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**Judith A Packer\*** ([packer@colorado.edu](mailto:packer@colorado.edu)), Department of Mathematics, Campus Box 395, University of Colorado, Boulder, CO 80305. *Filters and probability measures on solenoids*. Preliminary report.

I discuss some recent work, done in collaboration with L. Baggett, N. Larsen, K. Merrill, and I. Raeburn, which, under appropriate conditions, allows us to use certain filters corresponding to dilation by  $N > 1$  on  $\mathbb{R}^d$  to construct measures on the solenoid  $\Sigma_N$ . The filters, defined on the  $d$ -torus  $\mathbb{T}^d$ , need not be strictly low-pass, but must be non-zero at  $z = 1$ . Filters corresponding to the inflated fractal set wavelets of D. Dutkay and P. Jorgensen are used to construct isometries, which can in turn be used to construct measures on  $\Sigma_N$  previously constructed by Dutkay. The method described here uses the direct limit techniques first employed by Larsen and Raeburn. (Received February 05, 2008)