

**Title:** Compact Stars and Magnetized CFL Matter

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**Abstract:** The stability of the color flavor locked phase in the presence of a strong magnetic field is investigated within the phenomenological MIT bag model. It is found that the minimum value of the energy per baryon in a color flavor locked state at vanishing pressure is lower than the corresponding one for unpaired magnetized strange quark matter and, as the magnetic field increases, the energy per baryon decreases. This implies that magnetized color flavor locked matter is more stable and could become the ground state inside neutron stars. The anisotropy of the pressures is discussed. The mass-radius relation for such stars is also studied.

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