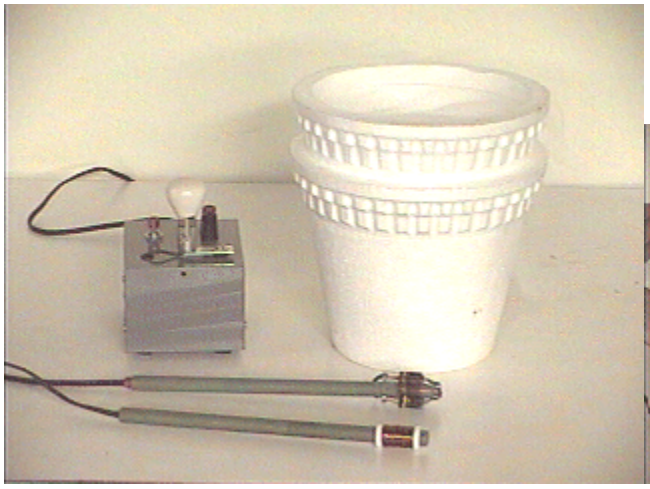
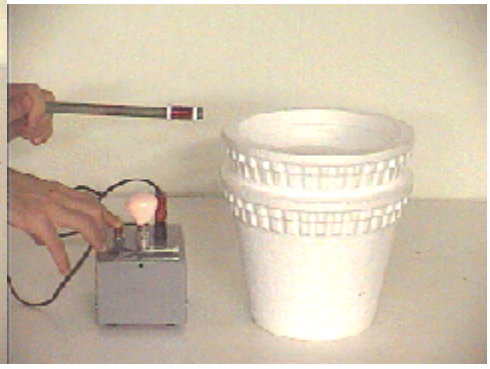
Question #197

The photograph at the left below shows a light bulb, mounted on top of a small power supply, two resistors that can be plugged into the top of the power supply so they will be in series with the light bulb, and a foam bucket of liquid nitrogen. Now let's concentrate on the picture at the right; a small resistive copper coil has been connected in series with the light bulb and the series circuit has been placed across a voltage source, which is turned on when Clay pushes the button. This can be verified by viewing the brightness of the light bulb in the photograph at the right.





Now the copper coil will be placed into the liquid nitrogen dewar and allowed to cool to the temperature of liquid nitrogen.

After the coil has cooled to the temperature of liquid nitrogen,

- (a) the light bulb will be brighter.
- (b) the light bulb will be less bright.
- (c) the light bulb will be about the same brightness.

Click here for Answer #197 after November 8, 2004.

Question of the Week

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For questions and comments regarding the *Question of the Week* contact Dr. Richard E. Berg by e-mail or using phone number or regular mail address given on the Lecture-Demonstration Home Page.