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Acoustically generated gravitational waves from thermal first order phase transitions

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Recent numerical simulations have demonstrated that the most important source of gravitational radiation from a thermal first order phase transition in the early Universe is the sound waves it produces. I outline the theory of the acoustic production of gravitational waves from phase transitions, showing how both the amplitude and shape of the power spectrum can be simply understood. Implications for the detectability of a first-order electroweak transition by future space-based detectors will be briefly discussed.

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