

Quantum Physics

Is magnetic flux quantized inside a solenoid?

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In some textbooks on quantum mechanics, the description of flux quantization in a superconductor ring based on the Aharonov-Bohm effect may lead some readers to a (wrong) conclusion that flux quantization occurs as well for a long solenoid with the same quantization condition in which the charge of cooper pair $2e$ is replaced by the charge of one electron e . It is shown how this confusion arises and how can one avoid it.

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