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Quantum Measurements of time

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We propose a time-of-arrival operator in quantum mechanics by conditioning on a quantum clock. This allows us to bypass some of the problems of previous proposals, and to obtain a Hermitian time of arrival operator whose probability distribution arises from the Born rule and which has a clear physical interpretation. The same procedure can be employed to measure the "time at which some event happens" for arbitrary events (and not just specifically for the arrival time of a particle).

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