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How to produce observable primordial gravitational waves

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A toy-model is presented, which considers two flat directions meeting at an enhanced symmetry point such that they realise the usual hybrid inflation mechanism. The kinetic term of the waterfall field features a pole at its Planckian vacuum expectation value (VEV), as in alpha-attractors. Consequently, after the phase transition which terminates hybrid inflation, the waterfall field never rolls to its VEV. Instead, it drives a period of “kination”, where the stiff barotropic parameter of the Universe $w=1/2$ results in a mild spike in the spectrum of primordial gravitational waves, which will be observable by the forthcoming LISA mission.

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