

Spooky work at a distance

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The quantum measurement process is usually discussed in terms of the knowledge of the observer, or in terms of information available about the quantum system. In my talk, I will discuss how the quantum measurement may also be viewed as stochastic energy source, where energy can be transferred from the meter to the system with near unit efficiency in order to do useful work. Further, I will also show that this measurement-generated work can be accomplished in systems where the meter seemingly never interacts with the system, as in the case of interaction-free measurements.

[1] Cyril Elouard, Andrew N. Jordan, Efficient Quantum Measurement Engines, Phys. Rev. Lett. 120, 260601 (2018),

[2] Cyril Elouard, Mordecai Waegell, Benjamin Huard, Andrew N. Jordan, in preparation

Presenter: JORDAN, Andrew N. (University of Rochester)

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