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## Even Zr Isotopes Investigation Near rp-process Path

Proton-drip line nuclei offer significant information about nuclear structure and nucleon-nucleon interaction. Their positions, far from beta stability and close to the astrophysical rp-process path, give them a great importance in both theoretical and experimental studies. This provides the opportunity to develop our knowledge about nuclear systems and lead to improve the theoretical nuclear models. Zr isotopes are good candidates for this. Due to its wide existence, from proton drip-line to neutron one, they provide important information about the nuclear interaction. In order to emphasize the importance of such unstable systems, we carry out some spectroscopic calculations in the framework of the nuclear shell model. These calculations aim to investigate even Zr isotopes nuclear structure properties by means of the NuShellX@MSU nuclear structure code. The used effective interaction is based on the  $sn100pn$  original one, considering the similarity between  $^{100}Sn$  and  $^{56}Ni$  neighboring nuclei. The obtained results have been compared to the available experimental data in order to improve the efficiency of our new interaction.

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