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A microscopic model of de Sitter spacetime with an observer

Monday 3 February 2025 17:15 (1 hour)

I describe a simple microscopic quantum mechanical model of low-dimensional de Sitter holography with an observer. Using semiclassical gravity and elementary thermodynamic considerations, I'll derive a formula for the total entropy of a 3D de Sitter universe with an observer. I then show that this entropy formula exactly matches the known spectral density of the double scaled SYK model.

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