

Spherical hypersurfaces associated with the spherical Gauss map and Gauss map

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Abstract. The Gauss map of a submanifold in a Euclidean space is a map of the submanifold into the Grassmann manifold via translation of tangent spaces into oriented planes. If a submanifold is spherical, the notion of the spherical Gauss map is naturally defined. The spherical Gauss map is more meaningful for studying spherical submanifolds lying in a unit sphere centered at the origin. We consider an easy approach to the spherical Gauss map and the Gauss map of a hypersurface of the unit sphere. We characterize the Clifford tori, a small sphere and a great sphere by means of the pointwise 1-type spherical Gauss map and the Gauss map.

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