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Shift-symmetric orbital inflation: single field or multi-field?

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Multi-field inflation with curved field manifold attracts a lot of attention recently. From theoretical aspect, this class of models may be more naturally realized in the UV completion of inflation. From observational point of view, however, the current constraints on primordial non-Gaussianity and isocurvature perturbation already/marginally ruled out many of these models. In this talk I will introduce a new class of two-field inflationary attractors, known as 'shift-symmetric orbital inflation'. It is strongly multi-field, but the phenomenology still mimics single-field inflation, since in the end only one degree of freedom (the one with isocurvature origin) is responsible for the prediction of primordial perturbations. This new regime of multi-field attractors provides a different perspective to explore UV completion of inflation, which is free from the problems faced by single field models.

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