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Promit Ghosal* (pg2475@columbia.edu), 520 West 122nd Street, New York, NY 10027, and
Guillaume Remy, Xin Sun and **Yi Sun**. *Probabilistic Conformal Blocks for Liouville CFT on the Torus*.

We give a probabilistic expression for the 1-point torus conformal block of Liouville conformal field theory. Our expression involves an expectation over a Gaussian multiplicative chaos on the unit interval and specializes to known Dotsenko-Fateev type integral expressions for the conformal block at integer values of parameters. Our method uses BPZ equations and operator product expansions for a deformation of our GMC expression for the conformal block to prove certain shift equations hold for its series coefficients. We combine these equations with expressions for the block as a Dotsenko-Fateev integral for integer parameters and as the Nekrasov partition function coming from the AGT correspondence to obtain the desired equality. (Received January 18, 2020)