

Darkness Intensified – Existence of a Nonlinear Threshold in Redshift-Induced Dimming

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Redshift obeys adiabatic invariance. From this fact it follows that not only the individual photons are dimmed by a factor of $z+1$ (if z is the redshift in percent), but the photon flux is reduced by the same factor once more. Hence the luminosity of any source is in the presence of redshift dimmed by a factor of $(z+1)^2$. This model-independent result possibly “explains away” the excess dimming of strongly redshifted Type-Ia supernovae, discovered in 1998.