

neutron neutron pair halo bound continuum proton particle-vibration proton ₂+∮ ⁹Li core quadr. coupling vertex continuum vibr. mode monopole particle-pair vibration interaction 15 $^{11}\mathrm{Li}\,\mathrm{giant}\,\,\mathrm{dipole}\,\,\mathrm{pygmy}$ coupling vertex v_{np} proton-neutron int. resonance mode particle-recoil mode ≨ recoil mode coupling vertex