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Joel Barnes* (joel@math.washington.edu), University of Washington, Department of Mathematics, Box 354350, Seattle, WA 98103. *Distributional limits of random conformally balanced trees*. Preliminary report.

A conformally balanced tree is an embedding of a given planar map into the plane with constraints on the harmonic measure of its edges such that the resulting set is unique up to scale and rotation. Bishop (2011) showed that there exists a conformal map from the exterior of the disc to the complement of such a tree, and that conformally balanced trees approximate any compact, continuous set in the plane. The preimage of the tree under the map is a conformal welding map which induces a lamination of the unit circle that corresponds exactly to the encoding of the tree as an excursion. We consider the distributional limits of the maps for the uniform measure on random walk excursions as the number of steps goes to infinity, normalized by conformal radius, and we show that subsequential limits are almost surely nontrivial. (Received January 28, 2014)