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Generic semi-positivity of orbifold cotangent bundles

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We show that the suitably defined cotangent bundle of a klt complex projective pair (X,D) is generically semi -positive in Miyaoka’s sense if its canonical bundle is pseudo-effective. The proof is in characteristic zero. We can then deduce, using [BCHM], that if (X,D) is log-smooth, and some tensor power of its cotangent bundle contains a big line bundle, then $K_X + D$ is big, which answers a conjecture of E.Viehweg motivated by his work with K.Zuo on families of canonically polarised manifolds. This is a joint work with M.Paun.

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