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Keri Kornelson* (kkornelson@math.ou.edu), **Palle Jorgensen** and **Karen Shuman**. *Spectral sets for $\frac{1}{2^n}$ -Bernoulli convolutions.*

Bernoulli convolution measures μ_λ arise from an iterated function system of 2 affine maps on the real line: $\tau_\pm(x) = \lambda(x \pm 1)$. We examine maximal orthogonal sets and orthonormal bases of exponential functions with respect to the Hilbert space $L^2(\mu_\lambda)$ with parameter $\lambda = \frac{1}{2^n}$. We also observe the operator properties of isometries mapping between these sets of exponentials. (Received September 20, 2009)