

Abstract Submitted  
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**Symmetries in Evolving Space Time, and Their Connection to High Frequency Gravity Wave Production** ANDREW BECKWITH, APS/ Contractor, Fermi laboratory — We claim that linking a shrinking prior universe via a wormhole solution for a pseudo time dependent Wheeler De Witt equation permits the formation of a short-term quintessence scalar field, which is tied to an initial configuration of the Einstein field equations allowing for high frequency gravitational waves (HFGW) at the onset of inflation. This is due to symmetries in space time which enable the creation of high frequency gravitational waves. The wormhole thermal bridge between prior to present universes is of less than Planck's time duration, yet has consequences up to our present cosmological era. It also leads to phase transition changes which form a template as to graviton production.

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