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Summary: I present a thought experiment in quantum mechanics and tease out some of its implications for the doctrine of “peaceful coexistence”, which, following Shimony, I take to be the proposition that quantum mechanics does not force us to revise or abandon the relativistic picture of causality. I criticize the standard arguments in favour of peaceful coexistence on the grounds that they are question-begging, and suggest that the breakdown of Lorentz-invariant relativity as a principle theory would be a natural development, given the general trend of physics in this century.

MSC: 81P05 General and philosophical questions in quantum theory

Full Text: DOI

References:
[16] DOI: 10.1007/BF0128978 · doi:10.1007/BF0128978
[17] Cushing J., Quantum Mechanics: Historical Contingency and the Copenhagen Hegemony (1994) · Zbl 0828.00005
[23] Perrett W., The Principle of Relativity · Zbl 0891.73059
[26] DOI: 10.1103/PhysRev.47.777 · Zbl 0012.04201 · doi:10.1103/PhysRev.47.777
[28] DOI: 10.1007/BF00666022 · doi:10.1007/BF00666022
[29] DOI: 10.1007/BF00416904 · doi:10.1007/BF00416904
[33] DOI: 10.1097/BF00715075 - doi:10.1097/BF00715075
[37] Hoyle F., Action at a Distance in Physics and Cosmology (1974)
[52] Russell B., The Principles of Mathematics (1903) - Zbl 34.0062.14

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