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Quantum tests

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Quantum mechanics is at the basis of our understanding of all matter and - since with the behavior of matter we explore space and time - also of our understanding of space-time. In the recent years, also quantum technologies became more and more important for practical purposes. This includes quantum sensors, quantum metrology, quantum information, quantum cryptography, quantum computing, etc. Of particular importance is the coupling of quantum matter to gravity. In this talk we collect the foundations of quantum mechanics, the foundations of relativistic gravity, and corresponding tests, in particular tests exploring the quantum-gravity interaction. Also the relevance of this research for practical purposes is described.

Summary

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