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From Volume of Tubes to Volume Testing.

The Hotelling-Weyl Volume of tubes formula is a basic part of differential geometry that was developed for carrying out a statistical test. Mathematically, it gave the first intrinsic description of a variety of higher curvatures. It has been applied in statistics and in probability ever since. I will survey the history and explain one statistical tendril; my work on 'volume testing' with Brad Efron. (Received September 07, 2014)