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Massachusetts Avenue, 2-492, Cambridge, MA 02139. *"Fake" symplectic manifolds via Lefschetz
fibrations.*

Stein manifolds are known to symplectic geometers as Liouville domains and are an especially nice class of open symplectic manifolds. I construct, in all odd complex dimensions, pairs of Liouville domains W_0 and W_1 which are diffeomorphic to the sphere cotangent bundle with one extra subcritical handle, but are not symplectomorphic. In fact, while W_0 is symplectically very similar to the cotangent bundle itself, W_1 is more unusual, and in particular contains no compact exact Lagrangian submanifolds. Constructions are given by explicit Lefschetz fibrations, and the proofs involve calculations of wrapped Floer homologies. (Received December 31, 2008)