

Abstract Submitted  
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**A space-wave model of zitterbewegung and the internal structure of the electron** DENNIS CROSSLEY, University of Wisconsin-Sheboygan — In recent years there has been renewed interest in zitterbewegung, the ultra-high frequency oscillations appearing in Dirac's theory of the electron, but there is no consensus on the physical interpretation or even the physical reality of this phenomenon. I present here a new model of zitterbewegung based on the author's space-wave theory of matter and interactions. This model not only clarifies the physical meaning of zitterbewegung but also presents a new model of the internal structure of the electron and sheds light on the fundamental quantum-mechanical mystery of wave-particle duality.

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