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(POS-3) Quantum clock with zero time point

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We introduce a novel concept for relational and discrete cyclic timekeeping for application in a quantum clock design. Taking inspiration from ancient timekeeping systems, we challenge conventional use of continuous time by exploring temporal space definable by finite Euclidean 1D geometry bound by discrete event-driven zero time points. In contrast to abstract continuous and infinitesimal time, our proposed quantum clock synchronizes the start/stop cycle with events in physical reality, offering a potential avenue to address challenges in quantum computing and discrete event simulations. Our approach is based on temporal space that is bound by physical limit in time, where time can be precisely defined as zero [$t = 0$]. This temporal limit aligns with Planck's limits and the Mohist definition of an "atomic,"representing an indivisible line. For instance, superposition phenomena occur precisely at $t = Øt = 0$, independent of space. In contrast to infinitesimal intervals proposed beyond our dimensional reality, our definition of temporal space is confined to our observable universe, relevant to normal matter. The concept highlights the contrast with relativistic modeling, emphasizing Rt relationalism's capability to separate space from time, offering a distinct perspective on temporal metrics within our observable reality.

Keyword-1

quantum clock

Keyword-2

relationalism

Keyword-3

discrete time

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