## Seventeenth Marcel Grossmann Meeting



Contribution ID: 2

Type: Talk in a parallel session

## Harmonic Oscillator with Time as a Dynamical Variable

Friday, 12 July 2024 15:40 (20 minutes)

We find that a field with oscillations of matter in proper time has the properties of a zero-spin bosonic field. A particle observed in this field is a proper time oscillator. Neglecting all quantum effects, a proper time oscillator can mimic a point mass at rest in general relativity. The spacetime outside a 'stationary' proper time oscillator is a Schwarzschild field.

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