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3.16 SIMPLEX CONJECTURE

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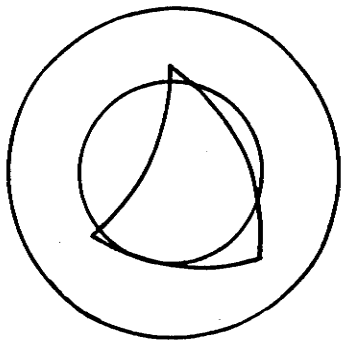
It may not be known that the famous simplex conjecture in communication theory can be reduced to the following geometrical problem.

Prove that the spherical simplex in $\mathbf{R}^n$ of surface content Ω that maximizes the content of intersection with a given spherical cap is indeed the regular spherical simplex centered at the center of the cap.



Note: A spherical cap is the intersection of a (translated) half-space with the surface of the (unit) n-sphere. A spherical simplex is the intersection of n half-spaces with the surface of the unit n-sphere.