1041-28-202 **Judith A Packer*** (packer@colorado.edu), Department of Mathematics, Campus Box 395, University of Colorado, Boulder, CO 80309 0395. *Decomposing Dutkay's measure on the solenoid.* Preliminary report.

In 2005 Dutkay defined a measure τ on the solenoid Σ_3 that allowed for another framework within which his and P. Jorgensen's inflated Cantor set multiresolution analysis and corresponding wavelet family could be studied. I discuss some recent work, done in collaboration with L. Baggett, K. Merrill and A. Ramsay, which studies measures, still denoted by τ, on more general solenoids Σ_A arising from the generalized form of this construction on more general inflated fractal set wavelets. Here A denotes a $n \times n$ dilation matrix with integer entries. In particular, since Σ_A will fiber over $\mathbb{T}^n$, we are interested in decomposing τ into fiber measures ν_z over each $z \in \mathbb{T}^n$. We are interested in the structure of each probability measure ν_z and what these measures tell us about the possible existence of analogs of wavelet sets. (Received August 11, 2008)