

Abstract Submitted
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**Quantum Collapse Requires Pre-and Immediate
Post-measurement States to Belong to Disjoint Sets** ARMIN NIKKHAH
SHIRAZI, Department of Physics. University of Michigan — We present a simple
proof that the orthodox interpretation of quantum mechanics, due to its incorpo-
ration of quantum collapse, requires pre- and immediate post-measurement states
to belong to disjoint sets of states. This requires a reformulation of the projection
postulate as a transformation of the quantum state to one that “looks like” an eigen-
state, because otherwise such projection implies that the two kinds of states belong
to the same set of states. An attempt to render more precise what is meant by a
state that “looks like” an eigenstate is presented.

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