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New physics in Kaon

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Kaon physics is one of the most powerful probes of physics beyond the standard model (SM), and sensitive to high scale new physics.

The exciting topic in kaon physics which gets attention is the discrepancy in the direct CP violation in $K\to\pi\pi$ decays, ϵ'/ϵ . Current progress of lattice calculations enables us to predict the ϵ'/ϵ accurately, and the SM prediction for it appears to be significantly below the experimental data. This may suggest a new physics model providing enhancement of ϵ'/ϵ .

In this talk, I will discuss implications of ϵ'/ϵ anomaly and the correlation with other observables.

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