Let $G$ be a noncompact, connected, semisimple Lie group with maximal compact subgroup $K$. Let $\Gamma$ be a discrete, cocompact subgroup of $G$ with no nontrivial elements of finite order and denote by $M$ the space $\Gamma \backslash G/K$. $M$ will be a Riemannian manifold with metric arising from the Cartan-Killing form of the Lie algebra of $G$. The Laplacian of $M$ will have eigenvalues $0 = \lambda_0 \leq \lambda_1 \leq \lambda_2 \leq \cdots$. Let $\zeta_M(t) = \sum_0^{\infty} e^{-\lambda_n t}$. It is standard that

$$\zeta_M(t) \approx (4\pi t)^{-\dim(M)/2}(a_0 + a_1 t + \cdots + a_n t^n + O(t^{n+1})), \quad t \downarrow 0.$$ 

Let $M' = G'/K$ be the compact dual of $G/K$. Then

$$\zeta_{M'}(t) \approx (4\pi t)^{-\dim(M)/2}(a'_0 + a'_1 t + \cdots + a'_n t^n + O(t^{n+1})), \quad t \downarrow 0$$

and the coefficients $a'_n$ have been computed (see [1] and [2]).

**THEOREM.** $a_n = (-1)^n (\text{Vol}(M)/\text{Vol}(M')) a'_n$.

"Nolan Wallach informs us that Mr. Miatello has proved this result for symmetric spaces of rank 1 using different methods."

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DEPARTMENT OF MATHEMATICS, UNIVERSITY OF MIAMI, CORAL GABLES, FLORIDA 33124

DEPARTMENT OF MATHEMATICS, UNIVERSITY OF CALIFORNIA, BERKELEY, CALIFORNIA 94720

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