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Stephen B Robinson* (sbr@wfu.edu), **Pavel Drabek** and **Quinn Morris**. *Resonance results on the Fucik Spectrum.*

Consider the problem

$$\begin{aligned} -\Delta u &= au^+ - bu^- + g(u) + h, \text{ in } \Omega \\ u|_{\partial\Omega} &= 0, \end{aligned}$$

where Ω is a smooth bounded domain, $g(u)$ is a continuous function satisfying a sublinear growth condition, $h \in L^2(\Omega)$, and (a, b) is a pair of real numbers on the well-known Fucik Spectrum, Σ . Building upon a recent variational characterization of Σ due to Castro and Chang, we prove the existence of at least one weak solution subject to a generalized Landesman-Lazer condition. The proof applies linking theory and characterizes the solution as a saddle point. We also indicate how our results generalize to a broader class of quasilinear problems. (Received September 25, 2012)