

Large-scale shell-model calculations for $^{32-39}\text{P}$ isotopes

P. C. Srivastava¹, J. G. Hirsch¹ and M. J. Ermamatov^{1,2}

¹*Instituto de Ciencias Nucleares, Universidad Nacional Autónoma de México, 04510
México, D.F., México*

²*Institute of Nuclear Physics, Ulughbek, Tashkent 100214, Uzbekistan*

The structure of $^{32-39}\text{P}$ isotopes is described in the framework of the state-of-the-art large-scale shell-model calculations, employing the code ANTOINE and the recently devised SDPF-U [1] and SDPF-NR [2] effective interactions. Protons are restricted to fill the sd shell, while neutrons are active in the $sd - pf$ valence space. Results for both positive and negative level energies, orbital occupations, and electromagnetic observables are compared with the available experimental data, and with those obtained with the extended pairing plus quadrupole-quadrupole-type forces with inclusion of monopole interaction (EPQQM) [3].

References

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