

Dan Greenberger

City College of CUNY

A (possible) Ultimate Bell Theorem without *Inequalities*

Bell's theorem is a statement that quantum mechanics produces special (entangled) states that have correlations that no local, realistic theory can possible reproduce. Both experimental and theoretical works on Bell's theorem proceed from the idea that the two entangled states are produced by the decay of a single central particle into two particles. But there is a new way to produce entangled states that originates from two independent pairs of particles, and which is exceedingly hard to get a handle on classically. I will discuss the background of the subject, and the new information provided by these new experiments

> Monday February 24, 2003 Starts at 12:15 PM Physics Conference Room, SB B326