Effects of the Coulomb interaction on parameters of resonance states in mirror three-cluster nuclei

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The Coulomb interaction plays an important role in forming bound and resonance states of nuclear systems. It is interesting to study effects of the Coulomb interaction in mirror nuclei represented as a three-cluster structure. In the present report we study effects of the Coulomb interaction in mirror pair-nuclei ^{7}Li - ^{7}Be, ^{8}Li - ^{8}B, ^{9}Be - ^{9}B, ^{11}B - ^{11}C. We employ two microscopic three-cluster models to describe dynamics of these three-cluster systems. Energies of bound states, energies and widths of resonance states are obtained within the microscopic calculations by imposing proper boundary conditions for two- and three-cluster continuous spectrum states. Two parameters are introduced to quantify effects of the Coulomb interactions for resonance states. As the energy E and width Γ of the corresponding resonance states of the mirror nuclei are naturally to display on the E - Γ plane, these parameters determine a rotation and a shift. With the help of these parameters we found resonance states with strong, small and medium effects of the Coulomb interaction.