Meeting: 999, Nashville, Tennessee, SS 14A, Special Session on Graph Theory and Matroid Theory

999-05-253 **Guantao Chen** and **Ralph Faudree*** (rfaudree@memphis.edu), Provost Office, Administration Building 360, University of Memphis, Memphis, TN 38152, and **Ronald Gould**, **Michael Jacobson**, **Linda Lesniak** and **Florian Pfender**. *Hamiltonian Graphs and Linear Forests.*

Given integers k, s, t with $0 \leq t \leq s$ and $k \geq 0$, a (k, s, t)-linear forest F is a graph that is the vertex disjoint union of s paths with k edges and with t of the paths being single vertices. A graph G is (k, s, t)-hamiltonian if for any (k, s, t)-linear Forest F there is a hamiltonian cycle of G containing F. Given an integers m and n with $k + s \leq m \leq n$, a graph G of order n is (k, s, t, m)-pancyclic if for any (k, s, t)-linear forest F and any integer r with $m \leq r \leq n$, there is a cycle of length r containing the linear forest F. Minimum degree conditions and minimum sum of degree conditions of nonadjacent vertices that imply a graph is (k, s, t)-hamiltonian and conditions that imply a graph is (k, s, t, m)-pancylic are proved. (Received August 24, 2004)