

Isobaric analogue resonances in A=40-50 nuclei

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Spectroscopic factors as well as parentage coefficients for collective  $J_i^{\pi}=2_1^+, 3_1^-, 4_1^+$  states have been obtained for N=29 nuclei and  $^{59}\text{N}$  via  $(\tau, d\vec{p})$  reactions through isobaric analogue resonances. By coupling one and three particles to the core and by performing shell-model calculations for three neutrons, one accounts theoretically for most of the observed phenomena. Some discrepancies, however, remain, in particular with respect to the description of the splitting of the  $2p_{1/2}$  neutron strength.<sup>1)</sup>

- 1) K. Heyde, M. Waroquier, P. van Isacker, H. Vincx, S. Galés and V. Paar, Nucl. Phys. A303, (1978) 313