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Christopher R Lee* (leec@up.edu), University of Portland, Buckley Center 262, MSC 60, 5000 N Willamette Blvd., Portland, OR 97203. *Uniqueness of folded symplectic toric manifolds*. Preliminary report.

A folded symplectic toric manifold is a $2n$ -dimensional manifold along with an effective action of the n -torus admitting a moment map with respect to a closed two-form that degenerates in a controlled fashion along a hypersurface. Unlike their symplectic counterparts, folded symplectic toric manifolds cannot be classified combinatorially. On the other hand, given Σ , a smooth surface with corners such that $H^2(\Sigma; \mathbb{Z}) = 0$, and an orbital moment map on Σ we prove that there is at most one orientable, folded four-dimensional symplectic toric manifold whose orbit space coincides with Σ . We also discuss how degree two cohomology classes of Σ parameterize isomorphism classes of folded symplectic toric four-manifolds. (Received September 23, 2009)