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Robert Buckingham* (buckinrt@uc.edu), Department of Mathematical Sciences, University of Cincinnati, Cincinnati, OH 45221, and **Thomas Bothner**. *Asymptotic analysis of a deformed Tracy-Widom distribution.*

The Tracy-Widom probability distribution describing the largest eigenvalue of a GUE random matrix can be written as a Fredholm determinant. We consider an integrable deformation of this determinant related to a thinned GUE process and orthogonal polynomials with discontinuous weights. We use Riemann-Hilbert analysis to study the asymptotic behavior of the deformed process over a range of parameter values. (Received August 29, 2016)