

# Abstract

## Thermodynamics and Gravity

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In this talk we will review Tolman's relation for temperature gradients in thermal equilibrium states. We will do that by presenting a simplified derivation of this effect, based on the relativistic Euler equation. This will lead naturally to an extension of Tolman-like thermal gradients to the case of stationary spacetimes for fluids with general four-velocities. We will then explore the connections between thermodynamics and gravity, looking at gravitational redshifts, observer-dependent temperatures and gravity's universality.

## References

- [1] R. C. Tolman,  
"On the weight of heat and thermal equilibrium in general relativity",  
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- [2] J. Santiago and M. Visser,  
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