

Abstract Submitted  
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**Surface Tension of Spacetime** HOWARD PERKO, Koppa Research, LLC — Concepts from physical chemistry and more specifically surface tension are introduced to spacetime. Lagrangian equations of motion for membranes of curved spacetime manifold are derived. The equations of motion in spatial directions are dispersion equations and can be rearranged to Schrodinger's equation where Plank's constant is related to membrane elastic modulus. The equation of motion in the time-direction has two immediately recognizable solutions: electromagnetic waves and corpuscles. The corpuscular membrane solution can assume different genus depending on quantized amounts of surface energy. A metric tensor that relates empty flat spacetime to energetic curved spacetime is found that satisfies general relativity. Application of the surface tension to quantum electrodynamics and implications for quantum chromodynamics are discussed. Although much work remains, it is suggested that spacetime surface tension may provide a classical explanation that combines general relativity with field theories in quantum mechanics and atomic particle physics.

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