999-57-66   **Boris Okun*** (`okun@uwm.edu`). *On Singer Conjecture for Coxeter groups.*

A conjecture of Singer states that the reduced L^2-cohomology of the universal cover of an aspherical manifold vanishes except possibly in the middle dimension. Associated to any finite flag complex L there is a right-angled Coxeter group W_L and a contractible cubical complex Σ_L (the Davis complex) on which W_L acts properly and cocompactly, and such that the link of each vertex is L. It follows that if L is an $(n-1)$-sphere, then Σ_L is a contractible homology n-manifold. We prove the Singer Conjecture (and its generalization for the weighted L_q^2-cohomology) for Σ_L when L is the barycentric subdivision of a triangulation of a $(2k-1)$-sphere. (Received August 04, 2004)