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Timothy E Goldberg* (goldberg@math.cornell.edu), Department of Mathematics, Malott Hall, Cornell University, Ithaca, NY 14850. *Singular reduction of generalized complex manifolds.*

In this paper we develop the analogue of Sjamaar and Lerman's singular reduction of Hamiltonian symplectic manifolds in the context of Hamiltonian generalized complex manifolds, in the sense of Lin and Tolman. Specifically, we prove that if a compact Lie group acts on a generalized complex manifold in a Hamiltonian fashion, then the stratification of the global quotient of the manifold by orbit types induces a stratification of the Lin–Tolman quotient, and each of these strata naturally inherits a generalized complex structure. (Received September 21, 2009)