

## **98b An Experimental Study of Elliptical Liquid Bridges**

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A liquid bridge is a region of liquid that is suspended between two solid endplates. It has long been known, that for long enough cylindrical bridges in zero gravity, the bridge collapses at what is known as the Plateau limit. In other words, the bridge becomes unstable when its height is equal to its circumference. In this presentation, the effect of elliptical endplates on the stability of a liquid bridge is studied. The elliptical endplates are obtained by distorting the circular endplates by a small amount and by keeping the areas of the endplates the same. Our objective is to measure the critical length of a static elliptical liquid bridge and compare it with the critical length of a cylindrical bridge of the same endplate area; requiring that the volume of the elliptical bridge be the same as the companion right cylindrical bridge at breakup. We conclude that the elliptical bridge is more stable than a circular liquid bridge. This presentation will focus on the experimental setup and the experimental results obtained.