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R. Daniel Mauldin* (mauldin@unt.edu), 2026 Kendolph Dr., Denton, TX 76205. *Dimension of the intersection of a translation of a subset of the reals by a Martin-Lof random real with the set of all numbers with a given constructive dimension* . Preliminary report.

In an article in press for the TAMS, R. Dougherty, J. Lutz , J. Teutsch and myself determined the Hausdorff dimension of the intersection of a translate of the standard middle-third Cantor set by a Martin-Lof random with the set of all numbers with a given constructive Hausdorff dimension. Here I will discuss this sort of analysis for some other subsets of the reals and some of the combinatorial results in additive number theory needed for this analysis. (Received September 17, 2013)