

618th ASRC Seminar

Date: 16:00 ~ 17:00 Friday, February 19

Location: KEK Tokai Campus No. 1 bldg.

Speaker: Dr. Sachiko Takeuchi
(Japan College of Social Work)

Title: Multiquark systems by a quark model

Abstract:

Recent LHCb experiments show us that there are two resonances in the $N\text{-}J/\psi$ channel, whose spin and parity are most probably $(3/2^- 5/2^+)$, or maybe $(3/2^+ 5/2^-)$, $(5/2^+ 3/2^-)$. In this talk, we present that there is a state which gains a large attraction from the color-magnetic interaction in the $uudc\bar{c}\bar{b}$ $I(J^P)=1/2(3/2^-)$ channel. This state may be seen as a resonance in the $N\text{-}J/\psi$ channel. We also found that there is an equally or more attractive state in the channel with strangeness, $udsc\bar{c}\bar{b}$, $I(J^P)=0(1/2^-)$. We would like to discuss the possibility to find it as a resonance in the $\Lambda\text{-}J/\psi$ or $\Lambda\text{-}\eta_c$ channel. We also would like to show a brief summary on the possibility that the 1^{++} $c\bar{c}\bar{b}$ component of the $X(3872)$ is seen in the $X(3872)$ radiative decay in the LHCb experiments.

なお、今回のセミナーは、第49回「原子核ハドロン物理セミナー」を兼ねております。またKEK, J-PARC素粒子原子核セミナーとの共催です。セミナー内容は http://silver.j-parc.jp/hadron/hadron_seminar/index.htmlでご覧になれます。

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