Dynamics of Distal Actions on Locally Compact Groups

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Let G be a locally compact group and let Γ be a semigroup in $\mathrm{Aut}(G)$. The Γ-action on G is said to be distal if for any two distinct points $a, binG$, the closure of the double orbit $\{(\gamma(a), \gamma(b)) \mid \gamma \in \Gamma\}$ does not intersect the diagonal set $\{(g, g) \mid g \in G\}$ (equivalently, any nontrivial closed orbit $\overline{\Gamma(a)}$ doesn't contain the identity e of G). We discuss some properties of distal actions of a (semi)group Γ as above. In particular, we discuss factor actions of distal actions and minimal orbit closures.