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**Exotic few-body systems with a heavy meson** YASUHIRO YAMAGUCHI, RIKEN Nishina Center — Hadron as an impurity bound in nuclei causes interesting phenomena which do not emerge in normal nuclei. These effects would give us the information not only on the internal structure of the nuclei, but also on the changing properties of the impurity in the nuclear medium. The hadron-nucleus systems have been studied in the light flavor sector, especially. However, a strong attraction between a heavy meson (Dbar and B) and a nucleon, provided by the one pion exchange potential (OPEP), was suggested recently. The OPEP is enhanced by the heavy quark spin symmetry which induces the mass degeneracy between the heavy pseudoscalar and vector mesons. The attraction motivates us to investigate the Dbar (B) nuclei having the exotic flavor structure. Hence, these bound states are stable against the strong decay. We discuss the possible existence of exotic few-body states realized as DbarNN and BNN. The OPEP between the Dbar (B) meson and the nucleon N is considered. By solving coupled channel equations for PNN and P$^*$ NN channels (P (P$^*$) is the heavy pseudoscalar (vector) meson), we obtain new three-body bound states and resonances. In these states, the tensor force of the OPEP plays an important role to yield the attraction.

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