

1070-70-276

Elizabeth A Zollinger* (zollingerea@hiram.edu). *Minimizing orbits in the Newtonian 3-body problem.*

For the equal mass 3-body problem we use variational techniques to prove the existence of a family of orbits. As a one parameter family, the orbits foliate the shape sphere without passing through collision. One extreme looks like the classic comet, with the “comet” relatively far away from the other two. The other extreme comes close to the Schubart orbit, where one body goes back and forth between collisions with the other two. We will be especially interested in looking at how this family relates to the orbits presented numerically by Hénon and the collision orbit of Schubart. (Received February 14, 2011)