

1135-20-1205      **Matt Sunderland\*** ([msunderland@gradcenter.cuny.edu](mailto:msunderland@gradcenter.cuny.edu)), 365 Fifth Avenue, New York, NY  
10016. *Linear Progress in Weakly Hyperbolic Groups.*

A random walk  $w_n$  on a separable, geodesic hyperbolic metric space  $X$  converges to the boundary  $\partial X$  with probability one when the step distribution supports two independent loxodromics. In particular, the random walk makes positive linear progress:

$$\liminf_{n \rightarrow \infty} \frac{1}{n} d_X(x_0, w_n x_0) > 0 \text{ almost surely.}$$

When (1) the step distribution has exponential tail and (2) the action on  $X$  is acylindrical, it is known that progress is linear with exponential decay, *i.e.*, there exists  $C > 0$  such that for all integers  $n > 0$ ,

$$\mathbb{P}(d_X(x_0, w_n x_0) \leq n/C) \leq C e^{-n/C}.$$

We extend the exponential decay result to the non-acylindrical case. (Received September 20, 2017)