

Abstract Submitted
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Is a generalized NJL model the effective action of massless QCD?

ALEJANDRO CABO, Department of Theoretical Physics, Instituto de Cibernetica, Matematica y Fisica, Havana, Cuba — A local and gauge invariant alternative version of QCD for massive fermions, which was proposed in a previous work, will be presented. It will be underlined that its action includes new vertices which eventually could had been overlooked before, because at first sight, they seem as breaking power counting renormalizability. However, the fact that these terms also modify the quark propagators, to become more convergent at large momenta, strongly suggests that theory is renormalizable. Accepting this view, surprisingly, it follows that all the four fermions terms constituting the Nambu-Jona-Lasinio models, can be included as counterterms in a slightly generalized renormalization procedure for massless QCD.

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