

学术交流报告

Enhanced quantum teleportation in the background of Schwarzschild spacetime by weak measurements

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个人简介:

肖兴, 教授, 2012年于湖南师范大学物理系取得博士学位, 2013-2015年北京计算科学研究中心博士后, 主要从事开放量子系统非马尔科夫动力学、量子弱测量、量子度量学和金刚石 NV 色心等方面研究。以第一作者或通讯作者在PRA、NJP、LPL和JPB 等 SCI 期刊上发表论文30余篇。论文被引用570多次, 谷歌学术H因子14, 获2016年江西省物理学会优秀论文二等奖。主持或完成国家自然科学基金2项, 省级基金4项。担任 JPB、QIP和 JMO 等7个 SCI 期刊审稿人。

报告简介:

It is commonly believed that the fidelity of quantum teleportation in the gravitational field would be degraded due to the heating up by the Hawking radiation. In this paper, we point out that the Hawking effect could be eliminated by the combined action of pre- and post-weak measurements, and thus the teleportation fidelity is almost completely protected. It is intriguing to notice that the enhancement of fidelity could not be attributed to the improvement of entanglement, but rather to the probabilistic nature of weak measurements. Our work extends the ability of weak measurements as a quantum technique to battle against gravitational decoherence in relativistic quantum information.

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