



Quantum Physics

# Longer-Baseline Telescopes Using Quantum Repeaters

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We present an approach to building interferometric telescopes using ideas of quantum information. Current optical interferometers have limited baseline lengths, and thus limited resolution, because of noise and loss of signal due to the transmission of photons between the telescopes. The technology of quantum repeaters has the potential to eliminate this limit, allowing in principle interferometers with arbitrarily long baselines.

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