Letters to the Editor

EFFECTS OF THE LINE SURGE

I have read with considerable interest the article by L. David Wells titled "Effects of the Line Surge on the Gamma Camera" in the March 1974 issue of your *Journal* (*JNMT* 2: 12-13, 1974). This article contains several errors which I would like to call to your attention.

Referring to Fig. 5 it will be noticed that the conductor labeled Ground (green) passes through the relay contacts. This sort of configuration is not allowed by the National Electrical Code which states in Article 250-51 that "The path to ground from circuits, equipment, and conductor enclosures shall (1) be permanent and *continuous* and . . ." There is no need to run this conductor through the relay, and it should not be so connected. Furthermore, you will notice that the ac common lead is labeled (black). The National Electrical Code (Article 200-6) requires that the "hot" lead be black. Reversal of this color coding, especially with a switched grounding lead, could produce a hazardous situation.

As far as the bright spots in the center of the pictures are concerned, they have nothing to do with line surges in the case of Nuclear-Chicago (Searle Radiographics) scintillation cameras. They occur momentarily whenever the power is turned on. They last only long enough for a capacitor in the cathode-ray tube grid circuit to charge up sufficiently to bias the tube off. If the camera is operating and the line voltage is suddenly interrupted, the spot will occur whenever the power comes back on be it immediately or later on.

As far as the protective relay is concerned, I am not convinced that it is necessary in most cases. The camera power supplies seem to be designed to handle most line transients which are likely to occur, and the nuclear medicine department should see to it that they have a power supply that is not frequently interrupted.

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