

Abstract Submitted  
for the MAR08 Meeting of  
The American Physical Society

**Non-Markovian Open Quantum Systems** CESAR RODRIGUEZ-ROSARIO, E.C.G. SUDARSHAN, The University of Texas at Austin — A generalized non-markovian master equation is derived from the dynamical map of systems initially correlated with their environment. We study the connection between the initial correlations and the non-markovian memory effects. The significance of not-complete positive maps in order to obtain a consistent theory of non-markovian quantum dynamics is discussed. Previous specific instances of non-markovian master equations are examined in this framework.

Cesar Rodriguez-Rosario  
The University of Texas at Austin

Date submitted: 23 Nov 2007

Electronic form version 1.4