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Joel W Fish* (joelfish.math@gmail.com), Stanford University, Mathematics Department, 450 Serra Mall, Building 380, Stanford, CA 94305. *Target-local Gromov-compactness for J -curves*. Preliminary report.

We discuss a version of Gromov-compactness which holds locally in the target symplectic manifold. Rather than considering the curves as holomorphically parameterized maps, we instead regard them as (almost) immersed sub-manifolds with arbitrarily many free boundary components in the boundary of a symplectic manifold. We provide applications to Symplectic Field Theory and degenerating connected sums in contact homology. (Received March 01, 2009)