Retrocausal Hologram Dark Energy as LNIF Advanced Wheeler-Feynman Hawking-Unruh Blackbody Real Photons Equivalent to LIF Zero Point Vacuum Virtual Photons

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ABSTRACT

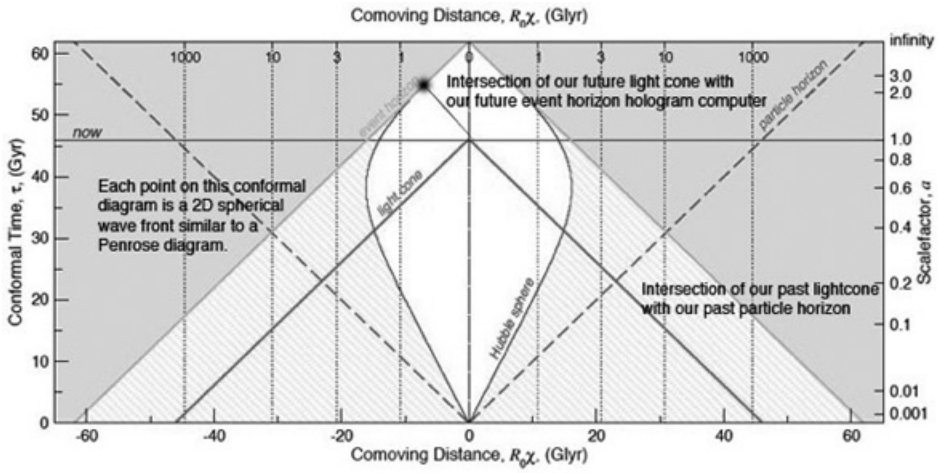
The cosmic microwave background black body radiation consists of retarded photons from the surface of last scattering remnant of the hot Big Bang. In contrast, the dark energy accelerating our observable universe is back-from-the-future advanced Wheeler-Feynman Hawking-Unruh black body radiation from our observer-dependent future event horizon that may also be the hologram screen.

Our future cosmological horizon is at the Planck temperature.

$$T_{horizon} = \frac{\hbar c}{k_B L_P} \tag{1.1}$$

The gravitational red shift in the static LNIF representation is

$$1 + z = \sqrt{\frac{g_{00(absorb)}}{g_{00(emit)}}} = \frac{f_{emit}}{f_{absorb}} \rightarrow \frac{T_{horizon}}{T_{here-now}} = \sqrt{\frac{g_{00(here-now)}}{g_{00(horizon)}}} \tag{1.2}$$



Based on Tamara Davis's Ph.D. Fig. 1.1

Our future universe approaches the de Sitter metric, which is not at all a good description of our past universe. This is a fundamental asymmetry relevant to the arrow of time problem.

$$
\begin{aligned}
&g_{00(future-universe)} = 1 - \Lambda r^2 \\
&r_{(here-now)} = 0 \\
&r_{(horizon)} = \sqrt{\frac{1}{\Lambda}} = \sqrt{A}
\end{aligned}
\tag{1.3}
$$

$$
\begin{aligned}
&g_{00(horizon)} \approx 1 - \Lambda\left(\frac{1}{\sqrt{\Lambda}} - L_P\right)^2 \to 2L_P\sqrt{\Lambda} \\
&L_P\sqrt{\Lambda} \approx 10^{-33}10^{-28} = 10^{-61}
\end{aligned}
\tag{1.4}
$$

$$
1 + z \to \sqrt{\frac{1}{L_P\sqrt{\Lambda}}} = \frac{T_{horizon}}{T_{here-now}}
\tag{1.5}
$$

$$
\begin{aligned}
T_{here-now} &= T_{horizon}\sqrt{L_P\sqrt{\Lambda}} \\
&= \frac{\hbar c}{k_B L_P}\sqrt{L_P\sqrt{\Lambda}} = \frac{\hbar c\sqrt[4]{\Lambda}}{k_B\sqrt{L_P}}
\end{aligned}
\tag{1.6}
$$

The black-body law gives the observed dark energy density.

$$\rho_{black-body} = \sigma T^4 \rightarrow \frac{\hbar c}{L_P^2}\Lambda = \frac{\hbar c}{L_P^2 A} \qquad (1.7)$$