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SOME REMARKS ON MEASURES WITH n-DIMENSIONAL VERSIONS

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Abstract: A nondegenerate probability measure ν on R^n is an n-dimensional version of a symmetric measure μ on R if there exists $c:R^n\to [0,\infty)$ such that $\hat{\nu}(ta)=\hat{\mu}(|t|c(a)),\,t\in R,\,a\in R^n.$ If the function c is an L_p -norm on R^n , we call the measure ν p-elliptically contoured. The main result of this paper is that if μ has an ε -order for $\varepsilon>0$, then every its n-dimensional version is p-elliptically contoured for some $p\in(0,2]$. We show also that $\mathrm{supp}(\mu)=R$ if only μ has an n-dimensional version which is not 2-elliptically contoured.

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