

Abstract Submitted
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Numerical Cosmology: Building a Dynamical Universe DAVID GARRISON, UH Clear Lake — In this talk I discuss an often over-looked aspect of most cosmological models, dynamical interactions caused by gravitational waves. Did gravitational waves interacting with the primordial plasma field result in a chaotic system? What impact would such a system have on cosmic structure formation? I begin by reviewing our current state of knowledge involving gravitational waves in the early universe. Then, I review work done to understand the physics of turbulent plasmas. Finally, I show the results of computer simulations of gravitational wave/plasma interactions in the early universe. This work seeks to explain what role gravitational waves played in the early universe when interacting with the primordial plasma field, primordial seed magnetic fields and cold dark matter.

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