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Edgar A. Bering IV* (edgar.bering@temple.edu), Department of Mathematics, Wachman Hall, 1805 North Broad Street, Philadelphia, PA 19122. *A uniform McCarthy-type theorem for linearly growing outer automorphisms of a free group.*

In his proof of the Tits alternative for the mapping class group of a surface, McCarthy also proved that given any two mapping classes σ and τ , there exists an integer N such that the group generated by $\langle \sigma^N, \tau^N \rangle$ is either free of rank two or abelian. In the setting of $Out(F_r)$, whether or not such a statement is true remains open, though there are many partial results. Later work in the mapping class group setting due to Hamidi-Tehrani showed that for Dehn twists the power N is uniform, which Mangahas used to prove that the mapping class groups have uniform-uniform exponential growth. I will present an $Out(F_r)$ analog of Hamidi-Tehrani's result. (Received January 31, 2018)