

1059-05-65

**Tricia Muldoon Brown\***, Armstrong Atlantic State University, Department of Mathematics, 11935 Abercorn St, Savannah, GA 31419. *The Rees product and cubical complexes*. Preliminary report.

In this preliminary report, we discuss the action of the Rees product with a chain on the face lattice of the cubical complex consisting of two  $d$ -dimensional cubes joined at a  $(d-k)$ -dimensional face. The resulting complex is a wedge of  $m$  spheres of dimension  $d$  where  $m$  is given by a sum of the Möbius functions of the Rees products of the  $d$  and  $(d-k)$ -dimensional cubical lattices with the chain. These results can be generalized to certain complexes which are homotopic to a wedge of  $k$ -spheres and further to the Rees product of the face lattices of these complexes with a  $t$ -ary tree. (Received February 15, 2010)