On the Erdős-Sós Conjecture for graphs with diameter at most $k+2$

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Let G be a graph with average degree greater than $k-2$. Erdős and Sós conjectured that G contains every tree on k vertices as a subgraph. The $circumference$ of G is the length of a longest cycle in G. In this paper, we prove that the Erdős-Sós conjecture holds for graphs with circumference at most $k+2$.

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