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Jay Pantone and **Vincent Vatter***, vatter@ufl.edu. *Growth rates of permutation classes.*

We establish that there is an algebraic number $\xi \approx 2.30522$ such that while there are uncountably many growth rates of permutation classes arbitrarily close to ξ , there are only countably many less than ξ . We further categorize all growth rates under ξ . Central to the proof are various structural notions regarding generalized grid classes, a new property of permutation classes called concentration, and a reconstruction result for sum indecomposable permutations. (Received August 29, 2016)