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On backreaction effects in geometrical destabilisation of inflation

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We study the geometrical instability arising in multi-field models of inflation with negatively-curved field space. We analyse how the homogeneous background evolves in presence of geometrical destabilisation, and show that, in simple models, a kinematical backreaction effect takes place that shuts off the instability. We also follow the evolution of the unstable scalar fluctuations. We show that they assist the kinematical backreaction while remaining in the perturbative regime. We conclude that, in the simplest models of geometrical destabilisation, inflation does not end prematurely, but rather proceeds along a modified, sidetracked, field-space trajectory

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