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Brian P. Johnson* (bpjohnson@fgcu.edu), Department of Mathematics, Florida Gulf Coast University, 10501 FGCU Blvd. S., Fort Myers, FL 33965-6565, and **Katherine Cooper** (k.cooper@uky.edu), Department of Mathematics, University of Kentucky, 719 Patterson Office Tower, Lexington, KY 40506-0027. *Zero divisor graphs of commutative graded rings.*

We study a natural generalization of the zero divisor graph introduced by Anderson and Livingston, extended to commutative rings graded by abelian groups by considering only homogeneous zero divisors. We develop a basic theory for graded zero divisor graphs and present many examples. Finally, we examine classes of graphs that are realizable as graded zero divisor graphs and close with some open questions. (Received September 20, 2016)