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Melinda Lanius* (lanius2@illinois.edu), 1409 W Green Street, Urbana, IL 61801. *Exploding trousers and computing the intractable: An introduction to scattering-symplectic geometry.*

The study of symplectic manifolds is equivalent to studying non-degenerate Poisson manifolds. However, Poisson manifolds are much, much more general than the symplectic case. Our goal is to study Poisson structures that are degenerate, but which live close enough to the symplectic world that we can understand them using symplectic tools. We introduce scattering-symplectic manifolds, such a class of Poisson structure. Employing standard symplectic machinery, we construct a new type of cobordism and compute a usually intractable invariant: Poisson cohomology! (Received August 13, 2016)