

1077-05-1945

**Peter Hamburger, Alexandr V. Kostochka and Christopher Stocker\***

([christopher.stocker@wku.edu](mailto:christopher.stocker@wku.edu)), Department of Mathematics, Western Kentucky University,  
1906 College Heights Blvd. # 11078, Bowling Green, KY 42101. *A hypergraph version of a graph  
packing theorem by Bollobás and Eldridge.*

Two  $n$ -vertex hypergraphs  $G$  and  $H$  *pack* if there is a bijection  $f: V(G) \rightarrow V(H)$  such that for every edge  $e \in E(G)$ , the set  $\{f(v): v \in e\}$  is not an edge in  $H$ . Sauer and Spencer showed that any two  $n$ -vertex graphs  $G$  and  $H$  with  $|E(G)| + |E(H)| < \frac{3n-2}{2}$  pack. Bollobás and Eldridge proved that, with 7 exceptions, if graphs  $G$  and  $H$  contain no spanning star and  $|E(G)| + |E(H)| \leq 2n - 3$ , then  $G$  and  $H$  pack. We generalize the Bollobás – Eldridge result to hypergraphs containing no edges of size 0, 1,  $n - 1$ , or  $n$ . As a corollary we get a hypergraph version of the Sauer – Spencer result. (Received September 21, 2011)