1046-70-256   **Elizabeth A Zollinger*** (`zollingerea@hiram.edu`), PO Box 233, Hiram, OH 44234. *A Family of Orbits in the Newtonian Three-Body Problem.*

Using variational techniques, I look at curves with three bodies of equal mass that have collinear initial position and, after a given time, end up in an isosceles configuration with a fixed amount of rotation. I find a family of periodic orbits extending from Meyer's classic extreme "comet" case to orbits where the "comet" passes close to both primaries. These orbits have the same topology which are deformed into each other without passing through collision. (Received August 24, 2008)