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Denominators of Igusa class polynomials.

Genus 2 curves with CM by a primitive quartic CM field K can be constructed from modular invariants which are values of certain Siegel modular functions evaluated at CM points associated to K . Those values are algebraic numbers in certain abelian extensions of the reflex field of K . Primes dividing the denominators of their minimal polynomials are primes where the genus 2 curve reduces to a product of elliptic curves. We provide explicit bounds on the primes appearing in the factorization of the denominators of the minimal polynomials.

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