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Valerie M Hower* (vhower@math.uga.edu). *\mathbb{Z}_2 Homology of Singular Real Toric Varieties*. Preliminary report.

Bihan, Franz, McCrory, and van Hamel defined a spectral sequence which converges to the ordinary \mathbb{Z}_2 homology of the real points of a toric variety. The authors have conjectured that this spectral sequence collapses for all toric varieties. Projective toric varieties are described by lattice polytopes. I will discuss how certain properties of the lattice polytope affect the E^2 term of this spectral sequence, and I will give a sufficient condition for the homology groups up to dimension k to be generated by algebraic cycles. If time permits, I will discuss the collapsing of the spectral sequence for some singular toric varieties. (Received September 25, 2006)