962-05-1002 Garth Isaak (gisaak@lehigh.edu), Department of Mathematics, Lehigh University, 14 E Packer Ave, Bethlehem, PA 18015, and Darren A. Narayan* (dansma@rit.edu), Department of Mathematics and Statistics, Rochester Institute of Technology, 85 Lomb Memorial Dr, Rochester, NY 14623. A Complete Classification of Tournaments Having a Disjoint Union of Directed Paths as a Minimum Feedback Arc Set.

A tournament is a directed graph where for each pair of vertices x,y only one of the arcs (x,y) or (y,x) is present. A minimum feedback arc set of a digraph is a smallest sized set of arcs that when reversed makes the resulting digraph acyclic. We present necessary and sufficient conditions for a tournament to have a disjoint union of directed paths as a minimum feedback arc set. (Received September 30, 2000)