1011-05-208 **Jianmin Ma*** (jianmin.ma@emory.edu), Oxford College of Emory University, Oxford, GA 30054.

A new method of finding fusion schemes. Preliminary report.

We present a method to construct commutative fusion schemes for a non-commutative scheme X. It exploits "double product" homomorphic images of the underlying adjacency algebra of X. This leads to "lifting" issues that are addressed combinatorially.

This method is applied to the centralizer algebra of $S_b^l \leqslant S_{lb}$, where S_n denotes the symmetric group of degree n and S_b^l is the direct product of l copies of S_b. The case $l = b = 3$ is studied in detail and several new commutative fusion schemes are found in this 55-dimensional algebra. (Received August 27, 2005)