Minimal bases in actions of simple groups

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Let G be a permutation group on a set Ω. A *base* for (G, Ω) is a subset $B \subseteq \Omega$ whose pointwise stabilizer $G_{(B)}$ is trivial; B is *minimal* if $G_{(B-\{b\})}$ is non-trivial for all $b \in B$. Bases arise naturally in computational group theory, and minimal bases are of particular importance. In this talk, we consider bases for primitive actions of finite almost simple groups. We present some new results on the size of minimal bases for such actions and report on recent progress towards an explicit version of the base size conjecture of Cameron and Kantor.