

You can teach gravitational wave physics using thermodynamics

Black holes seem very complicated, but they obey a set of simple rules. These rules are, in fact, just the laws of thermodynamics in disguise. By exploiting them, we can explain the basic ideas behind some modern gravitational wave observations using only concepts from a first course in thermal physics. This allows research topics to be discussed in introductory physics lectures.

Caio César Rodrigues Evangelista & **Níckolas de Aguiar Alves**. “Using thermodynamics to learn gravitational wave physics”. *Eur. J. Phys.* **47**, 025604 (2026). arXiv: 2602.21261 [gr-qc].

