

Erratum: Absence of gyratons in the Robinson-Trautman class
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Robert Švarc and Jiří Podolský

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The evaluation of equations (54) and (55) for the energy-momentum tensor is not correct in this paper. These equations should read

$$T_{up,r} + (D - 2)\Theta T_{up} = 0, \quad (1)$$

$$T_{uu,r} + (D - 2)\Theta T_{uu} = g^{pq}T_{up||q} + g^{rp}{}_{,r}T_{up}, \quad (2)$$

so that the correct integrated forms (63) and (64) are

$$T_{up} = \mathcal{J}_p r^{2-D}, \quad (3)$$

$$T_{uu} = \mathcal{N} r^{2-D} - \mathcal{J}^p{}_{||p} r^{1-D} + f^p \mathcal{J}_p r^{3-2D}. \quad (4)$$

Unfortunately, this mistake lead us to the incorrect statement about the nonexistence of gyratons within the Robinson-Trautman class of spacetimes, as concluded in Sec. III E. Since the overall results are now completely changed, we have published the detailed correction and Erratum, with explicit general Robinson-Trautman gyratons, in the new paper [1].

[1] J. Podolský and R. Švarc, Gyratons in the Robinson–Trautman and Kundt classes, *Phys. Rev. D* **99**, 044004 (2019).