

Abstract Submitted
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Membrane Nano-Structures: The Three Tether Junction OLIVER RUEBENACKER, University of Connecticut, GREG HUBER, University of Connecticut — Tethers are robust cylindrical nanostructures of lipid bilayer membranes, including biomembranes. They can be easily produced in experiments and can be found in and on cells. Tethers are useful for probing the mechanical properties of membranes, because the radius of a tether is small enough to make the bending stiffness of the membrane relevant. In an experiment, a glass bead was attached to a tether and pulled with a laser tweezer leading to the formation of a three tether junction. I will present a theory explaining the observed force-displacement relationship and simulation results of the shape of the three tether junction.

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