



NUCLEAR STRUCTURE: HIGH ENERGY ELECTRON SCATTERING

PIYUSH SINHA AND NEELAM SINHA*

Dept. of Physics, H.N.B. Garhwal University Campus, Pauri, piyushs03@gmail.com

Dept. of Physics, S.D. College, Muzaffarnagar

Received: 3.11.2015

Accepted: 12.12.2015

ABSTRACT

High energy electron scattering is a very powerful tool for studying the geometrical details of nucleus. The studies revealed information on static structure as well as dynamical structure of nucleus. In this paper theoretical analysis of the same has been explained using shell model wave function. This calculation is carried out using resonance group method along with complex generator coordinate technique.

KEY WORDS -: electron scattering, resonating group method (RGM), complex generator coordinate technique (CGCT)

REFERENCES

1. Horiuchi, H. 2012. Progr.Theoret.Phys.Suppl.,192,1
2. Kanada-En'yo, Y. 2012. Prog.Theor.Exp.Phys.
3. Lovato A1, Gandolfi S, Butler R, Carlson J, Lusk E, Pieper SC, Schiavilla R. Phys Rev Lett. 2013 Aug 30; 111(9):092501. Epub 2013 Aug 27.
4. Wildermuth, K. Unified Theory of the Nucleus, Clustering Phenomena in Nuclei - 1977
5. Yamada, T. 2012. (Chapter 5). Lect.Notes Phys.,vol. 848,229
6. Y. Funaki, H. Horiuchi, A. Tohsaki Prog.Part.Nucl.Phys. 82 (2015) 78-132 (2015-05)
7. Neelam Sinha and Piyush Sinha ,Cluster model wave function of ^{10}B using Complex Generator Coordinate Technique, Journal of Natural and Physical Sciences, Vol 25,2013,ISSN 097-3799
8. Piyush Sinha and Neelam Sinha, A Normalized Cluster model wave function of ^5He

using Complex Generator Coordinate Technique, International Journal of Theoretical and Applied Science , 5(2):114-120(2013) , ISS No.0975-1718

9. W.Sunkel and Y.C. Tang Nucl. Phys. , A329 (1979) 10
10. Y.C. Tang , M.LeMere ,Phys. Rep. C-4 (1978) 170