Available experimental angular distributions for  $\langle \sup > 6 \langle \sup > Li | elastically scattered from <math>\langle \sup > 16 \langle \sup > 0 | nucleus in the energy range 13.0 & ndash; 50.0 MeV are investigated and reanalyzed using optical model of the conventional phenomenological potential and also using double folding optical model of different interaction models: DDM3Y1, CDM3Y1, CDM3Y2, and CDM3Y3. All the involved models of interaction are of M3Y Paris except DDM3Y1 which is of M3Y Reid and the main difference between them lies in the different values for the parameters of the incorporated density distribution function <math display="inline">\langle em > F \langle em > (\&rho;) \rangle$ . We have extracted the renormalization factor  $\langle strong > em > N \langle sub > R \langle sub > \langle em > f \langle sup > 0 | nuclear system in the energy range 13.0 & ndash; 50.0 MeV using the aforementioned interaction models.$ 

**Keywords :** elastic scattering, optical model, folding potential, density distribution **Conference Title :** ICNPNE 2021 : International Conference on Nuclear Physics and Nuclear Engineering

Conference Location : Tokyo, Japan

Conference Dates : January 07-08, 2021