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Kyler Bryce Siegel* (kylersiegel@gmail.com). *On Stein manifolds diffeomorphic to Euclidean space*. Preliminary report.

I will discuss work in progress which constructs exotic Stein manifolds (or equivalently Weinstein manifolds) which are diffeomorphic but not symplectomorphic to standard affine space. The main novelty is that these examples have vanishing symplectic cohomology, hence a new invariant is necessary. Recent previous work studied Stein manifolds with vanishing symplectic cohomology but nontrivial twisted or bulk deformed symplectic cohomology. However, these invariants require a nontrivial singular cohomology class and hence cannot be fruitfully applied to a contractible space. Instead, we introduce the idea of deforming symplectic cohomology by a Maurer-Cartan Reeb orbit. This idea is quite natural from the point of view of deformation theory but raises a number of tricky convergence issues. (Received February 11, 2018)