

Stabilization of the Frobenius push-forward and the F-blowup sequence

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Given a variety X in characteristic $p > 0$, the e -th F-blowup of X is defined to be the universal birational flattening of the e -times iterated Frobenius push-forward $F^e_* \mathcal{O}_X$ of the structure sheaf. The stabilization of the list of indecomposable summands of $F^e_* \mathcal{O}_X$ as e varies implies the stabilization of the F-blowup sequence. We will discuss these two properties in the simplest non-trivial cases, emphasizing computations in concrete examples.