962-60-274 **Driver K Bruce*** (driver@math.ucsd.edu), Department of Mathematics, 0112, University of California, San Diego, La Jolla, CA 92093-0112, **Shigeki Aida**, Department of Mathematical Science, Graduate School of Engineering, Osaka University, 560-8531 Toyonaka, Japan, and **Vikram K Srimurthy**, 99 Brookline St., Apt 3, Cambridge, MA 02139. *Equivalence of heat kernel measure and pinned Wiener measure on loop groups.*

Let $t > 0$, K be a connected compact Lie group equipped with an Ad_K-invariant inner product on the Lie Algebra of K. Associated to this data are two measures μ_t^0 and ν_t^0 on $\mathcal{L}(K)$ – the space of continuous loops based at $e \in K$. The measure μ_t^0 is pinned Wiener measure with "variance t" while the measure ν_t^0 is a "heat kernel measure" on $\mathcal{L}(K)$. The measure μ_t^0 is constructed using a K – valued Brownian motion while the measure ν_t^0 is constructed using a $\mathcal{L}(K)$ – valued Brownian motion. We will show that these measures are equivalent when K is simply connected. This result is the outcome of joint work with Vikram Srimurthy and Shigeki Aida. (Received September 06, 2000)