

B-divisors and applications to dynamics

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Abstract: A b-divisor is a collection of divisors in all birational models of a fixed algebraic variety that are compatible under push-forward. It was introduced by Shokurov in his influential paper “prelimiting flips”. We intend to review the notion of b-divisors and develop a suitable theory of positivity and intersection of such objects. Standard applications of these techniques in algebraic geometry include the Zariski decomposition of divisors and the understanding of the volume of line bundles. We shall explain how b-divisors also intervene in problems in algebraic dynamics allowing to analyze in detail the growth of degrees of rational self-maps.