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Jozef H. Przytycki* (przytyc@gwu.edu), Department of Mathematics, George Washington University, Washington, DC 20 052. *Geometric realization of partial presimplicial sets and the almost extreme Khovanov homology.*

We say that (X_n, d_i) is a partial presimplicial set if

- (1) (kX_n, d_i) is a presimplicial module, that is $d_i d_j = d_{j-1} d_i$ for $i < j$, and
- (2) for any $x_n \in X_n$ we have $d_i(x_n) \in X_{n-1}$ or $d_i(x_n) = 0$.

Almost presimplicial set allows a standard geometric realization: if $d_i(x_n) = 0$ then the i th face of $x_n \times \Delta^n$ is contracted. We show that almost extreme Khovanov homology of a B -adequate link can be obtained from an almost presimplicial set giving a finite CW complex geometric realization. In particular we show that for the trefoil knot its geometric realization is a projective plane, RP^2 . We conjecture that the geometric realization will be homotopy equivalent either to S^m or the suspension $\Sigma^{m-2}RP^2$ depending on whether the B -state graph is bipartite or contains an odd cycle. $m + 1$ is the number of crossings of considered link diagram. For example for the figure eight knot we obtain ΣRP^2 . We outline a proof of the conjecture which is based on the previous work of R.Sazdanovic and M.Silvero with the author. (Received February 28, 2017)