The q-deformed Moszkowski model: RPA modes

CORRIGENDUM

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Dennis Bonatsos†, Lucília Brito‡, Debora Menezes§, Constança Providência‡ and João da Providência‡

† Institute of Nuclear Physics, NCSR 'Demokritos', GR-15310 Aghia Paraskevi, Attiki, Greece
‡ Centro de Física Teórica, Depto de Física, Universidade de Coimbra. P-3000, Portugal
§ CFM, Depto de Física, Universidade Federal de Santa Catarina, Campus Universitário, Caixa Postal 476, CEP 88049, Florianópolis SC, Santa Catarina, Brazil

Abstract. The behaviour of the Moszkowski model within the context of quantum algebras is studied. The Moszkowski Hamiltonian is exactly diagonalized for various values of the deformation parameter of the involved quantum algebra. The phase transition from a vibrational regime to a rotational regime is discussed in terms of the q-deformation. A coherent state for the ground state is introduced, and the Hartree–Fock energy and the RPA frequencies are compared with the exact values. The meaning of the q-deformation in this model is discussed.

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