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**Ryan S. Gantner\*** ([gantner@math.umn.edu](mailto:gantner@math.umn.edu)), 127 Vincent Hall, 206 Church Street SE, Minneapolis, MN 55455. *Extinction of Generalized Branching Annihilating Random Walks*. Preliminary report.

Introduced in the mid 1980's, branching annihilating random walks have found widespread applications in the physics community. However, relatively few rigorous results have been proved for these processes. In this talk, we will generalize the branching annihilating random walk model to accommodate random offspring placement. We will prove rigorously that there is a nontrivial sector of the parameter space for which extinction is almost surely guaranteed, as long as the number of offspring is even. The method of proof not only gives this result, but also provides methods for computing other statistics, such as the rate of extinction, expected width of the process, and the interesting differences between having even and odd numbers of offspring. (Received September 19, 2005)