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Simulation of soliton foam formation in early Universe

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The formation of solitons foam in the early Universe in the model with two real scalar fields and potential having at least one saddle point and a local maximum is considered. The initial fields distribution is obtained by quantum fluctuations simulation in the framework of Starobinsky's inflation. The formation and evolution of domain walls bounded by strings and solitons foam are discussed in the numerical simulation in (3+1)-space-time. The possibility of PBHs formation in the model is also considereded.

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