

Classical Physics Is an App Running on the Deep Universe

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https://youtu.be/TfwaEhNg9Oc&lc=UgyNTwXugo_PzCTpqI54AaABAg

A Comment on the [Astrum](#) YouTube post:

The Attribute of Light Science Still Can't Explain (Jun 15, 2023)

<https://youtu.be/TfwaEhNg9Oc?t=15m28s>

Abstract: Rather than viewing the quantum world as an anomaly within a universe of inexplicably preexisting, infinitely smooth $xyzt$ spacetime, a more experimentally compliant view is that classical physics is a network of apps running on top of a deep universe whose rules have yet to be adequately quantified. Each instance of the app creates an inertial frame, though the scope of that frame remains confined to the matter and energy participating — a point that necessarily modifies general relativity for frames cosmic in scale. Intriguingly, multi-scale wave collapse is the app's most heavily used deep-universe "instruction" for creating its approximation of classical space and point-like particles.

Space and Time as Local-Only Creations

15:28 *"What is going on under the hood of reality? Why is the universe behaving differently when looked at compared to when not?"* It's not *that* complicated: Instead of being fundamental, space and time are local-only constructs created by the well-structured clumps of matter we call inertial frames. When the deeper non- $xyzt$ universe intrudes on these narrow interpretations, you get events like two-slit interference that make no sense because *space and time are local-only creations of your inertial frame.*

A Simple Fix to the Vacuum Density Problem

A nice corollary is that *nothing* lurks between such inertial frame clumps as they stare at each other's data from their biased perspectives. The vacuum reverts to a more authentically empty Level 8 in Robert Lawrence Kuhn's "levels of nothing" — a vacuum without a density catastrophe lurking in every calculation — and quantum field theory becomes a complicated mapping of deep-universe relations into one inertial frame's $xyzt$ interpretations.

Special Relativity as a Network of Apps

Local-only creation of $xyzt$ is also why special relativity works. Since every viewer creates their particular version of $xyzt$ coordinates and thus of classical physics, it's just as good as anyone else's version. Thinking of $xyzt$ as a coordinate app applied to the deep universe is a pretty good analogy. This inertial-frame coordinate app restricts bits and pieces of deep universe structure into something comprehensible and information-generating. Persistent information stitches all the frames together to create a decent causality-network simulation of cosmic time, but it's way rattier and more piecemeal than the maths say.

Connectivity and Separation in the Deep Universe

That's not to say everything is disconnected or disjoint. Quite the opposite: The many locally connected inertial frames are intensely entangled, but *only* in ways that don't quickly create what we interpret locally as historical information. That's a specialty of the xyzt inertial frame app. Electrons, for example, are the same everywhere in the universe not because of replication but because, at a deeper level, only one electron construct gets accessed, shared, and multiplexed by all those xyzt apps.

The universal electron gives a glimpse of the well-structured universe that resides beneath our local xyzt interpretations but is not bound by them. I can tell you, for example, that the distances between fermionic objects in this "more real" universe are *squares* of what we think of as distances, e.g., year-lightyears replace lightyears. That's the easy one because it's the only way to preserve the Poincaré symmetries without violating causality. The extra distance provides the "slack" needed to avoid paradoxes.

The Classical App Is All About Closing Loops

But that's still space-like thinking. The deeper universe uses multi-scale loop logic: Nothing means anything until some out-and-back loop is closed. Einstein noticed this in 1905 when he refused to define lightspeed using anything simpler than an out-and-back. After his former professor Minkowski browbeat him into accepting points-are-free formalist maths, Einstein never followed up on his observation.

Unrelenting Wave Collapse Makes Classical Space, Time, and Particles Possible

The nature of wave collapse is the most baffling, yet also the most critical, puzzle for understanding the deep universe. Experimentally, collapses via tiny momentum and energy exchanges are the most common event in all experimental physics. These multitudes of micro collapses collectively make particles, waves, space, time, and history possible. We don't usually notice this frenetic collapse activity precisely because we summarize it as "classical" physics. The difficulty is that since wave collapse is part of the deep universe lurking beneath our xyzt interpretations, trying to model it by *using* information — math formalisms — is a bit like trying to model air using only steel anvils. It's not even a "wave" collapse since waves are an xyzt interpretation of some much odder non-spatial deep universe oscillatory behavior. A fascinating analytical puzzle, that.