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**Michelle L Wachs\*** ([wachs@math.miami.edu](mailto:wachs@math.miami.edu)), Department of Mathematics, University of Miami, Coral Gables, FL 33124, and **John Shareshian**. *Topology of Rees products of posets and multiset derangements*. Preliminary report.

The notion of Rees products of posets was introduced by Björner and Welker in their study of connections between poset topology and commutative algebra. They conjectured and Jonsson proved that the Rees product of a truncated Boolean algebra and a chain has the homotopy type of a wedge of  $d_n$  spheres of dimension  $n - 1$ , where  $d_n$  is the  $n$ th derangement number. In a previous paper we obtained a  $q$ -analog and type B analog of this result. In this paper we extend the result in yet another direction by replacing the Boolean algebra by any product of chains and the derangement numbers by multiset derangement numbers. We also obtain various analogs of the chain product result. (Received February 24, 2010)