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Harald E Ellers* (ellers@math.niu.edu), Dept. of Mathematics, Northern Illinois University, DeKalb, IL 60115. *The symmetric group in the search for more general weight conjectures.*

Preliminary report.

Let S_n be the symmetric group of degree n . Identify S_{n-1} with the subgroup of S_n consisting of all elements fixing n . Let k be a field of finite characteristic p . Let A be the centralizer in the group algebra kS_n of kS_{n-1} . We will discuss recent progress on two problems.

1. Find all simple A -modules.
2. Relate the number of non-projective simple A -modules to p -local information.

These problems are part of a program exploring the possibility that Alperin's weight conjecture and Brauer's First Main Theorem are both special cases of a more general phenomenon. (Received October 03, 2000)