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Galilean symmetry in the EFT of inflation: new shapes of non-Gaussianity

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We study the consequences of imposing an approximate Galilean symmetry on the Effective Theory of Inflation, the theory of small perturbations around the inflationary background. This approach allows us to study the effect of operators with two derivatives on each field, which can be the leading interactions due to non-renormalization properties of the Galilean Lagrangian. In this case cubic non-Gaussianities are given by three independent operators, containing up to six derivatives, two with a shape close to equilateral and one peaking on flattened isosceles triangles. The four-point function is larger than in models with small speed of sound and potentially observable with the Planck satellite.

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