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Samuel Birns* (office@math.hawaii.edu), Department of Mathematics, University of Hawaii at Manoa, 2565 McCarthy Mall, Honolulu, HI 96822. *Properties of One-sided Randomness.*

We use one-sided martingales (martingales that only increase their bets on strings that end on one) to define a novel notion of one-sided randomness, where a set is one-sided random if no one-sided c.e. martingale succeeds on it. We then explore analogs of theorems of classical randomness in the context of one-sided randomness, in particular showing that only one direction of van Lambalgen's theorem holds for one-sided random sets. Additionally, we discuss work pertaining to open questions regarding conditions allowing non-random sets to be contained in random sets, which themselves have consequences regarding the decidability of the theory of countable sets with containment, intersection, and complement. (Received January 07, 2019)