1135-05-865 **Kara Stasikelis*** (stasike@g.clemson.edu), Department of Mathematics, Clemson University, O-110 Martin Hall, Clemson, SC 29634, and **Svetlana Poznanovic**. *Properties of the Promotion Markov Chain on Linear Extensions.*

The Tsetlin library is a model for the way an arrangement of books on a library shelf evolves over time. It assumes that, given n books, one book is read and returned at the end of the shelf before another one is picked up. Suppose the probability that a book i is picked up is x_i. An interesting property of this Markov chain is that its eigenvalues can be computed exactly and they are linear in the x_i's. This result has been generalized in various ways by various people. In this work, we investigate the extended promotion Markov Chain introduced by Ayyer, Klee, and Schilling in 2014. They showed that for a poset that is a rooted forest, the transition matrix has eigenvalues that are linear in $x_1, \ldots, x_n$. We show the same result for a larger class of posets. (Received September 15, 2017)