Contribution ID: **1912** Type: **Oral**

Bound states in an effective quark model with a nonlocal interaction

Tuesday 28 October 2025 14:30 (15 minutes)

The properties of light and heavy quark-antiquark bound states are investigated within a model featuring a nonlocal interaction. The framework is based on the Bethe-Salpeter equation with Gaussian-type vertex function that defines the nonlocal interaction kernel. The model parameters are constrained by experimental data on electromagnetic and leptonic decay constants. This model is used to calculate the neutral pion transition form factor $F_{\pi\gamma}$, as well as the transition form factors of heavy pseudoscalar mesons $_c$ and $_b$. Finally, radiative decays of the ρ-meson and heavy quarkonia are successfully described.

Author: ХМЕЛЄВ, Александр

Presenter: ХМЕЛЄВ, Александр

Session Classification: Theoretical Physics

Track Classification: Theoretical Physics