Contribution ID: 0

Spin and Spin-isospin responses in N=Z nuclei and Isoscalar pairing correlations

Tuesday, 20 June 2017 15:45 (15 minutes)

The spin magnetic dipole transitions and the neutron-proton spin-spin correlations in sd-shell even-even nuclei with N = Z are investigated using shell model wave functions. The isoscalar (IS) spin-triplet pairing correlation provides a substantial quenching effect on the spin magnetic dipole transitions, especially on the isovector (IV) ones. Consequently, an enhanced isoscalar spin-triplet pairing interaction influences the proton-neutron spin-spin correlation deduced from the difference between the IS and the IV sum rule strengths. The effects of the higher configuration mixings, exchange currents and $\Delta(\Delta(33)$ resonance)-hole coupling are also examined in the spin transitions and the spin-spin correlations of the ground states.

Primary author: Prof. SAGAWA, HIROYUKI (RIKEN/UNIVERSITY OF AIZU) **Presenter:** Prof. SAGAWA, HIROYUKI (RIKEN/UNIVERSITY OF AIZU)