Ann. Sc. Norm. Super. Pisa Cl. Sci. (5)
Vol. XIV (2015), 221-231

A classification theorem for hypersurfaces of Minkowski spaces

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Abstract. Let M^n be a compact hypersurface of a Minkowski space $(V^{n+1}, \overline{F})$. In this paper, using the Gauss formula of the Chern connection for Finsler submanifolds, we prove that if the second mean curvature H_2 of M is constant and the norm square S of the second fundamental form of M satisfies $S \leq \frac{n(n-1)}{n-2} H_2$, then M with the induced metric is isometric to the standard Euclidean sphere. This generalizes the result of [2] from the Euclidean to the Minkowski space.

Mathematics Subject Classification (2010): 53C60 (primary); 53C40 (secondary).