## 1146-05-81 **Jessica McDonald** and **Gregory J. Puleo\***, gjp0007@auburn.edu, and **Craig Tennenhouse**. Packing and covering directed triangles.

We prove that if a directed multigraph D has at most t pairwise arc-disjoint directed triangles, then there exists a set of less than 2t arcs in D which meets all directed triangles in D, except in the trivial case t = 0. This answers affirmatively a question of Tuza from 1990. (Received January 08, 2019)