

Abstract Submitted  
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**Cosmic Acceleration and Einstein's Resolving Spooky Action at a Distance** THOMAS CHAMBERLAIN, University of California, Berkeley — Einstein believed spooky action at a distance meant quantum mechanics (QM) was incomplete, that hidden variables were needed to resolve faster-than-light influence. But Bell's Inequality supported spooky action and denied Einstein's local realism. Nevertheless, difficulties in advancing QM—e.g., spontaneous emission and deeper integration of QM with special and general relativity—hold out the possibility that Einstein's skepticism was justified after all. In this talk we consider—given a correct derivation of cosmic acceleration (2018:  $a = rH^2$ ;  $\Lambda = 3H^2/c^2$ ) from postulated singular light-speed inward in the Hubble expansion—how the same instantaneous effect along a temporally-entangled Einstein's lookback path also resolves Einstein's faster-than-light criticism of QM. Here instantaneous temporal effect of either of two entangled photons back to the source is understood to instantly cause the complementary state of the other photon despite an unlimited separation distance in any given epoch. Action-at-a-distance is given explanation by these considerations along with deeper insight into the nature of time, both results in accord with the empirical facts while leaving intact the probability-based successes of quantum mechanics.

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