1104-52-216 **Galyna V Livshyts*** (glivshyt@kent.edu), 233, Summit street, Kent, OH 44242. *On the version of the Gaussian Brunn-Minkowski inequality.*

The classical Brunn-Minkowski inequality in one of the forms states that for any measurable sets $A, B \subset \mathbb{R}^n$ and for any $\lambda \in [0,1]$,

$$|\lambda A + (1-\lambda)B|^{\frac{1}{n}} \geq \lambda |A|^{\frac{1}{n}} + (1-\lambda)|B|^{\frac{1}{n}},$$

where $|\cdot|$ stands for the standard Lebesgue measure. R. Gardner and A. Zvavitch conjectured that for the standard Gaussian measure γ_2 the same inequality holds under some natural assumptions on the sets A and B. Some progress have been made by T. Tkocza and P. Nayar but it remains unclear whether the inequality

$$\gamma_2(\lambda A + (1-\lambda)B)^{\frac{1}{n}} \geq \lambda \gamma_2(A)^{\frac{1}{n}} + (1-\lambda)\gamma_2(B)^{\frac{1}{n}}$$

is true or false when both A and B are origin-symmetric. We discuss some results in this direction. (Received September 01, 2014)