



On a canonical class of Green currents for the unit sections of abelian schemes

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We show that on any abelian scheme over a complex quasi-projective smooth variety, there is a Green current for the zero-section, which is axiomatically determined up to ∂ - and $\bar{\partial}$ -exact differential forms. This current generalizes the Siegel functions defined on elliptic curves. We prove generalizations of classical properties of Siegel functions, like distribution relations, limit formulae and reciprocity laws.

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