

# Bohr Hamiltonian with Hulthén Plus Ring-Shaped Potential for Triaxial Nuclei with Deformation-Dependent Mass Term

**A. Adahchour, A. Ait Benhammou, A. Lahbass, M. Oulne**

High Energy Physics and Astrophysics Laboratory, Faculty of Sciences Semlalia, Cadi Ayyad University, P. O. B. 2390, Marrakech 40000, Morocco

In this work, we solve the eigenvalues and eigenvectors problem with the Bohr collective Hamiltonian for triaxial nuclei within deformation-dependent mass formalism. We shall call the solution developed here  $Z(5)$ -H-DDM. Analytical expressions for spectra and wave functions are derived by means of a recent version of the asymptotic iteration method. The excited collective energies of nuclei and  $B(E2)$  transition rates are calculated and compared with the experimental data and with the model  $Z(5)$ -H, as well as theoretical predictions of other models.