

Abstract Submitted
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A test of the (circular) Unruh effect using atoms DOUGLAS SINGLETON, California State University, Fresno — We propose a test for the (circular) Unruh effect using certain atoms – fluorine and oxygen. For these atoms the centripetal acceleration of the outer shell electrons implies an effective Unruh temperature in the range 1000–2000 K. This range of Unruh temperatures is large enough to excite a significant fraction of the outer electrons into low lying energy levels above the ground state. Examining these atoms at low ambient temperatures and finding a larger than expected number of electrons in low lying excited states beyond what is expected via background thermal excitation would provide experimental evidence for the Unruh effect.

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