1077-05-2257   **John D Berman*** (`jberm@mit.edu`). *Cyclic Closures of Finitely Simple Pattern Classes.*

A pattern class is a lower set in the poset of permutations ordered by pattern involvement, and may be defined as the avoidance set of a minimal basis of permutations. I show that a pattern class X containing only finitely many simple permutations has cyclic closure which contains only finitely many proper pin permutations. In the case that the basis elements of X avoid certain explicit classes of permutations, I extend this result to show that the cyclic closure of X itself contains only finitely many simple permutations and therefore has finite basis. (Received September 21, 2011)