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**Daniel J Thompson\*** (thompson@math.osu.edu). *Entropy for generalized  $\beta$ -transformations*. Preliminary report.

Generalized  $\beta$ -transformations are the class of piecewise continuous interval maps given by taking the  $\beta$ -transformation  $x \mapsto \beta x \pmod{1}$ , where  $\beta > 1$ , and replacing some of the branches with branches of constant negative slope. If the orbit of 1 is finite, then the map is Markov, and we call the map a PCF (post-critically finite) generalized  $\beta$ -transformation. We would like to describe the set of  $\beta$  for which these maps can be PCF. We know that  $\beta$  (which is the exponential of the entropy of the map) must be an algebraic number. Our main result is that the Galois conjugates of such  $\beta$  have modulus less than 2. This extends an analysis of Solomyak for the case of  $\beta$ -transformations, who obtained a sharp bound of the golden mean in that setting. (Received January 24, 2014)