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Robert J Stanton* (stanton@math.ohio-state.edu), Ohio State University, Department of Mathematics, 231 W. 18th Ave., Columbus, OH 43210. *The Bochner measure for spherical functions.*

Using a modification of the usual principal series construction we obtain a new integral formula for elementary spherical functions. Applications of it include a spectral F_f transform, and in rank 1 a different proof of the holomorphic continuation of spherical functions and a residue calculus derivation of the Harish-Chandra expansion. This is joint work with Krötz and Kunze. (Received February 05, 2008)