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**Abbas M Alhakim\*** (aa145@aub.edu.lb) and **S Molchanov**. *Random walks on infinitely generated dense groups*. Preliminary report.

We consider symmetric random walks on dense groups of the real line, generated by a countable set of rationally independent real numbers which is equipped with an arbitrary probability distribution  $\{p_k\}$ . We obtain a precise result for the probability of return to zero in terms of a modified Bessel function. We then derive asymptotic expansions for this return probability. In particular it is shown that the leading asymptotics is sometimes determined by the tail of  $\{p_k\}$  while in some other cases it is determined by the lower part and yet in some other cases both the tail and the lower part contribute equally. To this end, various classes of distributions with light, moderately heavy and heavy tails are investigated. (Received September 20, 2016)