

Abstract Submitted
for the MAR14 Meeting of
The American Physical Society

Searching for Quantum Contextual Models ADAM ROSIER,
SCOTT WALCK, DAVID LYONS, Lebanon Valley College — Quantum states may
be classified in a number of ways; of particular interest are quantum states that ex-
hibit the property of contextuality. This research presents an outline and attempts
to establish a framework inside of which it may be possible to determine whether or
not a given quantum state exhibits contextual behavior. As an example, through a
trial-and-error approach it has been determined that 3, 4, and 5-qubit Werner states
are highly unlikely to exhibit contextuality. Additionally, a model is proposed in an
effort to help illuminate possible quantum states that may be tested.

Scott Walck
Lebanon Valley College

Date submitted: 15 Nov 2013

Electronic form version 1.4