

De *Madrid* al *Cosmos*

Spontaneous symmetry breaking and the Unruh effect

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Abstract: In this work we consider the ontological status of the Unruh effect. Is it just a formal mathematical result? Or the temperature detected by an accelerating observer can lead to real physical effects such as phase transitions? In order to clarify this issue we use the Thermalization Theorem to explore the possibility of having a restoration of the symmetry in a system with spontaneous symmetry breaking of an internal continuous symmetry as seen by an accelerating observer. We conclude that the Unruh effect is an ontic effect rather than an epistemic one, giving rise, in the particular example considered here, to a phase transition (symmetry restoration) both for global and gauge symmetries (inverse Higgs mechanism) in the region close to the accelerating observer horizon.

Jueves 24 de noviembre, 15:00 h.
Sala de Seminarios FT-I
Facultad de CC. Físicas, UCM

Ciclo de seminarios organizado conjuntamente por los grupos

- *Teorías Efectivas en Física Moderna* (UCM)
- *Gravitación y Cosmología* (IEM-CSIC)

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