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## Chiral transition within effective quark models under magnetic fields

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We consider the simplest version of the Nambu–Jona-Lasinio model in the mean field approximation in order to analyze the chiral transition in hot and dense two flavor quark matter subject to strong magnetic fields. In the present work, one of the most important results is related to the analysis of how these features affect the phase coexistence region in the  $T$ - $\rho_B$  plane. We find that the coexistence boundary oscillates around the  $B = 0$  value for magnetic fields of the order  $eB < 9,5m\pi^2$ .

