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**Joseph M Burdis\*** (jmburdis@ncsu.edu) and **Irina A Kogan.** *begincenter Equivalence of Curves Under Generalized Weak Perspective Projection. endcenter.*

A generalized weak perspective projection is a parallel projection from the 3-dimensional space to a plane. The degrees of freedom include the direction of the parallel projection and the coordinate system on the plane. We provide a computational algorithm for deciding whether a given curve in 3-dimensional space and a given planar curve are related by a generalized weak perspective projection. A variation of this algorithm is applicable for deciding whether a given finite set of ordered points in 3-dimensional space and a given finite set of ordered points on a plane are related by a generalized weak perspective projection. The latter problem was solved by a different method by Arnold, Stiller, and Sturtz in 2006. The problem is motivated by applications in computer image recognition. (Received September 14, 2009)