DIRECT IMAGES OF PLURICANONICAL BUNDLES

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I will explain that well-known vanishing and generation results for direct images of dualizing sheaves have effective analogues for direct images of pluricanonical bundles. The generation properties are expressed as Fujita-conjecture type statements. These in turn govern a number of fundamental properties of pluricanonical bundles, like weak positivity, additivity of Iitaka dimension, or generic vanishing. This is joint work with Christian Schnell.