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Alex K McDonald* (amcdona5@ur.rochester.edu). *Volumes spanned by k point configurations in \mathbb{R}^d .*

Given a configuration of k points in \mathbb{R}^d , consider the $\binom{k}{d}$ -vector whose entries are all volumes obtained by a choice of d points from the configuration. We show that a compact set $E \subset \mathbb{R}^d$ of sufficiently large Hausdorff dimension determines a positive measure set of these volume vectors by studying the action of the special linear group on the space of configurations. (Received February 08, 2021)