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Gaetan Borot, Bertrand Eynard, Motohico Mulase and Brad Safnuk*

(brad.safnuk@cmich.edu), Mathematics Department, Central Michigan University, Mt. Pleasant, MI 48859. *A matrix model for simple Hurwitz numbers and topological recursion.*

We introduce a new matrix model representation for the generating function of simple Hurwitz numbers. We calculate the spectral curve of the model and the associated symplectic invariants developed by Eynard and Orantin. As an application, we prove the conjecture proposed by Bouchard and Mariño, relating Hurwitz numbers to the symplectic invariants of the Lambert curve $x = ye^{-y}$. (Received July 01, 2011)