Low-energy J/Psi-Hadron Interactions from Quenched Lattice QCD

Presenter: Yokokawa Kazuo
K.Yokokawa, S.Sasaki, A.Hayashigaki, T.Hatsuda
Abstract: The J/Psi-hadron interaction is an important input for studying the J/Psi suppression in hot hadronic matter and for studing the J/Psi propagation in nuclei. For this purpose, we measure the J/Psi-pi, J/Psi-rho and J/Psi-Nucleon scattering lengths by the quenched lattice QCD simulations with Wilson fermions at $\beta = 6.2$ on $32^3 \times 48$ and $24^3 \times 48$ lattices. Using Luscher's method of utilizing the finite lattice volume, we find attraction in the s-wave channel for all three systems. A possibility of J/Psi-Nucleon bound state is also discussed.