

Review of: "Geodesics as Equations of Motion"

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Potential competing interests: No potential competing interests to declare.

I have made an earlier referee report of this paper, viewing it as quite mistaken for several reasons exposed there. None of these criticisms were addressed in the change from version 1 to version 2, so this judgement stands.

Finally I would like to point out a singularly absurd error in (16-17), where the expression

$$-\frac{1}{2} \left(\frac{GM}{c^2 r} \right)^2 \frac{c^2}{v^2} (1 - \epsilon^2)$$

is numerically evaluated. Note first that I do not believe this is obviously a good expression to evaluate, but it is what the author evaluates in going from (16) to (17). The author gets $1.33 \cdot 10^{-2}$. Let us see: in SI units

$$G = 6.67 \cdot 10^{-11} \quad M = 2 \cdot 10^{30} \quad r = 5.8 \cdot 10^{10}$$

and of course

$$c = 3 \cdot 10^8 \quad v = 4.7 \cdot 10^4 \quad \epsilon = 0.2$$

So the term $\left(\frac{GM}{c^2 r} \right)^2$ has the value

$$[6.67 \cdot 2 / (5.8 \cdot 9)]^2 \cdot 10^{-14} \approx 6.5 \cdot 10^{-16}$$

whereas $c^2/v^2 \approx (9/4.7^2) \cdot 10^8 = 4.1 \cdot 10^7$.

Up to the irrelevant terms $-1/2$ and $1 - \epsilon^2$, the expression is the product of the two quantities, that is $6.5 \cdot 4.1 \cdot 10^{-9} \approx 2.7 \cdot 10^{-8}$.

Which is rather off from $-1.33 \cdot 10^{-2}$.



