Ammon SI Lam* (lamsiyuen@gmail.com), 992 N 900 E Apt 28, Provo, UT 84604, and Lennard F Bakker. Existence of symmetric singular periodic brake orbits in fully symmetric planar four body problem. Preliminary report.

We investigate the existence of symmetric singular periodic brake orbits in the equal mass, fully symmetric planar four body problem. Using regularized coordinates, we remove the singularity of binary collision for each symmetric pair. We use topological and symmetry tools in our investigation. (Received February 13, 2016)