

Title: Magnetic Field and Temperature Effects on Strangelets

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Source: International Journal of Modern Physics E-Nuclear Physics

Volume: 20 **Supplement:** 2

Pages: 42-49 **DOI:**10.1142/S0218301311040578 **Published:** Dec 2011

Abstract: The main properties of magnetized strangelets, namely, their energy per baryon, radius and electric charge, are studied in the unpaired strange quark matter phase. Temperature effects are taken into account in order to study their stability compared to the (56)Fe isotope and non-magnetized strangelets within the framework of the MIT bag model. It is concluded that the presence of a magnetic field tends to stabilize more the strangelets, even when temperature is considered. We find that the electric charge is modified in the presence of the magnetic field, leading to higher charge values for magnetized strangelets, when compared to the non-magnetized case.

Document Type: Article

Language: English

Author Keywords: Strangelets; Strange Quark Matter; Magnetic Field

KeyWords Plus: Finite-Temperature; Matter; Stars

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Publisher: World Scientific Publ

Address Publisher: Singapore I 596224, Singapore

IDS Number: 876GH

ISSN: 0218-3013