

ABSTRACT. The Peiffer product of groups first arose in work of J.H.C. Whitehead on the structure of relative homotopy groups, and is closely related to problems of asphericity for two-complexes. We develop algebraic methods for computing the second integral homology of a Peiffer product. We show that a Peiffer product of superperfect groups is superperfect, and determine when a Peiffer product of cyclic groups has trivial second homology. We also introduce a double wreath product as a Peiffer product.