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Darrin Speegle* (speegled@slu.edu) and **Robert Steward**. *Tiling the line by affine shifts of a prototile*. Preliminary report.

We present conditions on a set $\Gamma = \{x(t), y(t)\}$, where x and y are continuous functions, such that there exists a sampling $\{t_n\}_{n=1}^{\infty}$ and a set E such that

$$\{x(t_n)^{-1}(E + y(t_n)) : 1 \leq n \leq \infty\}$$

is a measurable tiling of the line. Special attention is paid to the case when E can be chosen an interval or the union of two intervals. Relationship of this problem to the existence of wave packet frames will also be discussed. (Received January 20, 2015)