1037-57-266   **Radmila Sazdanović*** (`radmila@gwu.edu`), The George Washington University, Mathematics Department, Monroe Hall room 240, Washington, DC 20052, and **Jozef H. Przytycki** (`przytyck@gwu.edu`), The George Washington University, Mathematics Department, Monroe Hall Room 240, Washington, DC 20052. *Torsion in Khovanov homology of semi-adequate links.* Preliminary report.

Alexander Shumakovitch conjectured (2003) that any link which is not a connected or disjoint sum of Hopf links and trivial links has torsion in Khovanov homology. Shumakovitch proved the conjecture for alternating links and J. Przytycki and M. Asaeda generalized it for a large class of adequate links (including strongly adequate links). We extend the result to +-adequate links D, whose +-adequate diagram D has an associated s+-state graph $G_{s+}(D)$ with a cycle of length at least 3. This result is obtained by approximating Khovanov homology of D by chromatic (Helme-Guizon-Rong) cohomology of $G_{s+}(D)$. In particular, we analyze positive braid links in greater detail. Moreover, we prove that for a connected simple graph G of v vertices and cyclomatic number p_1, $tor H_{A_2}^{2,v-2}(G)$ is equal to $Z_2^{p_1}$ for G a bipartite graph and $Z_2^{p_1-1}$ otherwise. (Received February 04, 2008)