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Intersections of orbits of self-maps with subgroups in semiabelian varieties

Let G be a semiabelian variety defined over an algebraically closed field K, endowed with a rational self-map Φ . Let $\alpha \in G(K)$ and let $\Gamma \subseteq G(K)$ be a finitely generated subgroup. We show that the set $\{n \in \mathbb{N} : \Phi^n(\alpha) \in \Gamma\}$ is a union of finitely many arithmetic progressions along with a set of Banach density equal to 0. In addition, assuming Φ is regular, we prove that the set S must be finite.