

## Postulates Introduced by Periodic Physics

### Principle of Time

*With respect to the variant-rate time the speed of light in vacuum is a directionally periodic function of the absolute w-coordinate.<sup>1</sup>*

### Principle of Gravitational Mass

*The magnitude of the gravitational mass of a particle is proportional to its time-symmetric rest-mass; the sign of antimatter's gravitational mass is opposite to the sign of matter's gravitational mass.*

### Principle of Difference

*Macro gravitation differs from length-dependent electricity in all respects.*

### Second Principle of Equivalence

*Exclusively for photons and only in the reference frame of their absorbing matter the time-asymmetric gravitational field is equivalent to a conservative field.*

### Principle of Cosmic Odyssey

*Most of the non-virtual photons in empty space eventually return to their emitting systems in converging superpositions that are equally distributed over the whole solid angle.*

### Third Principle of Equivalence

*The spectrum of odyssey-radiation is equivalent to the spectrum of black-body radiation.*

### Principle of Supreme Design

*The universe is supremely designed, inspected, and controlled, such that at any epoch there are numerous solar systems which host life and numerous solar systems at recycling processes preparing to host life.*

### Principle of Cosmological Pair

*The whole universe is constituted of two interchangeably-orthogonal universes.*

### Principle of Internal Mode

*The independent variable on which the internal influence on a participant depends is its variable charge. Inside a composite quark/lepton the participants are its fundamental constituents; inside a quark-composed particle/leptonic-shell the participants are its quarks/leptons; inside an atom/ion the participants are its nucleus and its leptonic-shell.*

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<sup>1</sup> Events which are absolutely simultaneous are of the same absolute w-coordinate (the absolute simultaneity is introduced in Part II).

## Reformulated Postulates

### Principle of Time-Symmetric Mechanics

*The derivative of the momentum of a particle with respect to the invariant-rate time is proportional to the time-symmetric description of the force exerted on it.*

### Principle of Time-Asymmetric Mechanics

*The derivative of the momentum of a particle with respect to the variant-rate time is proportional to the time-asymmetric description of the force exerted on it.*

### Principle of Time-Symmetric Relativity

*The relativity of physical quantities is due to the invariance of the mathematical principles of Nature and due to the invariance of its universal constants.*

### Principle of Time-Asymmetric Relativity

*The relativity of physical quantities is due to the invariance of the mathematical principles of Nature, due to the invariance of its universal constants, and due to its fundamental variant.*

### Principle of Space

*With respect to the invariant-rate time the speed of light in vacuum is a universal constant.*

### First Principle of Equivalence

*Free fall of a purely-matter system or of a purely-antimatter system in a uniformly operated gravitational field is infinitesimally equivalent to uniform motion in a hypothetical universe free of gravitation; stationary state of a purely-matter system or of a purely-antimatter system in a uniformly operated gravitational field is infinitesimally equivalent to uniform acceleration in a hypothetical universe free of gravitation.*

### Time-Asymmetric Second Law of Thermodynamics

*The entropy of a closed cosmological system increases during the decrease of the variant speed of light, and decreases during the increase of the variant speed of light. States of infinite entropy are fictions. The total entropy of a closed cosmological system always lies within a certain finite interval.*