1166-60-31 **Carl Mueller*** (carl.e.mueller@rochester.edu), Department of Mathematics, University of Rochester, Rochester, NY 14627, and **Siva Athreya** and **Mathew Joseph**. *A Small Ball Problem for the Random String.*

Small ball problems for stochastic processes have a long history. One seeks to estimate the probability that a process stays in a small ball for a long time. Such estimates help us study the Hausdorff measure of the range of the process, among other things. Most such results involve Markov processes taking values in finite dimensional spaces, or Gaussian random fields. We establish a small ball estimate for vector-valued solutions of the stochastic heat equation with multiplicative white noise, which falls outside of the class of processes mentioned above. At one point we need to use the best constant in the Burkholder-Davis-Gundy inequality for large values of p. (Received February 03, 2021)