1086-VN-1073   **Katherine Benson*** (`katherine-f-benson@uiowa.edu`), 14 MacLean Hall, University of Iowa, Iowa City, IA 52242. *Improved Lower Bounds of Radio Numbers for Some Trees.* Preliminary report.

A radio labeling of a simply connected graph G with diameter D is a function $f : V(G) \to \mathbb{Z}^+$ such that for every two distinct vertices u and v of G, the radio condition, $d(u,v) + |f(u) - f(v)| \geq D + 1$, is satisfied. The radio number of a graph G is the smallest integer m for which there exists a radio labeling f with $f(v) \leq m$ for all $v \in V(G)$. In this talk, we will establish a method for finding a reasonable lower bound for the radio number of certain types of tree graphs. (Received September 18, 2012)