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Sandy Grabiner* (sgrabiner@pomona.edu), Department of Mathematics, Pomona College, 610 N. College Ave., Claremont, CA 91711. *Good Weights and Good-enough Weights on \mathbb{R}^+* .

When people started seriously studying the structure of the weighted convolution algebras $L^1(\omega)$ and $M(\omega)$ of functions and of measures on \mathbb{R}^+ , it was shown first for (properly normalized) continuous weights and then for right continuous weights that $M(\omega)$ was isometric to the dual space of a (weighted) space of continuous functions. This showed that such weights were “good” weights in the sense that one had the same basic results isometrically as in the unweighted case. Many examples showed that right continuity was too restrictive, but it was shown that a weight for which $L^1(\omega)$ was an algebra was “good enough” so that one could replace $\omega(x)$ with an equivalent “good” weight; hence all results involving the norm topology remained true isomorphically. As the theory developed, the weak* topology on $M(\omega)$ and its restriction to $L^1(\omega)$ became important so that a weight was not really “good enough” unless there was an equivalent “good” weight for which both $M(\omega)$ and $L^1(\omega)$ were unchanged. We will characterize which weights are “good enough” in this more restrictive sense (Received February 23, 2009)