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Contribution ID: **71** Type: **poster**

New magic number for neutron rich Sn isotopes

Due to scarcity of experimental data the variation of 2^+_1 energies for heavier Sn isotopes (A \geq 136) is still a topic for serious theoretical endeavours by different groups. Large basis untruncated shell model calculations have been done in the p(gdsh) + n(hfpi) valence space above the 132Sn core using both realistic and empirical (1+2) - body Hamiltonians. A new shell closure for neutron rich Sn isotopes has been predicted from these calculations using empirical SMPN interaction that works successfully in this neutron rich domain. Calculations with realistic two-body interaction CWG also predict this shell closure provided a three-body force contribution is included in it. The calculated $E(2^+_1)$ values for 134-140Sn fits nicely in the systematics and shows dramatic resemblance with the trends shown by even-even 18-22O and 42-48Ca.

Is this an invited talk? (please answer yes or no)

No

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NO

Would you prefer your contribution to be an oral presentation? (please answer yes or no)

YES

Are you a student, postdoc or an attendee from an "emerging" country and would like to apply for financial support?

I am a participant from India. Some financial support may be helpful.

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Track Classification: Shell structure far from stability