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Radmila Sazdanovic* (rsazdanovic@math.ncsu.edu), Department of Mathematics, NC State, SAS Hall PO Box 8205, Raleigh, NC 27695, and **Martha Yip**. *A categorification of the chromatic symmetric function.*

The Stanley chromatic symmetric polynomial X_G of a graph G is a symmetric function generalization of the chromatic polynomial, and has interesting combinatorial properties. We apply the techniques of Khovanov homology to construct a homology of bigraded S_n -modules, whose bigraded Frobenius series reduces to the chromatic symmetric polynomial at $q = t = 1$. We also obtain analogues of several familiar properties of the chromatic symmetric polynomial in terms of homology, including the decomposition formula for X_G discovered recently by Orellana and Scott, and Guay-Paquet. (Received August 28, 2018)