

Abstract Submitted
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Test of the Unruh Effect Using Atomic Electrons NAVID RAD,
California State University Fresno — We propose a test for the circular Unruh effect using the electrons of atomic 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 shift the population of the outer electrons in low lying energy levels above the ground state. Examining these atoms at low ambient temperatures and finding a population 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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