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Reverse circling supercurrents along a superconducting ring

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The reason why high temperature superconductivity has been being debated is that many basic ideas in literatures are wrong. This work shows that the magnetic flux quantum in a superconducting ring have been inaccurately explained in fact, thus we suggest a reinterpretation of the magnetic flux quantum in a superconducting ring on the basis of the translations of pairs. We also predict that the internal and external surface of a superconducting tube have the reverse circling supercurrents. This means that a more thick tube could trap a larger amount of flux. Both the magnetic flux quantum and the reverse circling supercurrents could not be found with the London equation.

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