The First International Congress on Recent Advances
in Mathematical, Physical and Chemical Sciences
(1st-ICRAMPCS 2024)
December 15-17, 2024. Constantine. Algeria

Spectroscopic properties of nuclei from ^{132}Sn mass region with Z>50 and N<82

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Researching the structure of exotic nuclei is essential for advancing our understanding of the spectroscopic properties of atomic nuclei. In this context, we have developed a new effective interaction within the shell model framework, utilizing the low-momentum potential approach to investigate nuclei surrounding 132Sn. This presentation aims to provide a versatile discussion of the energy levels, electric transitions, and magnetic moment in the isotopic chain with Z=50 and the isotonic chain with N=82, comparing our theoretical findings with available experimental data.

References:

[1] Hjorth-Jensen, Morten, Thomas TS Kuo, and Eivind Osnes. "Realistic effective interactions for nuclear systems." Physics reports 261.3-4 (1995): 125-270.

[2] E. Caurier, G. Martinez-Pinedo, F. Nowacki, A. Poves, and A.P. Zuker, Rev. Mod. Phys. 77, 427 (2005).

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