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Quantum Measurements Along Accelerated World-Lines

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Abstract content
   (Max 300 words)

In this research, we are working with a formalism for quantum measurements that takes special relativity into account. The ultimate goal is to modify this framework to work with more general space-times rather than just Minkowski space-time and determine how the metric would affect quantum entanglement by doing calculation of Bell's Theorem in curved space-time.
As a first step in that direction, in this paper, we calculate the case for quantum measurements along an accelerated world line by solving the Schwinger-Tomonaga equation.

Apply to be
 considered for a student
   award (Yes / No)?

Yes

Level for award
 (Hons, MSc,
   PhD)?

PhD

Main supervisor (name and email)
and his / her institution

Prof Simon H Connell
Prof Francesco Petruccione

Would you like to
 submit a short paper
 for the Conference
 Proceedings (Yes / No)?

Yes

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