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On Kelvin type transformation for Weinstein operator

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Abstract: The note develops results from [5] where an invariance under the Möbius transform mapping the upper halfplane onto itself of the Weinstein operator $W_k := \Delta + \frac{k}{x_n} \frac{\partial}{\partial x_n}$ on \mathbb{R}^n is proved. In this note there is shown that in the cases $k \neq 0$, $k \neq 2$ no other transforms of this kind exist and for case $k = 2$, all such transforms are described.

Keywords: harmonic morphisms, Kelvin transform, Weinstein operator

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