

1086-VB-1433 **Daniel C. Kemp*** (dan.kemp@sdstate.edu), Mathematics and Statistics Department, South Dakota State University, Box 2220, Brookings, SD 57007-1297. *A project to evaluate the probability integral using Calculus II techniques.*

The fact that the probability integral can be evaluated using only Calculus II techniques is well known in the sense that there are numerous publications illustrating this that date back to Stieltjes in 1918. However these evaluations are not well known enough to appear in calculus text books. This talk will present a project that has been successfully used with second semester freshmen in Calculus II to evaluate the probability integral. The main skills needed are integration by parts and mathematical induction. Part of the project will establish Wallis' product formula for $\pi/2$ which is needed to complete the main idea due to Thomas Stieltjes. (Received September 21, 2012)