

QUANTUM PHYSICS

Clone rangers

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A quantum scheme dubbed 'telecloning' has been realized by researchers at the University of Tokyo in Japan, and the University of York in the United Kingdom.

Telecloning allows a quantum state to be simultaneously copied and reproduced in a number of remote locations. The protocol was implemented using three laser beams, entangled so that their quantum states were linked. First, a measurement was performed on one beam, the 'sender'. The result of that measurement was then used to guide manipulations of the two 'receiver' beams such that both adopted approximations of the quantum state specified by the sender. Quantum mechanics forbids the creation of perfect copies, but the experiments achieved copies almost as good as theory permits.