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The equal tangents property

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Let M be a smooth strictly convex closed surface in space and denote by H the set of points x in the exterior of M such that all the tangent segments from x to M have equal lengths. In this note we prove that if H is either a closed surface containing M or a plane then M is an Euclidean sphere. Moreover, we shall see that the situation in the Euclidean plane is very different.

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