

Gravitational Relativity

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1. All laws of physics are phenomena of matter and energy interactions. These interactions of matter and energy are related to the reference frame of their ambient/local gravitational field. The source of gravitational fields are bodies of matter and the gravitational fields rotate and translate with their source bodies of matter.
2. Time is not dilated but passes at the same rate throughout the Universe so that all matter and energy interactions can be synchronized. Space dimensions are not contracted but are uniformly linear in every direction in the Universe.
3. The principal intrinsic property of matter is the electric charges of subatomic particles in a body of matter. There is no relativistic change of the quantity of the intrinsic electric charge of any subatomic particle in matter at any velocity in any relative frame of reference in the Universe.
4. Subatomic electric charges in matter have intrinsic electric fields which like gravitational fields extend out in the Universe into infinity. From the periodic chart of elements it appears that there are an equal number of positive and negative subatomic electric charges in the Universe. All these subatomic electric fields interact with each other at a distance. Any disturbance/perturbation in these electric fields of subatomic electric charges in its local gravitational field will produce electromagnetic radiation.
5. The speed of light/electromagnetic radiation varies inversely (1) with the strength of its electromagnetic transport medium according to Maxwell's derivation of the speed of electromagnetic waves $c^2 = \frac{1}{\epsilon \times \mu}$ where ϵ is the electric parameter (permittivity) and μ is the magnetic parameter (permeability) of the electromagnetic medium of transport} and (2) with the strength of the local gravitational field. Since the strength of electromagnetic and gravitational fields of matter approach zero in deep space, far from celestial bodies, then the speed of light/electromagnetic waves will approach nearly infinite speeds in deep space. Conversely, the speed of light/electromagnetic waves will decrease as light/electromagnetic radiation approaches the intensified electromagnetic and gravitational fields near celestial systems.
6. Light/electromagnetic radiation, traveling in a variable strength electromagnetic or gravitational field, will slow down in the higher strength sectors of the field (electromagnetic or gravity) and will therefore bend (refract) toward the higher strength sectors in a variable strength field in the same manner that light bends as a mirage in a variable strength electromagnetic medium of air.
7. The effects of gravity and the speed of electromagnetic waves travel at the same speed even as their speed of propagation approaches nearly infinite speeds in deep space. In accordance with Mach's Principle the gravity fields of all of the celestial bodies of matter in the Universe form a weak, universal background frame of reference for all local, ambient gravitational fields in the Universe.
8. Magnetism is not an independent phenomenon. Magnetism according to Maxwell's magnetic equation of state has no intrinsic magnetic source in sharp contrast to electric fields which have an electric charge as an intrinsic source according to Maxwell's electric equation of state. There is no magnetic monopole. Magnetism is a dependent phenomenon, the vector cross product of electric charges and their respective electric fields moving in their ambient/local gravitational field. There is no magnetic phenomenon without electric charges and their respective electric fields moving in gravitational fields.

Permeability (the magnetic parameter) is therefore a dependent function of permittivity (the electric parameter) of electromagnetic fields.

9. Mechanical properties of matter are electromagnetic phenomena, or more strictly electric phenomena, since magnetism is a dependent phenomenon of electric field and gravitational field interactions. The mass of a body of matter is (1) proportional to the quantity of its electric charges, (2) proportional to its relative velocity in an ambient gravitational field, and (3) inversely proportional to the diameters of its electric charged subatomic particles. Kinetic energy of a body of matter is induced electro-magnetic field energy developed by its subatomic electric charges moving in its ambient gravitational field according to Lenz's law.
10. Intrinsic electric fields of subatomic electric charges could possibly be a standing longitudinal electric wave phenomenon generated by high frequency resonance motion of subatomic electric charges which appear as a static intrinsic electric field.
11. Electric charges of like electric polarity in subatomic particles of matter have slightly less repulsion force than the attraction force of unlike electric charges in matter which creates a slight electric attraction force. This slight electric attraction of the subatomic electric charges in matter is probably gravity as an electric field phenomenon.
12. Gravity as electric field phenomenon serves as the electromagnetic medium of transport for electromagnetic waves and determines the electric and magnetic parameters for Maxwell's derivation of electromagnetic wave propagation. Gravitational fields and electric fields of subatomic electric charges in matter have exactly the same spatial configuration, most evident in their fields around celestial bodies. Changes/perturbations in both gravitational and electromagnetic fields travel out through their fields at the speed of light which indicates that both gravitational and electromagnetic fields are wave-fields that appear to be static fields.
13. Similar to waves from a ship, both gravitational and electromagnetic waves can act at a distance from the point of emission long after their source has moved or has ceased to exist. Light from distant nova explosions of stars continues to come to the Earth, long after a star has self-destructed. In a similar way, the effect of the gravitational pull of one celestial body can effectively appear to be instantaneous on another celestial body since the second body will interact with the previously emitted gravitational wave-field of the first body. For instance, the Earth will travel through the gravity wave-field emitted by the Sun eight minutes previously and the gravitational pull of the Sun on the Earth will appear to be instantaneous. If the Sun is annihilated, the Earth would continue to feel the Sun's gravitational pull for more than eight minutes after the Sun's annihilation, just as the Earth continues to receive electromagnetic waves from celestial bodies destroyed years ago.