1086-20-1051 **Wade Mattox*** (wade.mattox@salem.edu). *Homology of Group Von Neumann Algebras.*

This work investigates the connections between properties of groups G and properties of their group von Neumann algebras N(G). In particular, the module-theoretic properties of N(G) over the complex group ring are studied. It is conjectured that N(G) is dimension-flat if and only if G is amenable, and this conjecture is still open. Relatedly, it is also conjectured that N(G) is flat if and only if G is locally virtually cyclic. I have proved this result for a subclass of elementary amenable groups and various other special cases. The known results concerning these conjectures will be discussed, as well as the cases which are still unproven. (Received September 18, 2012)