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High performance simulation of the magnetization reversal phenomenon in the ⬚0 Josephson junction

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The φ0-Josephson junction model with direct coupling between magnetic moment and Josephson current is considered. In this framework, effect of the full magnetization reversal is numerically studied in the wide range of parameters of the model. The simulation is based on the implicit two-stage Gauss-Legendre algorithm of the 4th accuracy order. Effect of parallel execution of respective C++ computer code is demonstrated. Calculations have been carried out at the Heterogenius Platform "HybriLIT".

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