

Abstract Submitted  
for the MAR07 Meeting of  
The American Physical Society

**Initial quantum corrections, quantum process tomography, and physicality of not completely positive maps** KAVAN MODI, CESAR RODRIGUEZ, AIK-MENG KUAH, Univ. of Texas at Austin , ANIL SHAJI, Univ. of New Mexico at Albuquerque, E. C. GEORGE SUDARSHAN, Univ. of Texas at Austin — We make the connection between initial quantum correlations and not completely positive maps. Though this has been suggested in literature for some time now, our arguments are supported by explicit calculations. In the process we will discuss our work in relation with quantum process tomography. We are especially interested in recent experiments that yielded so called non-physical results. We will offer new interpretations of these experiments and show that the results do make sense in the end.

Kavan Modi  
Univ. of Texas at Austin

Date submitted: 20 Nov 2006

Electronic form version 1.4