

metry plane ($x=0$), but grows linearly with x away from the midpoint between the pole pieces. We have calculated the distortion on the circular cross section arising from this non-uniform magnetic force, and again found that the eccentricity is of order 0.02. The effects on the stability are therefore likely to be small. Both calculations will be published elsewhere.¹⁵

To summarize, we have demonstrated that magnetic levitation may simulate a low gravity environment to enable the formation of stable liquid bridges. Such a technique permits the continuous variation of the Bond number and obviates the need for using density-matched liquids. Despite these advantages, the inhomogeneities of the magnetic forces tend to reduce slightly the limits of stability. On the basis of these results we intend to examine the effects of a modulated magnetic field on the stability. Additionally, we may also consider the stability of *diamagnetic* fluids in much higher fields, as we have already demonstrated the principle of levitation in these systems.¹⁶

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