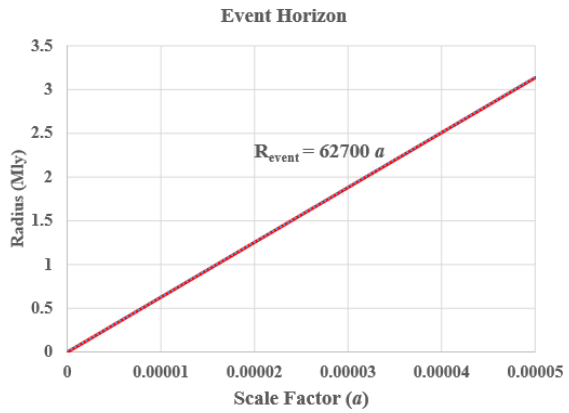
I use Jorrie's Tutorial Part III and the following method to calculate the event horizon for values beyond z=20000 using MS Excel:

$$S_1 D_{hor}(S_1) = \frac{1}{H_0}\int_0^{S_1} \frac{dS}{\sqrt{\Omega_r S^4 + \Omega_m S^3 + \Omega_\Lambda}}.$$

$$S_2 D_{hor}(S_2) = \frac{1}{H_0}\int_0^{S_2} \frac{dS}{\sqrt{\Omega_r S^4 + \Omega_m S^3 + \Omega_\Lambda}}.$$

$H_0S_1D_h(S_1) = \text{Int}(0,S_1)$
$H_0S_2D_h(S_2) = H_0S_1D_h(S_1) + \text{Int}(S_1,S_2)$
Etc.

I got the following result:



One time you mentioned,

One has to stand in front of a mirror, draw the ancient sigil of the electric monkey, and repeat his name three times. @Jorrie @Jorrie @Jorrie

How does it work and where to find such a mirror? I wonder whether Jorrie can verify this result for me. The input parameters are,

$\Omega_{\Lambda,0} = 0.692$
$\Omega_{m,0} = 0.308$
$\Omega_{r,0} = 9.15\times10^{-5}$
$H_0 = 67.8$ km/s/Mpc

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