ID de Contribution: **697** Type: **Parallel session talk**

F_\pi, \Lambda_MS and the Chiral Condensate from Renormalization Group Optimized Perturbation

vendredi 22 juillet 2011 11:00 (15 minutes)

A recent extension of a variationally optimized perturbation method, combined with renormalization group properties in a straightforward way, can provide a series of approximations to nonperturbative quantities such as the chiral symmetry breaking order parameters. We apply this to evaluate, up to the third order in this modified perturbation, the ratio F_\pi/\Lambda_MS
where F_\pi is the pion decay constant and \Lambda_MS the basic QCD scale in the MS scheme. We also obtain from a similar approach the chiral quark condensate. We compare our estimates of
\Lambda_MS and the chiral condensate with recent lattice calculation results.

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