

PROPERTIES OF THE GROUND STATES OF SPHERICAL ATOMIC NUCLEI IN THE FRAMEWORKS OF THE EXTENDED THOMAS – FERMI METHOD

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The characteristics of the groundstates of spherical nuclei has been studied in the frameworks of the extended Tomas - Fermi method. It has been shown that binding energy, rootmeansquare radii and nucleon densities for the β -stable nuclei are in a good agreement with the experimental results. The binding energy, rootmeansquare radii and nucleon densities for the nuclei far from the β -stability line has been calculated as well as for superheavy nuclei. The thickness of the diffusion area for proton, neutron and nuclon density distribution have been calculated also.