The Planck Interaction, α, and the Schwarzschild Force

The Planck Interaction stands at the "center" of the universe. There is no being without this continuing event. As Planck observed, **"There can be no doubt that the constant h plays a definite role at an emission center of the elementary oscillation process… The thermodynamics of radiation will have arrived at an entirely satisfactory conclusion only when the constant h is understood in its full universal significance"**.

Space-time and the tension of the vacuum are formed in its activity. It is the universal symmetric source for the fine structure constant (α), charge, and the force parameter of all black holes in this universe. This yielded force value, (being in every case equivalent, at exactly 1/4th of the Planck force) along with the other constants is important for having a direct connection with the universal frame.

So, one might ask, "How, and why"?

The Schwarzschild force (the force required to retain electromagnetic energy), is the force generated by any mass at its Schwartzchild radius, and as just mentioned, it has an interesting relation; it is exactly 1/4 of the Planck force.

$$F_P = \frac{E_P}{\lambda_P} = \frac{\hbar}{\lambda_P t_P} = \frac{c^4}{G} = 4F_{Sch}$$

The Planck particle, as is well known, exists within its own Schwartzchild radius, a black hole where

$$l_P^2 = \lambda_P^2 = \frac{R'_{Sw}\lambda'}{2}$$

Where $l_P^2 = \lambda_P^2$ equals the Planck length^2; R'_{Sw} equals the Schwarzschild radius; and λ' equals the de Broglie radius of the particle.

The dynamics of this are interesting because this general equilibrium applies to any mass/particle whatsoever. It confirms that all things have their source in the Planck Interaction. Yet at the Planck level, or at the quantum field, the relationship takes on special meaning.

 Consider the two principle Planck energy states, if you were in a Planck particle, you would see your event horizon expanding with your energy, or contracting by half, if in relation to your ground state. The force (required in both states), to hold you together would be the same gravitational Schwartzchild force (F$_{sc}$), which is ¼ of the Planck force. This limit exists because whatever mass contained is engulfed in its own black hole, thus it is impossible to add attractive force, yet the envelope can expand in accordance with Berkenstein's' law).

For any particle, a derivation of the constant α can be made by the following:

$$\alpha = \frac{k_0 e^2}{\lambda_\Phi E_\Phi}$$

Where $\lambda_\Phi E_\Phi$ = the energy for any particle multiplied by its de Broglie radius. This relation applies to all particles, and can be viewed as the link between differing forms for mass and energy

However, it turns out that the Planck Interaction of which we are talking serves as the universal symmetric source for the fine structure constant α, and of charge.

Item	Mass (kg)	Gravitational Equilibrium radius	Schwartzchild radius (m)	de Broglie Radius λ (m)	Columb force at Gravitational Equilibrium radius	Columb force at Sch radius	Columb force at dB radius	Schwartzchild Force (FSc)	Planck Force (Fpl)	1/2 Planck Force (Fpl)	→	Results
1/2 Planck	1.088E-08	1.043E-04	1.616E-35	3.232E-35	2.120E-20	8.832E+41	2.208E+41	3.026E+43	1.210E+44		→	7.297E-03
Planck	2.177E-08	1.475E-04	3.232E-35	1.616E-35	1.060E-20	2.208E+41	8.832E+41	3.026E+43	1.210E+44		→	7.297E-03
.707 Planck	1.539E-08	1.241E-04	2.286E-35	2.286E-35	1.499E-20	4.416E+41	4.416E+41	3.026E+43	1.210E+44	6.052E+43	→	7.297E-03

Table 1. A color coded view of universal alpha force derivations relationships.

The particle (Table 1) alternates at the Planck frequency, between the Columbic force and gravitational force yielding α
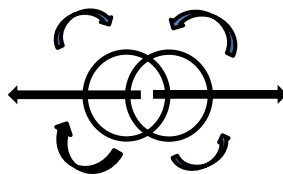
The Planck Interaction

Figure 1

This model postulates that at an "ever-continuing moment of creation" a Planck quantity generates a de Broglie/Planck radius, **and** a Schwarzschild radius (at two Planck lengths or radii), or in Planck time, the Planck quantity (its energy ground state) creates a de Broglie radius at two Planck radii, while its Schwarzschild radius goes to one Planck length (or radius). The cycle repeats as time itself is created, thus acting as a universal source for the quantum fluctuation.

The quantum field

At this point, we consider this universal quantum background. Uniquely at the Planck level, along with the general appearance of expansion (when viewed from within each "particle"), other localized gravitational influences (being equivalent in energy and form), are evidencing their own interactions, and the acting force in all cases being equivalent to perimeter forces, a field is formed, the Planck Field where charge separation, pair production, and quantization occur across a range of frequencies according to the Heisenberg uncertainty principle. This field underlies the Lorentz space, which is described as a Fugue. The essential effect of this field is the quantization of mass and time; it begins at the Planck frequency, or at its implied mass, (which acts as a form of pilot wave), and includes every particle and incident mass, unto the stars and galaxies.

Charge Separation

On the atomic level, under the influence of this continuing flight towards the Planck and Lorentz fields, time slows immensely, and tidal charge separation occurs. The Lorentz limit tidal effect is determined in a particle well by the Lorentz equations and by the alpha constant (α), as shown below. The differences between particles are determined quantically according to the equation;

$$l_P^2 = \lambdabar_P^2 = \frac{R'_{Sw}\lambdabar'}{2}$$

as described above, and briefly described in the "Is the Universe in Equilibrium?" discourse. Essentially, α delineates the balance between gravitational attraction and electrostatic attraction and repulsion.

$$\alpha = \frac{k_0 e^2}{G m_P^2}$$

α is equal to the ratio of the general Columbic constant, divided by G times the Planck mass squared.

This then is the primary resonance field fluctuation interaction, at one Planck radius, the Planck interaction at the Planck length/radius consists in the Planck force, which yields the Schwarzschild force (1/4th of the Planck force, as taken at the Schwartzchild radius).

$$F_{pl} = \frac{(Gm_p^2)}{\lambdabar_p^2} = \frac{(\hbar c)}{\lambdabar_p^2} = \frac{(k_0 e^2 \alpha^{-1})}{\lambdabar_p^2} = \frac{4(Gm_p^2)}{R_{Sw}^2}$$

Where, R_{Sw} = the Schwartzchild radius of the Planck mass. And where, as seen (twice) above, for any mass/energy whatsoever,

$$l_P^2 = \lambdabar_P^2 = \frac{R'_{sw}\lambdabar'}{2}$$

Where $l_P^2 = \lambdabar_P^2$ equals the Planck length²; R'_{sw} equals the Schwarzschild radius; and $\lambdabar'$ equals the de Broglie radius of the particle. This confirmed by the ubiquitous confirmed equality.

$$\hbar c = l_P E_P = \lambdabar_\Phi E_\Phi = Gm_P^2 = k_0 e^2 \alpha^{-1} = 3.16153e^{-26}$$

Where $\lambdabar_\Phi E_\Phi$ is the energy for any particle multiplied by its de Broglie radius.

Discussion

Consider the de Broglie radius as compliment to the Schwarzschild radius.

The Schwarzschild force (3.02585e[43]N required to retain electromagnetic energy) maintains equivalent for any mass value whatsoever. It is integral to all of the relationships shown above. It is also unique and determinant for the universal frame or primary quantum field. It is sister to the Planck force.

All elements (normal matter) are in a natural state of fugue (flight), towards the primary quantum field, the Planck Interaction. What we call "Space-time" is also derived from this interaction. It is the "not so weak", particle well creating interaction/particle, that gives "tension" to the fabric of space, and to inertia its properties. This short description of the Planck Interaction leaves many questions, yet it can be seen (with a small amount of effort), that the model is worthy of closer inspection.

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