Contribution ID: **270** Type: **Oral**

The impact of the tensor interaction on the β-delayed neutron emission of the neutron-rich Ni isotopes

The neutron emission of the β-decay of 74,76,78,80Ni are studied with the Skyrme interaction taking into account the tensor terms. Calculations are performed within the quasiparticle random phase approximation. The coupling between one- and two-phonon terms in the wave functions of the low-energy 1+ states of the daughter nuclei is taken into account. It is shown that the strength decrease of the neutron-proton tensor interaction leads to the substantial increase of the half-life and the neutron-emission probability.

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Track Classification: Experimental Nuclear Physics