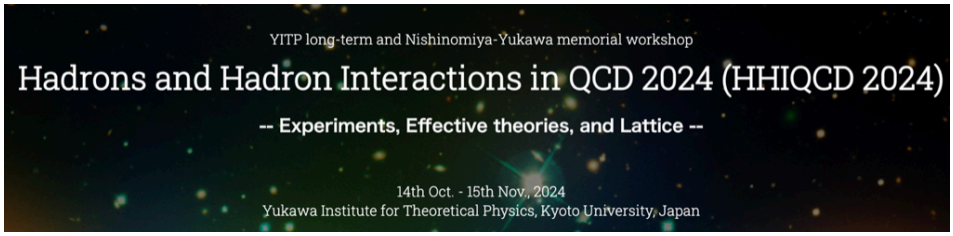

Contribution ID: **41** Type: **3rd week (Nishinomiya-Yukawa symposium)**

Study of multiquark states based on effective models

Monday, October 28, 2024 11:10 AM (1 hour)

We propose a chiral quark model including the ω and ρ meson contributions in addition to the π and σ meson contributions. We show that the masses of the ground state baryons such as the nucleon, Λc and Λb are dramatically improved in the model with the vector mesons compared with the one without them. The study of the tetraquark Tcc is also performed in a coupled channel calculation and the resultant mass is much closer to the experiment than the result without vector meson contribution. This approach could be applied in future study of multi-quark systems.
[references: Phys. Rev. D 108, 054025 (2023) & Eur. Phys. J. C 83, 12 (2023)]

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Session Classification: Nishinomiya-Yukawa workshop