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Trevor Nakamura* (trnakamu@uark.edu). *Classification of the quotient of the braid group by the level 4 braid group.*

Results of Kordek and Margalit show the quotient of the braid group by the level 4 braid group is an extension of the symmetric group by $\mathbb{Z}_2^{\binom{n}{2}}$ under the standard action of S_n on unordered pairs. Eilenberg and MacLane proved extensions of a group can be classified by low dimensional cohomology of classifying spaces. In this talk I will construct a representative of the 2 cocycle which classifies this extension of the symmetric group. (Received January 16, 2021)