

Cosmological Model – An Alternative to the Beginning and Expanding Universe

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1. The Theory of the Whole Universe

The Deep Nature of Eternity and Infinity: The universe is eternal in time and infinite in space. And time and matter and space are relative. Here, infinity defines a boundless and immeasurably vast realm where scale itself ceases to have any meaning. Yet, a cosmic size exists, and its minimum is observable and maximum is less than infinite, we don't know how much. The cosmos is inherently without an exterior—no "outside" exists.

The Longest Possible Distance and Logic: Instead of an abstract infinity, physical reality is governed by the *longest possible distance*, a concept from which a precise mathematical formula of the space of the universe can be derived. Although logic and physical reality are generally separate entities, the universe as a whole possesses intrinsic logical properties. The universe does not expand globally; cosmological redshift is merely an intrinsic property of the space and time and light of the universe, or a phenomenon that occurs as light travels across this infinite space.

2. The Theory of Sub-Universes

Local Big Bangs: The infinite cosmos is divided into dynamic sub-universes. The Big Bang was not the creation of the entire universe, but a **local phenomenon** - general mechanism that serves as the cosmic reboot for a single sub-universe.

General Mechanism: Sub-universes function in cyclical phases. Driven by gravity, galaxies collide and accumulate into massive clusters, compressing matter to its absolute limit. Supermassive black holes eventually reach the next stage of their life cycle (a critical mass limit), erupting into quasars (maybe this for example) and generating dense, opaque proto-nebulae. These nebulae obscure the distant galaxies behind them and act as cosmic nurseries from which a new local generation of stars and then galaxies condenses.

Empirical Testing:

Verification: Telescopes detect galaxy populations that systematically grow younger toward a specific point in the sky (the center of a local Big Bang). The discovery of "too

old" galaxies at extreme distances by the James Webb Space Telescope becomes the norm, proving the eternity of the universe.

Falsification: If it is irrefutably proven that redshift can only be caused by the metric expansion of space, or if infrared observations fail to detect any signs of older galactic structures behind or within the proto-nebulae.

We cannot yet choose one theory as the only right one, but we must have some alternative, if standard theory is not good enough. This is one for testing.

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