# Hausdorff dimension of the CLE gasket

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The conformal loop ensemble CLE(k) is a conformally invariant ensemble of random non-crossing loops in a proper simply connected domain in the complex plane. In this work we study the geometry of the CLE gasket, the set of points not surrounded by any loop in the CLE. We show that the Hausdorff dimension of the gasket is bounded from below by 2-(8-k)(3k-8)/(32k) when 4<k<8, which matches an upper bound obtained by Schramm--Sheffield--Wilson for all k. Combined with work of Nacu--Werner, which gives the matching lower bound for 8/3 < k <= 4, this completes the determination of the CLE(k) gasket dimension for all values of k. This value agrees with the prediction of Saleur--Duplantier (1987) for the FK gasket. (Joint work with Jason Miller and David Wilson.)