

Abstract Submitted
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Angular Momentum in de Broglie-Bohm Quantum Theory DON-ALD H. KOBE, University of North Texas — The time rate of change of angular momentum of a many-particle system in an electromagnetic field in the de Broglie-Bohm formulation of quantum mechanics is equal to the classical torque plus a quantum torque due to the quantum force. When an average is taken with respect to the probability density the average of the quantum torque is zero. The average of the time derivative of the angular momentum is equal to the time derivative of the average angular momentum. The average of the equation is thus the same as the classical form. The resulting equation agrees with Ehrenfest's theorem for the quantum angular momentum operator.

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