

Abstract Submitted  
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**Odd Length Contraction** FLORENTIN SMARANDACHE, University of New Mexico — Let's denote by  $V_E$  the speed of the Earth and by  $V_R$  the speed of the rocket. Both travel in the same direction on parallel trajectories. We consider the Earth as a moving (at a constant speed  $V_E - V_R$ ) spacecraft of almost spherical form, whose radius is  $r$  and thus the diameter  $2r$ , and the rocket as standing still. The non-proper length of Earth's diameter, as measured by the astronaut is:

$$L = 2r\sqrt{1 - \frac{|V_E - V_R|^2}{c^2}} < 2r.$$

Therefore Earth's diameter shrinks in the direction of motion, thus Earth becomes an ellipsoid - which is untrue. Planet Earth may increase or decrease its diameter (volume), but this would be for other natural reasons, not because of a... flying rocket! Also, let's assume that the astronaut is laying down in the direction of motion. Therefore, he would also shrink, or he would die!

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