Experimental Evidence of Discrete Time[1] JOHN HALLER, 100PI — Theoretical investigation into the discrete nature of motion leads to a hypothesis that particles move via the discrete Bernoulli process. An artifact of this hypothesis is measurable as noise on the space-time location of a particle. Specifically, the theory suggests: 1) that when β is the probability of stepping to the right and **v** is the velocity of the particle, then $\mathbf{2\beta-1= v/c}$ and 2) that a variance of time (measurable as magnitude of jitter on a clock) is proportional to $(\mathbf{v/c})^{\mathbf{2}}$. Since no reference frame is given $\mathbf{v/c}$ is deemed absolute and can be measured in a locally stationary laboratory on Earth. Experimental evidence collected from the last 2.5 years shows a combined 16+ sigma spike in the Fourier Transform of the magnitude of jitter on an locally stationary atomic clock at the three frequencies $\mathbf{1/day}$ and $\mathbf{1/day}$ $\mathbf{\pm 1/year}$. Analysis of the phase and magnitude of the measurement provides further affirmation of the hypothesis by suggesting that Earth's preferred frame is the obvious choice, the Cosmic Microwave Background reference frame.

[1]Experimental Evidence of Discrete Time

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