



THE ORIGIN OF MATTER IN THE UNIVERSE: GRAVITY WAVES, QUANTUM SQUEEZING AND BESSEL FUNCTIONS

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Cosmic inflation succeeds in explaining the problems associated with the *standard big bang scenario*, such as the horizon, flatness and monopole problems. Inflation also provides us with a causal mechanism for generating large scale structure, such as galaxies and clusters. We show that quantized gravitational waves which are consistently produced during inflation can produce the observed matter-antimatter asymmetry observed on galactic and cosmic scales today. The mechanism has some curious connections to squeezed oscillators and special bessel functions.