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Matthew Gentry Durham* (mdurham@ucr.edu), **Yair Minsky** and **Alessandro Sisto**. *Stable cubulations in the mapping class group*.

As with much of geometric group theory, the study of the coarse geometry of the mapping class group has recently seen an influx of ideas coming from the world of CAT(0) cubical complexes. Perhaps most remarkably, Behrstock-Hagen-Sisto recently proved that the coarse convex hulls of finite sets of points in the mapping class group are coarsely modeled by cube complexes.

Using work of Bestvina-Bromberg-Fujiwara-Sisto, we improve their construction to build modeling cube complexes which remain coarsely stable under perturbation of the relevant data. As initial applications, we build a bicombing of the mapping class group and prove that finite sets admit coarse barycenters.

This is joint work with Yair Minsky and Alessandro Sisto. (Received January 24, 2019)