

# SU(6) Hamiltonian with Spherical Quadrupole Phonons in the Rotational Limit for Even Nuclei

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The SU(6) Hamiltonian in the rotational limit was diagonalized in the basis of spherical quadrupole phonons. Fig. 1 shows the results of the calculation for the parameters  $h_1=0.0225$ ,  $h_2=-0.0100$ ,  $h_3=-0.0265$ ,  $h_{40}=-0.1175$ ,  $h_{42}=-0.0362$ ,  $h_{42}=0.0950$ . In fact, there are only two free parameters,  $\alpha$  and  $\beta$ , which uniquely determine the parameters  $h$ :  $\alpha=0.01$ ,  $\beta=0.02$ . The maximal number of phonons in the calculation is  $N=7$ . We point out that rotational bands do arise, althourh there is no static deformation, but the spherical quadrupole phonons appear as basis states.

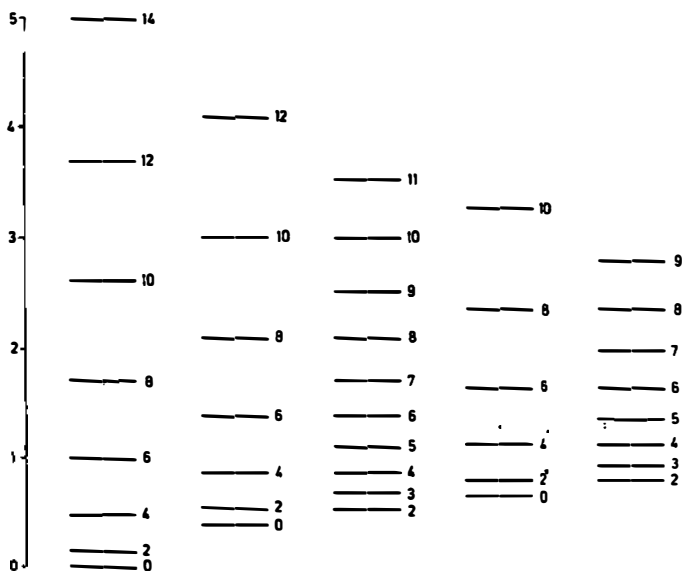


Fig. 1