Holographic surface and Lorentz factor

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Holographic definition of time assumes that time is focused inside a closed surface at any point of the internal volume. Accordingly, in this approach, time is considered as a closed surface integral along the entropy area of entanglement

$$t = \frac{Gh}{c^4} \oint \frac{dS}{r}$$

This definition allows you to introduce the concept of focusing time. The focus value can be defined as the inverse relation to the radius from the focal point to the point of the closed surface.

In addition, it must be borne in mind that an arbitrary closed surface can be not only a static surface, but a kinematic one. Each point of the surface can have its own speed of movement. In this case, the speeds that are perpendicular to the radius affect the geometric dimensions of the surface. This is due to the reduction in the length of Lorenz. Therefore, entropy of entanglement of a surface has a relativistic modification due to the Lorentz contraction.

$$t = \frac{Gh}{c^4} \oint \frac{dS}{r\sqrt{1 - \frac{v^2}{c^2} sin^2\varphi}}$$

Here, the flat angle between the velocity vector of a surface point and the radius-vector. Hence, the relativistic modification of time holography has the following form