Merger Bound States in $0 - \pi$ Josephson Structures

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The possible static distributions of magnetic flux in a $0 - \pi$ Josephson junction is described as a result of a nonlinear interaction between distributions of magnetic flux in "virtual" homogenous and π junctions. The influence of an external magnetic field on basic stability fluxons in a $0 - \pi$ Josephson junction is studied. The "virtual" junctions for basic stability fluxons are investigated.