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Amy Elizabeth Peterson* (amy.peterson@uconn.edu). *The Gaussian limit of High Dimensional Spherical Means.*

Given a function f we can associate to an affine subspace A the integral of f over A . For A , an affine subspace in l^2 of finite codimension and A_N its intersection with \mathbb{R}^N , we create a circle S_{A_N} which is the intersection of A_N with the sphere $S^{N-1}(\sqrt{N})$. We show that, in the large- N limit, the spherical integral of f over S_{A_N} converges to a Gaussian integral of f in infinite dimensions. (Received September 24, 2018)