Ramsey families of subtrees of the dyadic tree.

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Abstract. We show that for every rooted, finitely branching, pruned tree T of height ω there exists a family $\mathcal{F}$ which consists of order isomorphic to T subtrees of the dyadic tree $C = \{0,1\}^{<\mathbb{N}}$ with the following properties: (i) the family $\mathcal{F}$ is a G_δ subset of 2^C; (ii) every perfect subtree of C contains a member of $\mathcal{F}$; (iii) if K is an analytic subset of $\mathcal{F}$, then for every perfect subtree S of C there exists a perfect subtree S' of S such that the set $\{A \in \mathcal{F} : A \subseteq S'\}$ either is contained in or is disjoint from K. Our result simultaneously extends Louveau-Shelah-Veličković theorem as well as Stern's theorem for broader classes of subtrees of the dyadic tree.