

Meeting: 1003, Atlanta, Georgia, AMS CP 1, AMS Contributed Paper Session

1003-05-1224 **Zhongyuan Che*** (zxc10@psu.edu), Penn State Beaver - Math, 100 University Drive, Monaca, PA 15061, and **Karen Collins** (kcollins@wesleyan.edu), Math Department, Wesleyan University, Middletown, CT 06459. *Cartesian product Cores with Mycielski construction graphs*. Preliminary report.

A graph homomorphism between graphs G and H is a map from $V(G)$ to $V(H)$ that preserves adjacency property. A graph G is called a core if there is no graph homomorphism from G to any its proper induced subgraphs. In this talk, we give a proof to construct cartesian product cores from graphs that have a vertex which is fixed under any of its automorphisms. In particular, the box product $M(G)\square M(G)$ is a core if $M(G)$ is a core, where $M(G)$ is the graph resulting from the Mycielski construction on G . (Received October 04, 2004)