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Erwin Miña-Díaz* (minadiaz@olemiss.edu), The University of Mississippi, Department of Mathematics, Hume Hall 305, P. O. Box 1848, University, MS 38677-1848, and **Peter Dragnev**. *Asymptotics of polynomials orthogonal over planar regions with analytic boundary*. Preliminary report.

Let L be an analytic Jordan curve in the complex plane \mathbb{C} . Polynomials that are orthonormal with respect to area measure over the interior domain of L were first considered by Carleman, who established a strong asymptotic formula for the polynomials valid on some neighborhood of the closed exterior of L . We extend the validity of Carleman's asymptotic formula to a maximal open set, every boundary point of which is an accumulation point of the zeros of the polynomials. The results will be illustrated with some concrete examples and numerical computations. (Received September 09, 2008)