1073-35-170 **N. Mavinga*** (`mavinga@swarthmore.edu`), Department of Mathematics and Statistics, Swarthmore College, Swarthmore, PA 19081-1390, and **M. N. Nkashama**, Department of Mathematics, University of Alabama at Birmingham, Birmingham, AL 35294-1170. *Generalized Eigenproblem and Nonlinear Elliptic Equations at Resonance.*

We consider a generalized Steklov-Robin eigenproblem (with possibly singular weights) in which the spectral parameter is both in the differential equation and on the boundary and prove existence results for nonlinear elliptic equations when both nonlinearities in the differential equation and on the boundary interact, in some sense, with the generalized spectrum. The proofs are based on variational methods, a priori estimates and topological degree techniques. (Received August 01, 2011)