# Possible Terms/Definitions of:

# Potential Aspects in/of Protocosmic Informational Substrate

## I. STRUCTURAL ASPECTS OF THE PROTOSUBSTRATE [($\mathcal{S}_0$)=Zo-]

Zo-/Oz 'axis'

- Zo- → the substrate, the origin, the unseen
- Oz → the emergent universe, the observed world, the legible domain

Zo-Phys = academic nomenclature

Plancktonian Protophysics = Zo-physics = the field of research/study:

"The systematic study of the substrate (Zo) and its emergent expressions (Oz)."

Zophysicists = practitioners of the field

Ozlings = S.A.S. = Self-Aware-System = observer class entities/observer-one(s)

***Non-geometric, non-energetic, pre-causal informational primitives***

### 1. Protoisotopes

Definition: Distinct informational configurations within $\mathcal{S}_0$ that differ in stability class, not mass or nucleon count.
Usage: "Protoisotopes represent admissible micro-configurations of the substrate that later manifest as stability families in emergent matter."

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### 2. Protocharges

Definition: Pre-quantum relational asymmetries that later give rise to conserved quantities (charge, parity, etc.).
Usage: "Protocharges encode directional biases in the substrate's admissible transitions."

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3. Protosymmetries

Definition: Upstream invariances of the substrate that constrain which event-structures can emerge.
Usage: “Protosymmetries are not spacetime symmetries; they are informational invariants that geometry inherits.”

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4. Proto-degrees of freedom

Definition: The minimal independent informational axes available to $\mathcal{S}_0$ prior to any physical interpretation.
Usage: “Proto-degrees of freedom define the substrate’s expressive capacity before quantization.”

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5. Proto-topologies

Definition: Non-metric adjacency relations among informational states, not embedded in space.
Usage: “Proto-topology determines which transitions are ‘near’ or ‘far’ in informational terms.”

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6. Proto-causalities

Definition: Pre-temporal ordering constraints that later manifest as causal structure.
Usage: “Proto-causality is the substrate’s admissible partial ordering, not a temporal sequence.”

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7. Proto-spectra

Definition: The allowed eigen-structures of $\mathcal{S}_0$’s informational operators, prior to energy or frequency.
Usage: “The proto-spectrum is the substrate’s set of admissible informational modes.”

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8. Proto-manifolds

Definition: Abstract relational scaffolds that later become geometric manifolds when metricized.
Usage: “Geometry is a metric-decorated projection of a deeper proto-manifold.”

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9. Proto-fields

Definition: Distributed informational gradients in $\mathcal{S}_0$ that later appear as physical fields.
Usage: “Proto-fields are not energetic; they are constraints on informational variation.”

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10. Proto-operators

Definition: Transformations on substrate states that later correspond to physical observables.
Usage: “Proto-operators define the substrate’s admissible transformations before quantization.”

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II. DYNAMICAL ASPECTS OF THE PROTOSUBSTRATE

*How $\mathcal{S}_0$ evolves or transitions without time, energy, or geometry*

11. Transition Kernels

Definition: Rules governing allowed informational transitions in $\mathcal{S}_0$.
Usage: “Transition kernels encode the substrate’s pre-dynamical evolution.”

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12. Admissibility Conditions

Definition: Constraints determining which informational configurations can exist or persist.
Usage: “Admissibility conditions are the substrate’s equivalent of conservation laws.”

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13. Stability Classes

Definition: Families of substrate configurations that resist transition under the kernel.
Usage: “Stability classes are the substrate’s precursor to particle families.”

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14. Informational Attractors

Definition: Preferred configurations toward which substrate states tend.
Usage: “Attractors in $\mathcal{S}_0$ seed the emergence of structure in the protocosmos.”

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15. Proto-resonances

Definition: Recurring relational patterns in the substrate’s transition graph.
Usage: “Proto-resonances are the substrate’s pre-spectral harmonics.”

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III. RELATIONAL / EMERGENT ASPECTS

*How $\mathcal{S}_0$ gives rise to geometry, matter, and observers*

16. Emergence Channels

Definition: Pathways by which substrate configurations become geometric or energetic.
Usage: “Emergence channels define how informational primitives become physical observables.”

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17. Observer-Legible Modes

Definition: Substrate configurations that can be encoded by an emergent observer.
Usage: “Only observer-legible modes survive the transition into the protocosmos.”

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18. Pre-metric Gradients

Definition: Differences in informational density that later become curvature.
Usage: “Curvature is the metric expression of pre-metric gradients in $\mathcal{S}_0$.”

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19. Proto-entanglement Structure

Definition: Non-spatial relational binding in the substrate that later appears as entanglement.
Usage: “Entanglement is a downstream shadow of proto-relational binding.”

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20. Informational Fossils

Definition: Residual substrate signatures that persist into the cosmic cycle (e.g., the dark duo).
Usage: “Dark matter and dark energy are informational fossils of $\mathcal{S}_0$.”

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## IV. META-LEVEL ASPECTS

*How the substrate constrains entire cosmic cycles*

### 21. Cycle Boundary Conditions

Definition: Substrate-level constraints that determine how cycles begin and end.
Usage: “Cycle boundaries are informational, not energetic.”

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### 22. Foundational Unknowns (α, β, γ)

Definition: The irreducible substrate-level parameters that define the space of possible cycles.
Usage: “The Foundational Unknowns are the substrate’s primitive degrees of freedom.”

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### 23. Origin Moment Conditions (O.M.O.)

Definition: The informational criteria under which the substrate becomes legible to itself.
Usage: “O.M.O. marks the transition from substrate to protocosmos.”

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