

Contribution Title:	SCALING LIMITS OF RANDOM PLANAR MAPS WITH LARGE FACES
Authors:	J.-F. Le Gall, G. Miermont
Presenting author:	Miermont G.
Affiliation:	CNRS & DMA, Ecole Normale Supérieure
E-mail:	miermont@dma.ens.fr
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Large random planar maps and their scaling limits are a natural way to define surfaces picked at random, in a way similar to the fact that Brownian motion is the scaling limit of random walks. Recent work on this topic showed that many models of random planar maps, like the uniform distribution on the set of planar quadrangulations, admit a scaling limit which is a random metric space homeomorphic to the 2-dimensional sphere.

In this work, we are interested in the case where the degree of a typical face in the map is in the domain of attraction of a stable distribution with some index $\alpha \in (1, 2)$. We show that as the number n of vertices of the map goes to infinity, the typical graph distances in the map are of order $n^{1/2\alpha}$. The metric space formed by the vertices of the map, endowed with the graph distance renormalized by $n^{1/2\alpha}$, is shown to converge, at least along a suitable subsequence, to a limiting space with Hausdorff dimension at most 2α . It is expected that these spaces play a role in the study of interfaces of annealed statistical physics models on random maps at the critical point, such as the Ising model on the faces of a quadrangulation.