

Quantum magnetic collapse of a partially bosonized npe-gas: implications for astrophysical jets

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We study the quantum magnetic collapse of a partially bosonized npe-gas and obtain that this type of collapse might be one of the mechanisms behind matter expulsion out of compact objects. We check also that this gas might form a stable stream of matter whose collimation is due to its strong self-generated magnetic field. Possible astrophysical applications of these results, in particular related to jet formation and its maintenance, are discussed.

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