

## ACOUSTIC Plank Units derived to Friedmann Units incorporating Hubble Expansion & Photon Extinction Radius

[Minkowski Spatial geometry](#) & the [Lorentz Transformation](#) are Inadequate as they produce a [Photon](#) that travels Eternally, Ignoring [Hubble Red Shift](#).

$$(4e-7\pi) * ((((((1.875546023e-18 \text{ coulombs}) / (\text{planck length}^3))^2) * 299792458 \text{ ohms}) / (4\pi)) / ((c^7) / (\hbar * (G^2)))) * ((\text{Planck length}^3) / (\text{Planck length} / c)) = 1$$

<https://photos.app.goo.gl/n5PXgjVhnsgeuMrz7>

$$((\text{acoustic ohms}) / (\text{ohms}))^{0.5} = \text{Coulombs/meter}^3$$

$$(\text{acoustic ohms}) = (\text{mass}) / (\text{length})^4 / (\text{time})$$

$$((1.8755459e-18 \text{ Coulombs}/(\text{planck length})^3)^2 * 29.9792458 \text{ Ohms}) / (c^7 / (\hbar * G^2)) * ((\text{Planck length})^3 / (\text{Planck length}/c)) = 1$$

$$((5.91643087e+174 * (1e-5 \text{ acoustic ohms})) * (1 / (((((1.70377849e+53 \text{ kg}) * (c^2)) / (4 \text{ (m}^2))) / \text{joules})^{0.5}))^6 / \hbar) = 1$$

$$1.70377849e+53 \text{ kg} = \text{mass universe}$$

$$((((5.91643087e+174 * (\text{acoustic ohms})) * (2/c)^6 / \hbar)))^{(1/3)} = 1.70377849e+53 \text{ s}^2/\text{m}^4$$

<http://hyperphysics.phy-astr.gsu.edu/hbase/permot3.html>

<http://hyperphysics.phy-astr.gsu.edu/hbase/Sound/souspe2.html#c1>

$$1 / (((((\text{Boltzmann constant} / (6.67408e-11 \text{ pascals} * 0.5)) * ((1 / 2.739868) * \text{kelvin}))^{(1/3)}) / \text{m})^{0.5}) = 137.035994$$

$$(((\text{Boltzmann constant} / (6.67408e-11 \text{ pascals} * 0.5)) * ((1 / 2.739868) * \text{kelvin}))^{(1/3)}) / \text{m})^{0.5} = 0.00729735285$$

## Friedmann Acoustic Parameters

$$(((3.71295774e-28 \text{ (kg} / (\text{m}^3))) * (c^2)) / (((3.71295774e-28 \text{ kg}) / (\text{m}^4)) / \text{s})) / (8.98755179e+16 \text{ (m}^3)/\text{s}) = 1$$

Density (3.71295774e-28 (kg / (m<sup>3</sup>)))

Pressure 3.33704e-11 (pascals)

Viscosity 3.33704e-11 (pascal \*seconds)

Kinematic Viscosity 8.98755179e+16 (m<sup>2</sup> / s)

Wave Speed = c

$(\text{Boltzmann constant} / ((c^7) / (\hbar * (G^2)))) * (1.416808e32 * \text{kelvin}) / (\text{planck length}^3) = 1$

$((\text{Boltzmann constant} / (6.67408e-11 \text{ pascals} * 0.5)) * 1 \text{ kelvin}) / (m^3) * (137.03600^6) = 2.73986875$

Planck Units Derived to Friedmann Units

$(((((c^7) / (\hbar * (G^2))) * ((3.71295774e-28 \text{ (kg / (m}^3))) * (c^2)))^{0.5}) / (c^2)) * ((2^{0.5}) (\text{planck length} / m))) = 1 \text{ kg} / m^3$

Planck Units Derived to Friedmann Units

$(((((c^7) / (\hbar * (G^2))) * ((3.71295774e-28 \text{ (kg / (m}^3))) * (c^2)))^{0.5}) / (c^2)) * ((2^{0.5}) ((13.8880509 \text{ billion light years} * c / 2 * \pi))) = 1$

Hubble Redshift is incorporated

Friedmann Matches Planck with no adjustment necessary

A photon at Planck Temp reaches its extinct horizon after 13.8880905 billion years at c and cannot perform any useful work.

$(((((c^7) / (\hbar * (G^2))) * ((3.71295774e-28 \text{ (kg / (m}^3))) * (c^2)))^{0.5}) * ((2^{0.5}) * (1 / (((13.8880509 \text{ billion (light years} / m)) * (299792458^3) / 2) * \pi)))) = 0.999999999 \text{ pascals}$

Planck Units to Friedmann Units with Hubble Redshift photon extinction included

$(((((8^{0.5}) * 6.5248935)^{0.25}) / ((2\pi) / (4 / (13.8880509 \text{ billion (light years} / m) * 299792458 * 2.42632627e-12)))) / \text{Boltzmann constant}) = 0.999999999$

$(2\pi / (13.8880509 \text{ billion light years} * 299792458 / m / 2 * \pi * 2.42632627e-12))^2 = 1.7517285e-45$

$$\left( \left( \left( 1.70377849 \times 10^{53} \text{ kg} \right) * \left( 1 \text{ kg} \right) \right) * \left( G / 6.67408 \times 10^{-11} \right) \right) / \left( \left( \left( 13.8880509 \text{ billion light years} \right) * \pi \right)^2 \right) = 1 \text{ newton}$$

**G is nullified to unity**

<https://docs.google.com/document/d/14dGOjOuRXXIBSg-0N-vBovhwDCnrMbBioONasYH9FG0>

[https://en.wikipedia.org/wiki/Friedmann\\_equations#Density\\_parameter](https://en.wikipedia.org/wiki/Friedmann_equations#Density_parameter)

[https://en.m.wikipedia.org/wiki/Planck\\_units#Derived\\_units](https://en.m.wikipedia.org/wiki/Planck_units#Derived_units)

[https://en.wikipedia.org/wiki/Boltzmann\\_constant](https://en.wikipedia.org/wiki/Boltzmann_constant)

[https://en.wikipedia.org/wiki/Compton\\_wavelength](https://en.wikipedia.org/wiki/Compton_wavelength)

[https://en.wikipedia.org/wiki/Hubble%27s\\_law](https://en.wikipedia.org/wiki/Hubble%27s_law)

[https://en.wikipedia.org/wiki/Minkowski\\_space](https://en.wikipedia.org/wiki/Minkowski_space)

[https://en.wikipedia.org/wiki/Lorentz\\_transformation](https://en.wikipedia.org/wiki/Lorentz_transformation)

<https://en.wikipedia.org/wiki/Photon>