1047-32-487   **Dror Varolin*** (`dror@math.sunysb.edu`), Department of Mathematics, Stony Brook University, Stony Brook, NY 11231. *An L^2 extension problem for affine algebraic varieties.*

We find necessary and sufficient conditions for extending holomorphic functions that are square integrable on the regular part of an affine algebraic hypersurface (i.e., a possibly singular subvariety of $\mathbb{C}^n$ cut out by a single polynomial) with respect to a smooth weight ϕ satisfying $c\sqrt{-1}\partial\bar{\partial}|z|^2 \leq \sqrt{-1}\partial\bar{\partial}\phi \leq C\sqrt{-1}\partial\bar{\partial}|z|^2$ for some constants $C > c > 0$. We also discuss the situation when the non-negative weight does not dominate a constant multiple of the Euclidean metric, and if time permits we will say something about the non-algebraic case. (Received February 03, 2009)

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