Contribution ID: **88** Type: **talk**

Particles with Proper Time Oscillation

Wednesday 25 September 2024 11:30 (25 minutes)

We demonstrate that a matter field with proper time oscillations has the properties of a quantum field. The particles observed are oscillators propagating back and forth in time. We also find that the internal time of the field is self-adjoint. The proper time oscillation of an observed particle satisfies an uncertainty relation analogous to that between spatial position and momentum. To test the theory, we propose to study the effects of the oscillations on a particle's decaying time and arrival time.

Primary author: YAU, Hou (San Francisco State University)

Presenter: YAU, Hou (San Francisco State University)

Session Classification: Session V. Teleportation, entanglement and decoherence