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Cosmological Implications of Supercooled Confinement

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A strongly-coupled sector can feature a supercooled confinement transition in the early universe. When fundamental quanta of the strong sector are swept into expanding bubbles of the confined phase, the distance between them is large compared to the confinement scale. The flux linking the fundamental quanta then deforms and stretches towards the wall, producing an enhanced number of composite states upon string fragmentation. The composite states are highly boosted in the plasma frame, which leads to additional particle production through the subsequent deep inelastic scattering. I will discuss the modelling of these dynamics and introduce the consequences for the abundance and energetics of particles in the universe and for bubble-wall Lorentz factors.

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