

Model calculation of U_e

Due to the exist of electrons around the target atom, the effect c. m. energy in experient is larger than that of bare nuclei system. The larger part U_e is the absolute value of the potential between the projectile and electrons is U_e . In the energy region of astrophysical interest, U_e has a significant imoact on cross section. However, U_e got by analyzing experiment data is usually large than that got by theoretical model. A new model is constructed based on quantum mechanics to calculate U_e . When the projectile is p and target is light nuclei, the trend of U_e varyig with target atomic number is quadratic trend.

Field of Research

Nuclear reaction

Experiment/Theory

Theory

Primary author: LI, Jiayinghao

Presenter: LI, Jiayinghao

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