

Novel features of the energy-momentum tensor of a Casimir apparatus in a weak gravitational field

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Corrigendum

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Giuseppe Bimonte, Enrico Calloni, Giampiero Esposito and Luigi Rosa 2008 *J. Phys. A: Math. Theor.* **41** 164056

Equation (13) should read

$$T^{(1)00} = -\frac{\pi^2}{1200a^3} + \frac{11\pi^2 z}{3600a^4} - \frac{\pi \cos\left(\frac{\pi z}{a}\right)}{60a^3 \sin^3\left(\frac{\pi z}{a}\right)}. \quad (13)$$

Thus, there is no trace anomaly, and the title of section 4 should read **Push**. The formula for ρ at the beginning of section 4 should read as

$$\rho = -\frac{\pi^2}{720a^4} + \frac{2g}{c^2} \left(-\frac{\pi^2}{1200a^3} + \frac{\pi^2 z}{600a^4} - \frac{\pi \cos\left(\frac{\pi z}{a}\right)}{60a^3 \sin^3\left(\frac{\pi z}{a}\right)} \right) + \mathcal{O}(g^2),$$

while thereafter the energy stored in the Casimir device should read as

$$E = -\frac{\hbar c \pi^2}{720} \frac{A}{a^3} \left(1 + \frac{1}{2} \frac{ga}{c^2} \right).$$

The last two unnumbered equations of section 4, and the last two lines of the abstract, should be deleted.