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and **James A Walsh*** (jim.a.walsh@oberlin.edu), J.A. Walsh, Department of Mathematics,
Oberlin College, Oberlin, OH 44074. *A Multi-Track Three Body Problem.*

In this talk we present an analysis of a multi-track three body problem. This work grew out of a research project completed by a group of undergraduates in a course on chaotic dynamical systems and fractals. This model was created in response to difficulties encountered in trying to understand the mathematics of the collinear three body problem. Consider three parallel lines in the plane, separated by a distance $\epsilon > 0$. Place one mass on each line, and let the system evolve under Newton's inverse square law of gravitation. We present results concerning the dynamics of this system. As the limiting $\epsilon = 0$ case yields the collinear three body problem, the multi-track problem can be viewed as a natural entry point for undergraduates interested in learning a bit about the intricate dynamics of the three body problem. (Received September 07, 2000)