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## Effect of Isospin Averaging for $ppK^-$ Kaonic Cluster

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The kaonic cluster  $NN\bar{K}$  ( $s_{NN} = 0$ ) is modeled based on the configuration space Faddeev equations. The  $N\bar{K}$  interaction is given by isospin-dependent potentials having significant difference between singlet and triplet components. We show that the relation  $|E_3(V_{AA} = 0)| < 2|E_2|$  is satisfied, where  $E_2$  is the binding energy of the  $N\bar{K}$  subsystem and  $E_3(V_{AA} = 0)$  is the three-body binding energy, when interaction between identical particles is omitted,  $V_{NN}=0$ . Taking into account weak attraction of NN interaction, the relation leads to the evaluation  $|E_3(V_{AA}=0)| < 2|E_2|$ . The "isospinless model" for the kaonic cluster based on the isospin averaged  $N\bar{K}$  potential [1, 2, 3] demonstrates the opposite relation  $|E_3(V_{AA}=0)| > 2|E_2|$ . The isospin averaging leads to loosely bound  $NN\bar{K}$  system due to reduction of two-body threshold. Numerical calculations using phenomenological potentials will be presented.

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