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Jeong-Hyun Kang* (kang@math.ucf.edu), University of Central Florida, Department of Mathematics, 4000 Central Florida Blvd., Orlando, FL 32816. *On $L(2,1)$ -labeling of graphs.*

A nonnegative-integer coloring f of the vertices of a graph G is an $L(2,1)$ -labeling if $|f(u) - f(v)| \geq 2$ for each edge uv and $|f(u) - f(v)| \geq 1$ for each pair $u, v \in V(G)$ at distance 2. The $L(2,1)$ -labeling span of G , denoted by $\lambda(G)$, is the smallest number t such that G has an $L(2,1)$ -labeling using no label larger than t . Griggs and Yeh (1992) conjectured that always $\lambda(G) \leq (\Delta(G))^2$. In this talk, we prove this for 3-regular Hamiltonian graphs. If time permits, we prove the exact λ number for the incidence graph of every projective plane by showing a result about packing of bipartite graphs that is analogous to the result of Sauer and Spencer for packing of graphs in general. (Received September 28, 2005)