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Kathy D. Merrill* (kmerrill@ColoradoCollege.edu), 44281 Road L, Mancos, CO 81328. Wavelet sets that are finite unions of convex sets.

Wavelet sets that are finite unions of convex sets will be presented for arbitrary scalar dilations in \mathbb{R}^2 . Generalizations to \mathbb{R}^3 and to other expansive matrix dilations in \mathbb{R}^2 will be discussed. (Received September 19, 2007)