Jill Faudree* (jrfaudree@alaska.edu), Department of Mathematics and Statistics, University of Alaska Fairbanks, Fairbanks, AK 99775-6660, and Ralph J Faudree, Paul Horn, Ron Gould and Michael Jacobson. Degree Sum and Vertex Dominating Paths.

A graph G is called H - saturated if G contains no copy of H, but for any edge e in the complement of G, the graph G + e contains some copy of H. The minimum size of an n-vertex H-saturated graph is denoted by sat(n; H) and is called the saturation number of H. Kászonyi and Tuza determined the values of sat(n; H) when H is a path or a disjoint union of edges. In this paper, we determine the values of sat(n; H) for the disjoint union of paths (a linear forest) within a constant depending only on H. Moreover, we obtain exact values for some special classes and include several conjectures. (Received August 25, 2015)