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Michael Anshelevich* (manshel@math.tamu.edu), Department of Mathematics, Mailstop 3368, Texas A&M University, College Station, TX 77843-3368. *Generators of the q -Brownian motion.*

The q -Brownian motion is a certain non-commutative random process whose distributions are the q -Gaussian distributions, and for which the Rogers q -Hermite polynomials are martingale polynomials. Bożejko, Kümmerer, and Speicher showed that it is a (non-stationary) Markov process, and computed its transition functions. In this talk, I will compute the generators of these transition functions. The proof involves q -stochastic calculus, but the question is a purely special functions question, and so it would be interesting to have a purely special functions proof. (Received September 08, 2012)