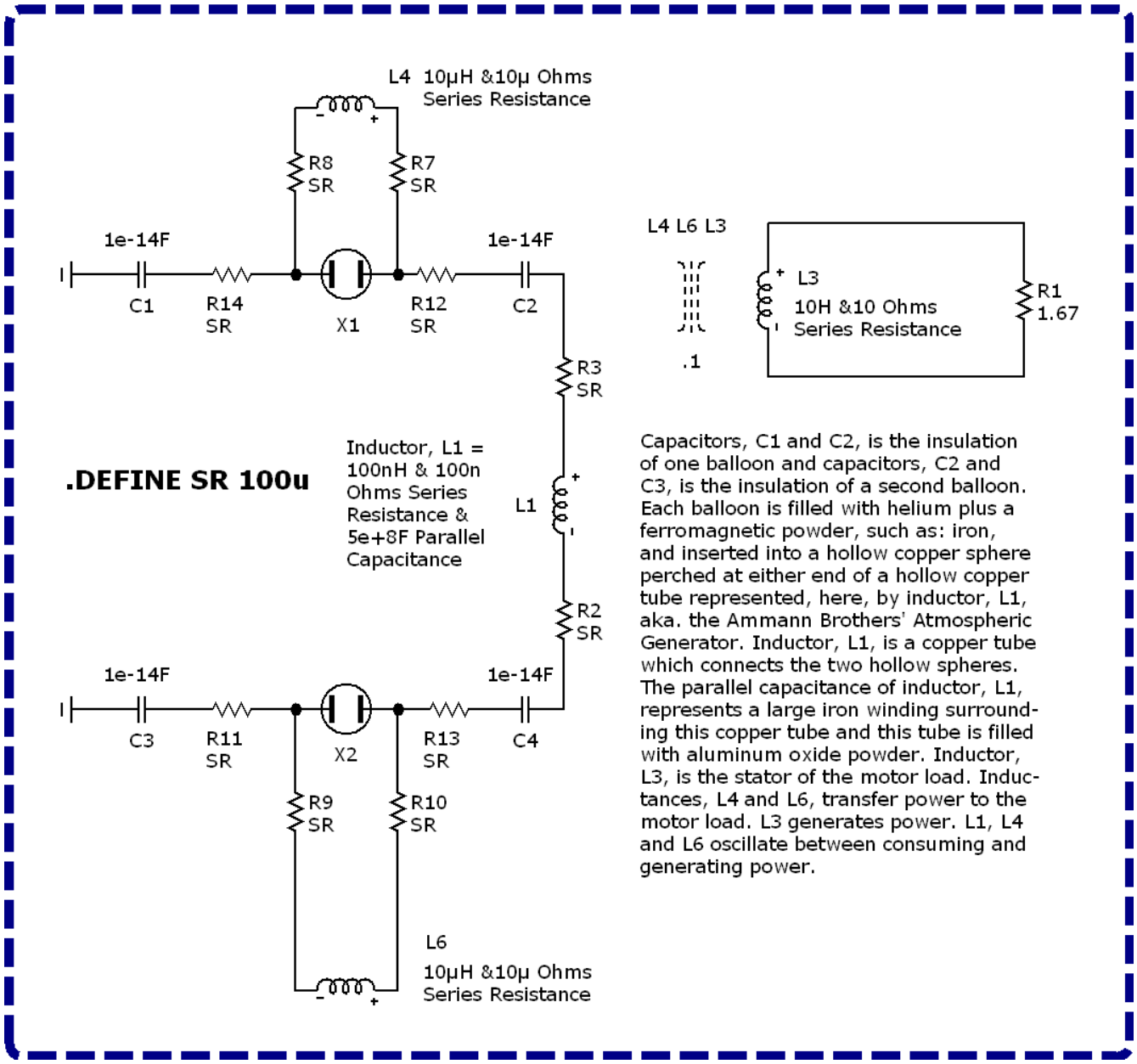
Speculating the Ammann Brothers' Atmospheric Generator



Inductors, L4 and L6, are stabilized by magnetically coupling them to each other – rather than keeping them separate – when each is coupled to the stator coil, L3. This way, the simulator doesn't get confused between approximating large amplitudes versus small amplitudes. Instead of the confusion, it consistently determines a large set of amplitudes when calculating an output.

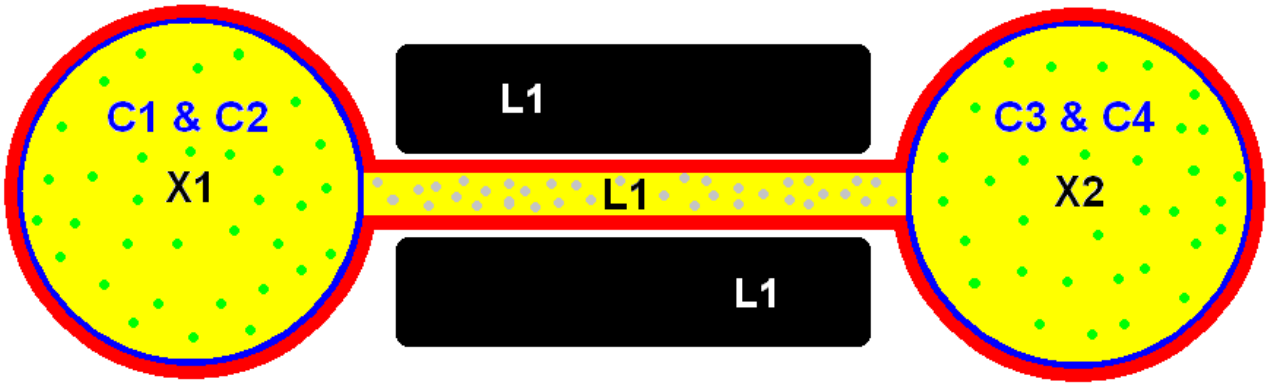
A coupling coeffience of one percent, **.01**, is not enough to transfer power from the inductors of the

power supply, L4 and L6, to the stator coil of the motor load, L3. But, ten percent, **.1**, is adequate.

The SR resistors represent solder joints.

Capacitors, C1 and C2, is the insulation of one balloon filled with helium while capacitors, C3 and C4, is the insulation of another balloon – separate from the first balloon. Each balloon is also filled with iron metallic (reduced) powder intended to provide a weak pair of inductances, L4 and L6, by which the stator coil, L3, gets its power transferred to itself from this power supply. Each of these two balloons are housed within two hollow copper spheres. Each of these two spheres are perched at either end of a hollow copper tube which is also filled with helium, but without any balloon insulating its interior surface.

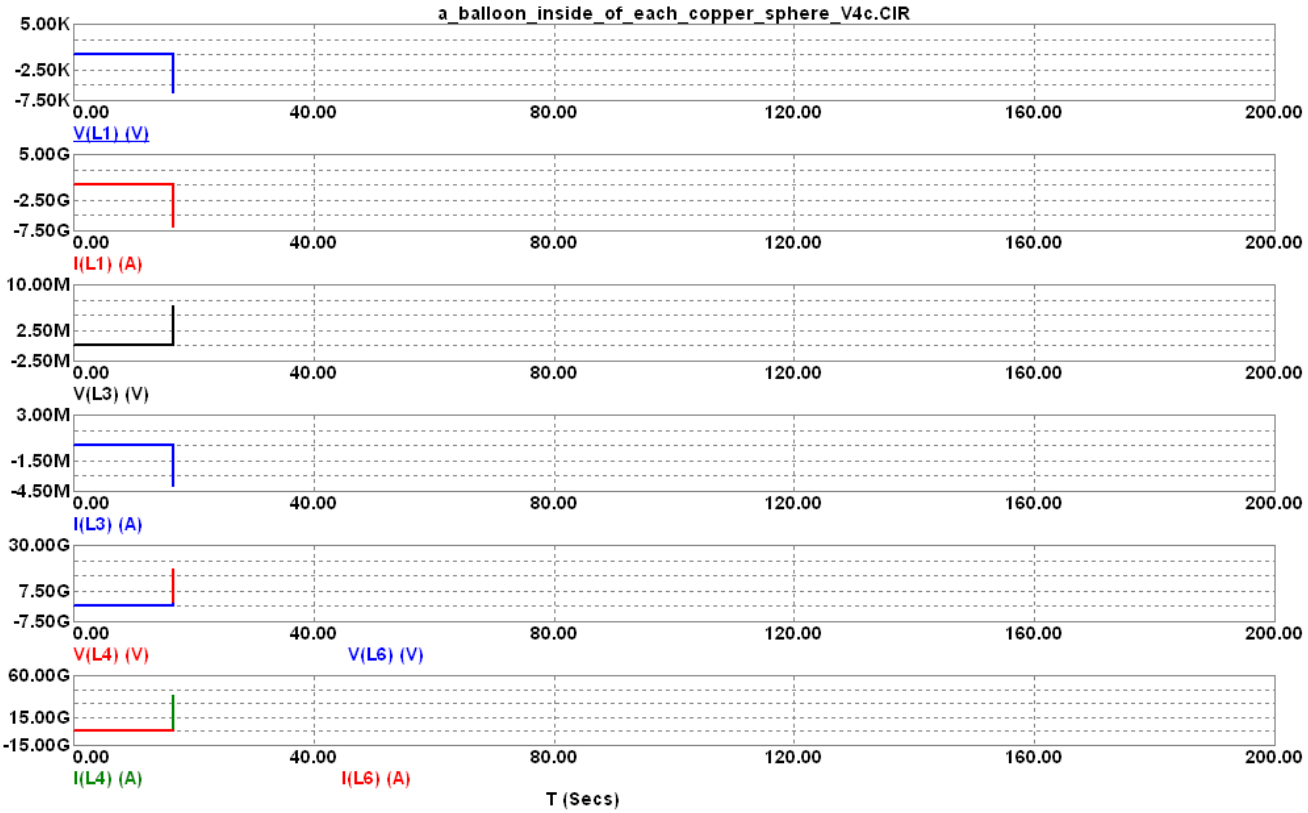
The parallel capacitance of inductor, L1, is generated by powdered alumina (aluminum oxide) contained within this hollow copper tube plus a massive iron winding wound around this copper tube.



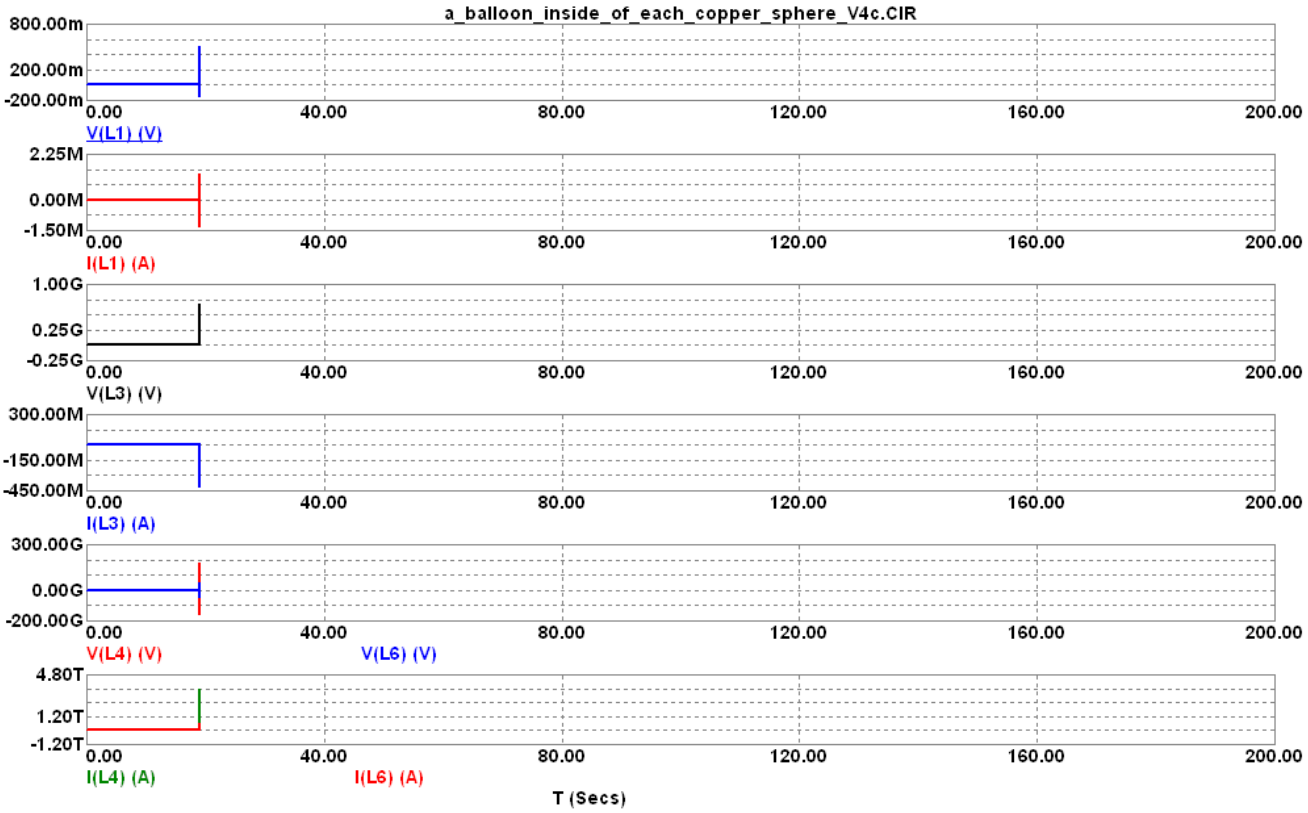
L4 AND L6

Powdered metallic iron is diffused throughout the interior of two helium-filled balloons due to the similarity of electric potential repels each iron particle. A hollow copper sphere surrounds each balloon and both spheres are connected via a hollow copper tube. Within this tube is powdered aluminum oxide plus helium and surrounding this tube is a massive iron winding.

Here are the outputs of all four inductances resulting from the first simulated run-through...



Here are the outputs of all four inductances resulting from the second simulated run-through...



It's generally a good idea to perform two, or more, run-throughs to see how the simulator progressively “decides” upon an outcome to ascertain a trend, if any, and thus conclude what the most likely outcome is from these inevitably variable results. Simulators don't calculate an exact answer unless you're simulating a simple flashlight circuit (for example). But, complicated circuits involving multiple reactances tend to confuse the Berkeley SPICE family of simulators. So, we have to guess what is happening by viewing the simulation from multiple perspectives of run-time and (possibly) modify the circuit to help the simulator stabilize its perspective.

Hint...

“Matrix is singular” and “Convergence error” does not mean that there is anything wrong with your circuit. On the contrary, it means that the simulator was not designed by its software engineers to accommodate circuits which output a rapidly varying amplitude of oscillating peaks and troughs, for this results in a divergent set of data points by which to trace a wave in its virtual oscilloscope. Thus, I find it helpful – and sometimes necessary – to reset the RELTOL parameter (“relative tolerance” parameter within the Global options window) to a value of “1” (one) from its default condition of “1m” (one milli). But I also like to challenge myself by resetting its default approximation engine from its preset of “Mixed Trapezoidal/Gear” to just “Gear”, alone, since Gear is generally used for power supplies and that's what I am always simulating.

But if you get an error which says, that the “time-step is too small for a transient analysis”, then that means that you may need to reset your simulation run-time to a larger value. So, instead of running the simulation for one micro second, try running it for one milli second, etc.

https://youtu.be/tSuIOQDotgk – Paramagnetism, parallel capacitance and magnetic remanence are loosely equivalent. Be sure and check out my books and software on “free energy” at...

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