1137-18-168 Victor William Summers\* (vwsummer@ncsu.edu), NC State Department of Mathematics, PO Box 8205, Raleigh, NC 27695, and Radmila Sazdanovic (rsazdanovic@math.ncsu.edu), NC State Department of Mathematics, PO Box 8205, Raleigh, 27695. On Magnitude Homology. Preliminary report.

Many mathematical constructions come equipped with a canonical measure of size; the cardinality of a set, Euler characteristic of a topological space, dimension of a vector space, to name just three. T. Leinster added magnitude of a metric space to this list of cardinality-like invariants. Graphs, when regarded as metric spaces, admit magnitude. R. Hepworth and S. Willerton went on to categorify the magnitude of graphs, realizing the invariant as the Euler characteristic of a bigraded homology theory; magnitude homology. In this talk we will introduce magnitude homology, describe structural results for some special types of graph, and discuss conjectures based on computational results. (Received February 02, 2018)