On flops and canonical metrics

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Abstract. This article is concerned with an observation for proving non-existence of canonical Kähler metrics. The idea is to use a rather explicit type of degeneration that applies in many situations. Namely, in a variation on a theme introduced by Ross-Thomas, we consider flops of the deformation to the normal cone. This yields a rather widely applicable notion of stability that is still completely explicit and readily computable, but with wider scope. We describe some applications in dimension two, among them, a proof of one direction of the Calabi conjecture for asymptotically logarithmic Del Pezzo surfaces.

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