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Heather A Dye* (hadye@mckendree.edu), **Louis Kauffman** and **Aaron Kaestner**. *Khovanov homology for virtual knots*. Preliminary report.

We define a Khovanov homology for virtual knots with integer coefficients. Virtual crossings introduce the possibility of a 1-1 bifurcation: changing the smoothing type of crossing in a virtual knot or link does not always change the number of components in the smoothed states. As a result, we need to redefine the boundary maps in the homology theory and prove that invariance still holds. (Received January 19, 2012)