Mathematics > Algebraic Geometry

Minimal Model Program with scaling and adjunction theory

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Let (X,L) be a quasi polarized pairs, i.e. X is a normal complex projective variety and L is a nef and big line bundle on it. We study, up to birational equivalence, the positivity (nefness) of the adjoint bundles K_X + rL for high rational number r. For this we run a Minimal Model Program with scaling relative to the divisor K_X +rL. We give some applications, namely the classification up to birational equivalence of quasi polarized pairs with sectional genus 0,1 and of embedded projective varieties X < P^N with degree smaller than 2codim(X) +2.

Comments:	12 pages. Proposition 3.6 of the previous version was incomplete. Some proofs have been shortened. The paper will be published on International Journal of Mathematics
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