Is the Non Linearity of Red-Shift-Distance-Curve, Observed by Perlmutter and Riess, Due to the 'Reduction-of-Additional-Red-Shift' with the 'Reduction-in-Brightness' of the Super Novae?

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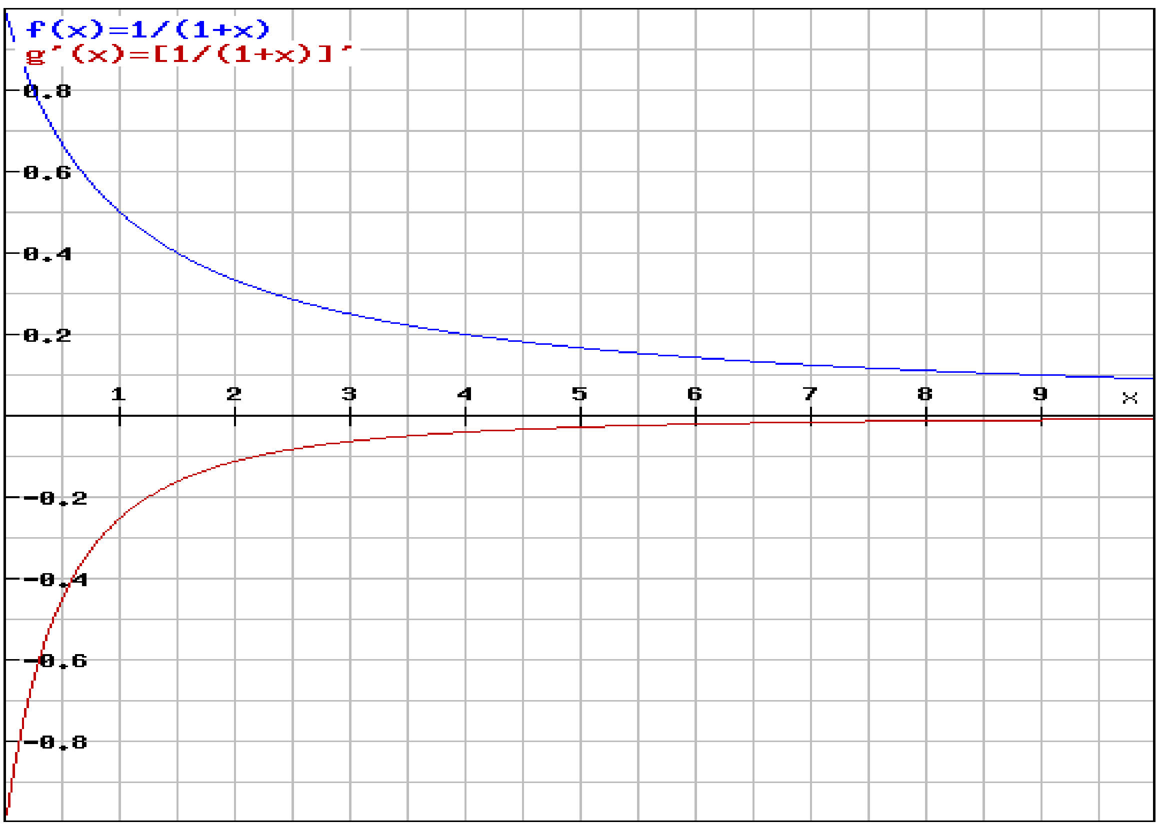
The Description:

According to the inverse square law, the brightness of every source-of-light reduces with distance, as shown in fig.1, (blue curve). On the surface of an atom, at a distance of one atomic-radius, say the brightness is one-unit; and with the increase of radial distance the brightness reduces as shown in fig-1, blue-curve:



Fif.1. Showing reduction in brightness at various distances from the surface of emitting atoms (the blue curve). And the *rate of reduction of brightness* at various radial distances (the red curve). And from the fig.1, we find that the rate of reduction of brightness keeps on changing with the radial distance; as shown in the fig.1, (red curve).

We also know that light is electromagnetic waves, so when amplitude of any wave reduces with time at certain rate, then its frequency also gets red shifted depending upon the *rate of reduction of the brightness.* This is the reason why in the case of 'amplitude-modulation', in which only the amplitude of single-frequency sine wave is changed, also causes a wide spectrum, depending upon the *rate of change of amplitude* of that single-frequency-sine-wave.

To understand the mechanism of frequency-shift with the rate-of-reduction-of-brightness, perform the following experiment: Mount a one-kilohertz speaker at the back of a car, moving away from you at a constant speed. Take two microphones. Connect one to a linear amplifier, and the other microphone to a limiter-amplifier; so that you get two signals, one of which has distance-dependent-amplitude, whereas the other has constant amplitude. Using a dual-beam-spectrum-analyzer you can compare the spectra of signals from both the amplifiers; and you will find, that the frequency-shift of the signal coming from 'limiter-amplifier', which is purely due to the well known Doppler-effect, is lesser than the frequency-shift of the other signal coming from linear-amplifier, which has got red-shifted due to two mechanisms, one due to Doppler-effect and the other due to the rate of change of amplitude of the received signal. This red-shift, due to the rate-of-change of amplitude of the signal, is termed as 'additional-red-shift' in this note.

Now, according to the 'Big Bang Theory', all the galaxies are moving away from each other, at the velocities proportional to their distance from us. If so, then, we should be able to measure, that the brightness of all the galaxies and super novae reducing with time; and as shown in the fig.1 red curve, the *rate of reduction of brightness* should go on reducing with time; and the additional red shift, caused due to rate-of-reduction-of-brightness should go on reducing with time. Therefore, my question is: has such reduction in brightness of distant super novae, and reduction in additional-red shift (in addition to the well known Doppler shift), been noticed, in these eight decades, after E.P. Hubble first measured the brightness verses red shifts of many galaxies, in nineteen thirties? My second question is: does the recently observed non linearity in the red-shift-distance-curve, by Perlmutter and Reiss, can be explained in terms of 'reduction in the additional-red-shift caused due to reduction in rate of reduction of brightness with distance, as shown in green in the graph of fig.2 below?

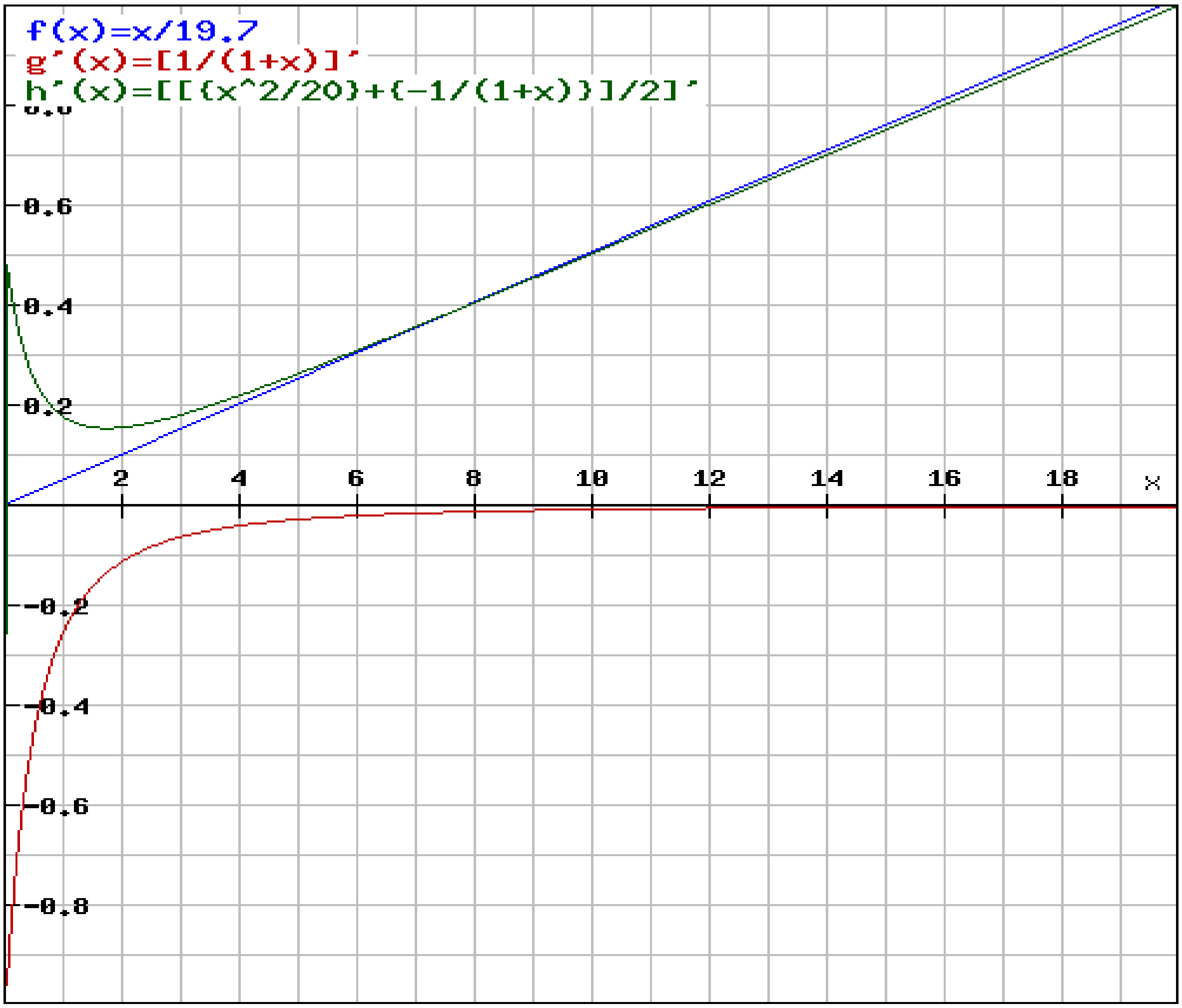


Fig. 2: (a) Blue-curve showing extrapolated Red-shift-Distance-Curve, based on observations at red-shifts 0.1 to 0.5. (b) Red curve showing the rate-of-reduction-of-brightness with distance from the emitting atom; which should cause additional red-shift, as discussed in this note. (c) Green curve showing the sum of red-shifts due to two mechanisms, one, the well known Doppler shift; and two the additional red-shift caused due to the rate-of-reduction-of-brightness, as discussed in this note.