For how long would a human need to be in freefall in order to reach the speed of light?
Viktor T Toth
The highest velocity that you can achieve falling towards a body is the body's escape velocity at its surface. So even if you fall towards the Earth from infinity, your vel...
so free fall toward the object, to the point of the surface, and the escape velocity at that point on the surface, is the same, so free fall IS being still in proper space, IF starting the free fall from infinitely far away

Generate lwew for lift and antigrav
Like the resonant cavity propulsion device
and thus gravitational and velocity time dilations are united in the concept of directional dilation and the concept of creation and destruction or rolling-up of proper space

In the Cerenkov effect possibly, when a charged particle such as an electron, passes through a medium where light travels slower than it, might be used to study what happens in cases like GN-zll

The precise formula for the starlight deflection is given by

$$
4 \mathrm{GM}
$$

Theta = ------------- radians
c2 R
where for the sun we have $M=2 \times 1030 \mathrm{~kg}$, G is the constant of gravity of $6.67 \mathrm{x} 10-11, \mathrm{c}$ is the speed of light $3 \times 108$ meters $/ \mathrm{sec}$, and R is the distance between the light ray and the center of the sun in meters. If we plug-in the numbers and use the fact that 1 radian $=206265$ arcseconds, we get for a radius of the sun of $\mathrm{R}=6.9 \times 108$ meters,

Theta $=206265(4)(6.67 \times 10-11)(2 \times 1030) /(3 \times 108) 2(6.9 \times 108)=1.75$ arcseconds.
https://eclipse2017.nasa.gov/testing-general-relativity

The Faraday effect can also be studied further for the effects of electric fields on light, in the same way as gravity should affect light by refraction

If an electron is not moving and not accelerating and it emits electromagnetic waves with 0 amplitude.or.maybe has velocity but not acceleration so the wave would be flat, wouldn't it.seem to another electron moving away, in it's own rest frame, that that wave has an amplitude and a relative direction of red shift away, or if the other electron is loving closer, that it has blue shift, making the wave relative as well as the movement velocity?

Maybe it is light from ALL spectrums that is LWEW that are responsible gravity push

