1021-05-43 **Patricia Hersh*** (phersh@indiana.edu), Patricia Hersh, Dept. of Math, Indiana University, Rawles Hall, Bloomington, IN 47405, and **Edward Swartz** (ebs@math.cornell.edu), Department of Mathematics, Cornell University, Ithaca, NY 14853. *Coloring complexes and arrangements.*

We provide a convex ear decomposition for the coloring complex of any finite graph and for some related simplicial complexes. As a consequence, we deduce new constraints on the chromatic polynomials of all finite graphs, by using a formula of Steingrimsson which relates the chromatic polynomial of a finite graph to the h-polynomial of the double cone of its coloring complex. (Received September 04, 2006)