1117-05-440   **Gregory S Warrington***, Department of Mathematics & Statistics, University of Vermont, 16 Colchester Ave., Burlington, VT 05401, and **Nicholas A Loehr**. *Quasisymmetric expansions of cycle indices.* Preliminary report.

The cycle index of a subgroup G of S_n is known to be Schur positive by representation-theoretic reasons. As such, it has a positive expansion in terms of fundamental quasisymmetric functions. Such an expansion has a natural interpretation in terms of colorings for which the symmetries in G are taken into account. We derive the quasisymmetric expansions for certain subgroups G and discuss some of the issues that arise in attempting to determine a framework for arbitrary G. (Received January 18, 2016)