James M. Carraher* (carraherjm2@unk.edu), David Galvin, Stephen G. Hartke, A. J. Radcliffe and Derrick Stolee. Independence ratio of distance graphs.

A distance graph is an infinite graph whose vertex set is the integers and two integers are adjacent if their distance is in a prescribed distance set. We investigate the density of independent sets in finitely-generated distance graphs. We search for periodic sets to provide lower bounds and use discharging arguments to find upper bounds. Using this method we are able to determine the exact density for many generator sets and present several conjectures. (Received January 28, 2015)