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A New Approach to the Planar Fractional Minkowski problem via a Curvature Flow

We will present a planar anisotropic curvature flow on the space of smooth, symmetric and strictly convex bodies of the Euclidean plane. We study its long term existence and show that the solutions of the flow converge subsequentially to a solution of the planar $L^p$-Minkowski problem for $0 < p < 1$. The proof relies on the monotonicity and uniform boundedness of a functional of the flow, called entropy, and on a planar case of the logarithmic Minkowski inequality. (Joint work with A. Stancu.)