

Odd-odd nuclei as the core-particle-hole systems and chirality

S.G. Rohoziński¹, Ch. Droste¹, L. Próchniak², K. Starosta³

¹ University of Warsaw

² UMCS, Lublin

³ Simon Fraser University, Vancouver

The Core-Particle-Hole Coupling (CPHC) Model for odd-odd nuclei is discussed. The core is described in the frame of the Bohr Hamiltonian. Cores with different properties, and the particle and hole on different orbitals are considered. The energy spectra, and the electromagnetic moments and transitions are calculated. The calculations show that the sufficient conditions for the core-particle-hole systems to manifest the “signatures of chirality” are the α -parity of the core and the proton-neutron symmetry of the single-particle states. The results are obtained without assumption of chiral symmetry.