

THE AHARONI-KORMAN CONJECTURE FOR PARTIALLY SEMI-WELL ORDERED SETS

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ABSTRACT. Aharoni and Korman (Order 9 (1992), 245-253) conjectured that every partially ordered set with no infinite antichain has a chain and an antichain partition such that each part intersects the chain exactly once. For a partially ordered set (X, \leq) and a subset Y of X , a subset M of Y is called a minimal (or maximal) subset of Y if: (i) every element m in M is a minimal (or maximal) element of Y and (ii) for each y in Y , there exists an element m in M such that $m \leq y$ (or $m \geq y$). We verify the conjecture for partially semi-well ordered sets—a class of partially ordered sets in which every non-empty subset has either a finite minimal subset or a finite maximal subset.