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Maya Chhetri* (maya@uncg.edu), Department of Mathematics and Statistics, UNC Greensboro, Greensboro, NC 27402, and **Petr Girg**. *Continua of solutions for asymptotically linear systems of three equations.*

We will consider an asymptotically linear system of three semilinear equations satisfying Dirichlet boundary conditions. The nonlinear perturbations are Carathéodory functions that are bounded by some appropriate nonnegative function. There are only two simple eigenvalues, associated to the linear part, whose corresponding eigenfunctions are componentwise nonnegative. We will discuss bifurcation of positive solutions from infinity from these simple eigenvalues. In particular, we will provide sufficient conditions under which the system has bifurcation of positive solutions (from infinity) from both, one, or none of the simple eigenvalues. (Received September 16, 2014)