Communicating by magic

(where “magic” == “quantum mechanics”)

UvA MolSim Group Literature Talk
David W.H. Swenson
12 May 2017

PNAS

Direct counterfactual communication via quantum Zeno effect

Yuan Cao[a,b,1], Yu-Huai Li[a,b,1], Zhu Cao[c], Juan Yin[a,b], Yu-Ao Chen[a,b], Hua-Lei Yin[a,b], Teng-Yun Chen[a,b], Xiongfeng Ma[c], Cheng-Zhi Peng[a,b,2], and Jian-Wei Pan[a,b,2]

[a]Shanghai Branch, National Laboratory for Physical Sciences at Microscale and Department of Modern Physics, University of Science and Technology of China, Shanghai 201315, China; [b]Synergetic Innovation Center of Quantum Information and Quantum Physics, University of Science and Technology of China, Hefei, Anhui 230026, China; and [c]Center for Quantum Information, Institute for Interdisciplinary Information Sciences, Tsinghua University, Beijing 100084, China

Edited by Gilles Brassard, Université de Montréal, Montreal, Canada, and accepted by Editorial Board Member Anthony Leggett March 29, 2017 (received for review August 31, 2016)

PRL **110,** 170502 (2013) PHYSICAL REVIEW LETTERS week ending 26 APRIL 2013

Protocol for Direct Counterfactual Quantum Communication

Hatim Salih,[1,*] Zheng-Hong Li,[1,2] M. Al-Amri,[1,2] and M. Suhail Zubairy[2]

[1]*The National Center for Mathematics and Physics, KACST, P.O. Box 6086, Riyadh 11442, Saudi Arabia*

[2]*Institute for Quantum Science and Engineering (IQSE) and Department of Physics and Astronomy, Texas A&M University, College Station, Texas 77843-4242, USA*

(Received 1 January 2013; published 23 April 2013)