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Karthik Ganapathy* (karthg@umich.edu), Ann Arbor, MI 48104. *Stillman's question for twisted commutative algebras.*

Ideals in a non-noetherian ring R , typically exhibit wild behaviour. However, in many cases, their behaviour can be controlled to some extent when R has a large group G acting on it. For example, when G is the infinite general linear group, and R is the polynomial ring $\text{Sym}(\mathbf{C}^k \otimes \mathbf{C}^\infty)$, Sam–Snowden showed that G -stable ideals in R have finite regularity. We show that this result cannot be made uniform in k even after fixing the degree and number of generators of the ideal (up to the action of the group). (Received February 15, 2021)