

Three flavour order parameters of chiral symmetry in low energy QCD

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The current state of knowledge of the order parameters, the quark condensate and the pseudoscalar decay constant in the chiral limit, will be reviewed, based on available phenomenological fits and lattice QCD calculations. It will be argued that while the theory is pretty well understood in the two flavour case, there is still a gap in the knowledge of the characteristics of the QCD vacuum in the three flavour one. Our results for the three flavour parameters obtained by a Bayesian statistical analysis of the decays of eta to three pions will be presented. A connection with the apparently terrible convergence of the decay widths in standard chiral perturbation theory will be discussed. Possible implications of a new analysis of subthreshold parameters of pion-pion scattering will be outlined.

Secondary track (number)

Primary authors: KOLESÁR, Marián (Charles University, Prague); Dr NOVOTNÝ, Jiří (IPNP, Charles University, Prague)

Presenter: KOLESÁR, Marián (Charles University, Prague)

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