1067-46-1049   **Brian C. Hall*** (`bhall@nd.edu`), University of Notre Dame, Department of Mathematics, 255 Hurley Hall, Notre Dame, IN 46556, and **Matt Cecil**. *Dimension-independent results on heat kernels.* Preliminary report.

An influential paper of Bruce Driver and Leonard Gross studies L2 spaces of holomorphic functions on complex Lie groups with respect to a heat kernel measure. This paper obtains various dimension-independent estimates, thus opening the door to a similar analysis on infinite-dimenional Lie groups, beginning in the work of Maria Gordina. I will discuss some recent dimension-independent results about heat kernels on arbitrary manifolds. This is joint work with Matt Cecil. (Received September 17, 2010)