Suman Balasubramanian* (sb333@msstate.edu), Department of Mathematics and Statistics, Mississippi State University, Mississippi State, MS 39762-9715, and Edward Dobson (dobson@math.msstate.edu), Department of Mathematics and Statistics, Mississippi State University, Mississippi State, MS 39762-9715. On the Erdos- Sos and Komlos Sos Conjecture for graphs without a $K(2,s)$.

Let $s > 2$ be an integer and $k > 12(s - 1)$ an integer. We give a necessary and sufficient condition for a graph $G$ containing no $K_{2,s}$ with and to contain every tree $T$ of order $k + 1$. We then show that every graph $G$ with no $K_{2,s}$ and average degree greater than $k - 1$ satisfies this condition, improving a result of Haxell, and verifying a special case of the Erdős - Sós conjecture, which states that every graph of average degree greater than $k - 1$ contains every tree of order $k + 1$. We also give some preliminary results on the Komlos- Sós Conjecture that states that Let $k$ be a positive integer. If at least half the vertices of a graph $G$ have degree at least $k$, then $G$ contains as subgraphs all trees of size $k$. (Received September 13, 2008)