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## Flavor-singlet strange pentaquarks with hidden heavy quark pairs

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The recent experiments by LHCb indicates that the  $NJ/\psi-\Lambda_c\bar{D}-\Sigma_c\bar{D}$  or  $q^3c\bar{c}$  systems have a rich spectrum [1].

Theoretically also, it has been found that a quark cluster model, or a hadron model which includes the five-quark mode, gives narrow resonances or cusps in the  $Y_c\bar{D}$  scattering [2,3].

Such a structure appears because the three light quarks in the system can take a color-octet isospin-1/2 spin-3/2 configuration, in which the color-magnetic interaction becomes attractive comparing to the relevant threshold.

Here we discuss the strange pentaquark systems with the hidden heavy quark pair. The three light quarks now can also form a color-octet flavor-singlet spin-1/2 configuration. Then, the color magnetic interaction is more attractive than the isospin-1/2 case and causes a baryon-meson bound state. We argue that the pentaquarks with strangeness can be candidates of the exotic baryons.

[1] R.Aaij et al., [LHCb Collaboration], arXiv:1904.03947 [hep-ex].

[2] S.Takeuchi and M.Takizawa, Phys.Lett.B764, 254 (2017)

[3] Y.Yamaguchi, A.Giachino, et.al., Phys.Rev.D96,114031 (2017)

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