

Erratum: Spontaneous occurrence of a hierarchy of generation masses and quark mixing [JETP 82, 181–189 (1996)]

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In this paper, the ground state of a Nambu–Jona–Lasinio (NJL) type chiral quark model which is symmetric in n flavors was found. When a term N_c^{-1} with a large number N_c of colors was included in the gap equation, a solution with spontaneous breaking of both chiral and flavor symmetry (which would automatically distinguish a heavy generation among the initially symmetric quarks) was found. However, in this approximation Eq. (6) for the quark propagator would have to be solved for the self-energy $\Sigma(p^2)$ — a function of the momentum p^2 — and not for $\Sigma(p^2) = \text{const}$ (5), as was done in the paper (and “proved” on page 183 of the paper). Then, although a solution of the gap equation with the required properties once again exists (and in the N_c^{-1} approximation), it is unstable in the NJL model considered. All other physical consequences of the solution investigated (for the hierarchy of masses of the light generations and the mixing matrix) remain unchanged.