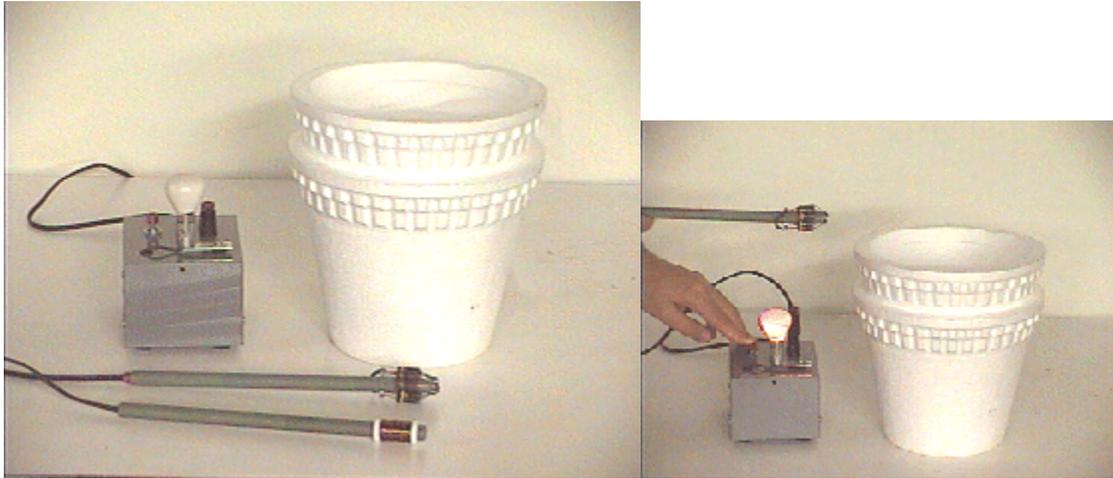


## Question #198

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 parallel group of *carbon* resistors 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 carbon resistors will be placed into the liquid nitrogen dewar and allowed to cool to the temperature of liquid nitrogen.

After the resistors have 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 #198](#) after November 15, 2004.

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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](#).