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Nsoki Mavinga* (nmaving1@swarthmore.edu), **Quinn A. Morris** (morrisqa@appstate.edu) and **Stephen B. Robinson** (sbr@wfu.edu). *Existence Results for Nonlinear Perturbations of Asymmetric Spectrum with Weights.*

We consider a nonlinear elliptic equations with nonlinear boundary conditions and prove existence theorems for both the resonance and nonresonance cases relative to the asymmetric Spectrum with weights. For the resonance case, we provide a sufficient condition, the so-called generalized Landesman-Lazer condition, for the solvability. The proofs are based on variational methods and rely strongly on the variational characterization of the Spectrum. (Received September 13, 2020)