1007-20-223 **Craig Jensen*** (jensen@math.uno.edu), Mathematics Department, University of New Orleans, New Orleans, LA 70148, and **Jon McCammond** and **John Meier**. *The Euler characteristic of the Whitehead automorphism group of a free product.*

A combinatorial summation identity over the lattice of labelled hypertrees is established that allows one to gain concrete information on the Euler characteristics of various automorphism groups of free products of groups. In particular, we establish formulae for the Euler characteristics of: the group of Whitehead automorphisms $WH(*_{i=1}^{n} G_i)$ when the G_i are of finite homological type; $AUT(*_{i=1}^{n} G_i)$ and $OUT(*_{i=1}^{n} G_i)$ when the G_i are finite; and the palindromic automorphism groups of finite rank free groups. (Received February 22, 2005)