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Transformation of SO(5) coupling coefficients to the isospin basis A.E. MCCOY, Grinnell College, M.A. CAPRIO, University of Notre Dame — The SO(5) pairing model for nuclei with N≈Z is based on the algebra of the proton and neutron pair creation, pair annihilation, and isospin operators. Nuclear structure calculations carried out in this framework require the coupling coefficients for SO(5), reduced with respect to the physical isospin subalgebra. However, it is more straightforward to calculate coupling coefficients reduced with respect to the mathematically natural (canonical) SO(4) subalgebra. We transform the canonical chain coupling coefficients to the physically relevant isospin chain by a unitary transformation obtained by diagonalizing the isospin operator in the canonical basis.
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