

CHARGE FORMFACTORS AND DENSITIES OF  ${}^2\text{D}$ ,  
 ${}^3\text{H}$ ,  ${}^3\text{He}$ , AND  ${}^4\text{He}$  NUCLEI

*Yu.A. Berezhnoy, V.Yu. Korda<sup>1</sup>, A.G. Gakh*

V.N. Karazin Kharkiv National University  
(4, Svoboda Sq., Kharkiv 61077, Ukraine;  
e-mail: [agakh@mail.ru](mailto:agakh@mail.ru)),

<sup>1</sup>Institute for Electrophysics and Radiation Technology,  
Nat. Acad. of Sci. of Ukraine  
(28, Chernyshevskiy Str., Kharkiv 61002, Ukraine)

S u m m a r y

A new non-relativistic analytical phenomenological model for  ${}^2\text{D}$ ,  ${}^3\text{H}$ ,  ${}^3\text{He}$ , and  ${}^4\text{He}$  nuclei has been developed. The wave function parameters for the ground states of those nuclei have been determined by analyzing the experimentally measured charge formfactors, root-mean-square radii, and binding energies. The obtained wave functions have been used to calculate the charge densities in the nuclei concerned.