

# Energy Capture Model (ECM)

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## ABSTRACT

The Energy Capture and Emergent Projection Model (ECM) introduces a new paradigm for mass, energy, time, and space. This paper posits the hypothesis that time and space are not fundamental dimensions of the universe, but somewhat emergent phenomena resulting from the "arrest" of free energy. By analyzing the photon state ( $v=c$ ), where the spacetime interval is zero, the author suggests that the primordial state of energy is timeless and spaceless. Mass is defined as energy trapped in local interaction loops (Higgs mechanism, strong interactions), resulting in a "deceleration" relative to the constant speed of light  $c$ . This deceleration creates the dilation that observers (material beings) interpret as the linear passage of time and distance.

The paper proposes a paradigm shift: from a universe as a stage for events to a universe as a static energetic structure perceived dynamically only through the lens of the perceptual limitations of material entities. The ECM model reinterprets mass and time as derivatives of the energetic state.

Starting from Einstein's equation reconfigured as  $m = \frac{E}{c^2}$  the author hypothesizes that energy is the primary state of reality. At the same time, mass is its "residue" formed by mechanical and structural deceleration. The "Capture Index" ( $\frac{1}{c^2}$ ) is introduced to describe the phase transition of pure energy into matter via the looping of its dynamics. The key conclusion is a new definition of time as a "delay" resulting from the photon's loss of the limit velocity  $c$ .

Keywords: Energetic capture, time dilation, rest mass, Higgs field, photon timelessness, emergent projection, capture index, energy looping.

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*The language of light opens spaces where there is no space.*

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## Energy Capture Model (ECM)

The ECM postulates that time and space are not fundamental dimensions, but effects of energy (photons), losing the limit velocity  $c$ . The objective state of the universe is timeless energy. Spacetime is the observer's emergent cognitive interface. Mass is created through energetic capture.

### 1. THE TIMELESSNESS PARADIGM <sup>1</sup>

The foundation of the Energy Capture Model (ECM) is the recognition that the universe's primordial state is pure energy. ECM posits that this timelessness and spacelessness are not mathematical abstractions but the only objective reality. Time and space emerge only as a result of a photon losing its limiting velocity  $c$  during the process of energetic capture.

## 2. CAPTURE ENERGY (MATTER)

Matter is energy that has undergone "arrest" through local condensation and field coupling (e.g., the Higgs mechanism and strong interactions).

- **Mass as an Anchor<sup>2</sup>:** When particles (electrons, quarks) acquire mass, energy is forced to move at velocities  $< c$
- **The Birth of Time:** The moment energy ceases to be "everywhere at once" (the photon state), a communication delay between points arises. This delay constitutes the fundamental unit of time, and by extension, distance and space.

## 3. MATHEMATICAL FOUNDATION – REVERSING EINSTEIN'S HIERARCHY

The ECM model begins with a radical reinterpretation of the most famous equation in physics. Instead of the traditional  $E=mc^2$ <sup>3</sup>, which suggests mass is a primary "reservoir" of energy, the ECM model is based on the transformation:

$$m = \frac{E}{c^2}$$

This formula is introduced as the fundamental law governing the formation of reality. In this view, energy is the base state of the Universe, and mass is merely its specific, "frozen" form. Mass ( $m$ ) is the mathematical result of dividing pure energy by the square of the limit velocity  $c$ . The coefficient ( $\frac{1}{c^2}$ ) is not merely a constant, but the Capture Index (Energy Capture).

## 4. TIME AS A PRODUCT OF MATERIALIZATION

According to ECM theory, time is the "delay" resulting from the entrapment of energy. Since energy ceased to be "everywhere at once" (photon state) and began to persist in one location as mass, the interface of time is born. Time is the "price" energy pays to become matter.

### The Two States of Energy:

- **Propagation State** (Pure Energy): When a photon moves at  $v = c$ , it remains in a "free," massless, and timeless state. Energy is "free"; there is no time or space—it simply *is*.
- **Capture State** (Matter): When energy is looped or braked (due to structural interactions), it becomes "trapped" in a static structure. Mass measures how effectively energy has been decelerated and "packed" into the spacetime interface. Dynamics are reduced to a minimum by powerful resistance or curvature, a state known as "energetic inertia." The lower the net velocity of a system relative to  $c$ , the more pronounced its materiality becomes.

## 5. SPACETIME AS AN OBSERVER'S PROJECTION

The most radical element of the ECM model is the observer's role. Time and space are defined as an emergent<sup>5</sup> cognitive<sup>4</sup> interface for beings composed of capture energy.

- **Time Projection:** The human brain, operating on slow electrochemical processes, interprets the change of states as a linear flow of time.
- **Space Projection:** Distance is the subjective perception of the lack of simultaneity. We perceive distance only because our "arrested" nature prevents direct, timeless contact with the rest of the universe.

## 6. NEGATING ANOMALIES (BLACK HOLES)

The ECM model redefines the concept of extreme cosmic objects. Since time and space are merely projections:

- **The Black Hole** is not an "object": It is a region where the density of capture energy is so high that the generation of time and space projections becomes impossible.
- **End of the Interface:** The event horizon is not a physical boundary, but the limit of the "reach" of the human cognitive interface. In these regions, the universe returns to its fundamental state of timelessness, appearing to a material observer as a singularity or a "hole."

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## AUTHOR'S SUMMARY (CONCLUSIONS)

1. The universe is a static, energetic whole.
2. The universe is a point. From the perspective of a photon, there is no speed because there is neither time nor distance. Travel does not exist—distance is ZERO (due to Lorentz contraction). A photon emitted from a galaxy 13 billion light-years away reaches our eye instantly at the moment of emission. It experiences no waiting, no aging, and no past or future. The start and end points are identical.
3. A photon does not "travel" at speed  $c$ ; it is a bridge connecting two points of the universe in a single, infinite moment.
4. The Big Bang marks the beginning of energy capture into material forms.
5. The limit velocity  $c$  is a conventional speed from the observer's perspective. In ECM,  $c$  is a state of simultaneity where cause meets effect.
6. We are energy "trapped" in time. Returning to the state of energy is a return to timelessness.
7. Life is only possible because energy can be capture (ECM) to create stable structures.
8. Mass is the result of "braking." While  $c^2$  is traditionally a conversion constant, in ECM,  $\frac{1}{c^2}$  is the Capture Index.
9. If  $c$  represents maximum dynamics (pure state), then mass is the state where dynamics are minimized by resistance.

10. Since  $c$  is the speed at which time does not exist (photons do not age), deceleration to  $\frac{1}{c^2}$  is the moment time is born.
11. It is commonly accepted that mass can be converted into energy. The ECM model confirms the reversal of this hierarchy: energy is the base state, and mass is merely its specific, "frozen" form. From the equation  $m = \frac{E}{c^2}$  it follows that mass is essentially energy subjected to the reciprocal of the square of the limit velocity. This "deceleration" is not just a change in physical value, but a process in which pure energy becomes matter, thereby creating the spacetime interface.

### Two Images of Reality

| Perspective    | Does speed exist?            | Does time exist?                   | Does distance exist?                |
|----------------|------------------------------|------------------------------------|-------------------------------------|
| Human Observer | <b>Yes</b> (km/s)            | <b>Yes</b> (Linear flow)           | <b>Yes</b> (Meters/Kilometers)      |
| Photon         | <b>No</b><br>(Instantaneous) | <b>No</b><br>(Everything is "Now") | <b>No</b><br>(Everything is "Here") |

This demonstrates that time and space are merely the "interface" through which we—material beings—experience the universe. For energy itself, these limitations do not exist.

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