We consider the stability question for the rigidity part of the positive mass theorem. That is, consider a sequence of asymptotically flat manifolds with nonnegative scalar curvature whose masses are approaching zero. We explore in what sense such a sequence becomes closer to Euclidean space in the limit. Specifically, in some simple cases, we obtain the desired result where closeness is measured using Sormani and Wenger’s intrinsic flat topology. We discuss prospects for a more general theorem. I will summarize work from papers written in collaboration with Christina Sormani, Lan-hsuan Huang, and Huang and Sormani. (Received January 09, 2017)