Qeios

Peer Review

Review of: "Fundamental Issues and Measurement Problem in Quantum Mechanics"

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Tadashi Nakajima's *"Fundamental Issues and Measurement Problem in Quantum Mechanics"* (2026) proposes a distinction between directly measurable observables (Type A quantities) and probabilistic constructs like the wave function (Type B quantities), arguing that wave functions are not ontic entities and do not physically collapse. The paper's strength lies in its operational focus on real detection mechanisms and its attempt to connect nonrelativistic quantum mechanics with quantum field theory. However, it suffers from internal inconsistencies—particularly regarding the ontological status of the wave function—and contains several conceptual and technical weaknesses. While ambitious and thought-provoking, the framework requires clearer ontological commitments and stronger engagement with modern decoherence theory to achieve broader interpretive impact.

Declarations

Potential competing interests: No potential competing interests to declare.

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