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## Growth in simple groups of Lie type of bounded rank

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We prove that if  $L$  is a finite simple group of Lie type and  $A$  a symmetric set of generators of  $L$ , then  $A$  grows i.e.  $|AAA| > |A|^{(1+\varepsilon)}$  where  $\varepsilon$  depends only on the Lie rank of  $L$ , or  $AAA = L$ . This implies that for a family of simple groups  $L$  of Lie type the diameter of any Cayley graph is polylogarithmic in  $|L|$ .