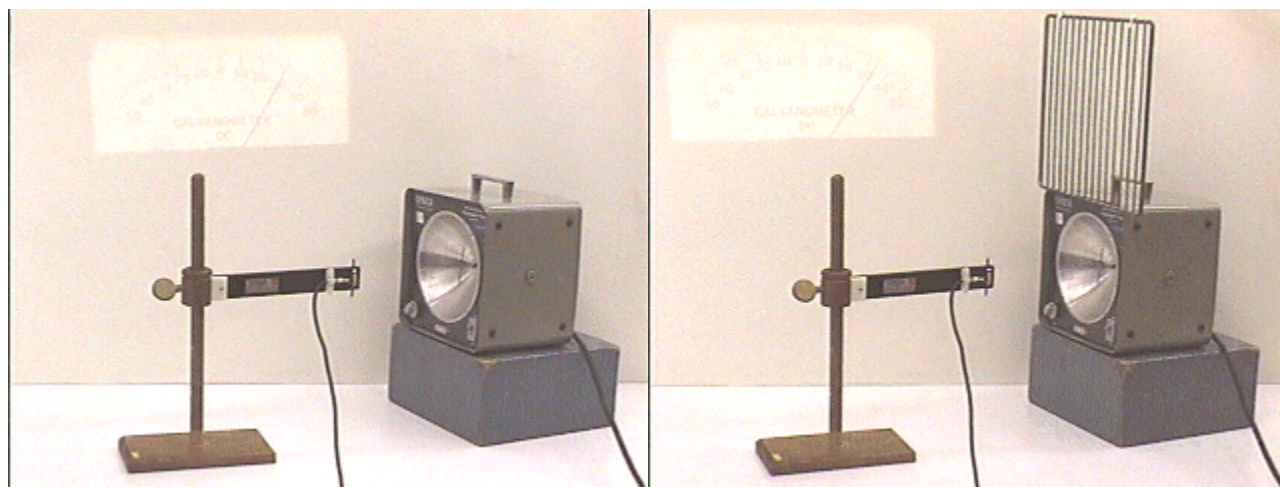


Question #15

A microwave transmitter (at the right in the photograph at the left below) produces approximately 12cm wavelength microwaves which are picked up by the receiver (at the left in the photograph), with the amplitude of the microwave signal voltage at the receiver displayed by the meter in the background (center zero, reading about 30 units). Note that both the transmitter antenna and the receiver antenna are oriented vertically, so the microwave vibration is vertical, and the waves are vertically polarized.



Now suppose that a wire rack like a cookie cooler, shown in the photograph at the right, is lowered into the beam between the transmitter and the receiver. The polarization of the microwaves and the orientation of the wires are both in the same direction (vertical). Which of the following statements about the signal voltage at the receiver will be true?

- (a) The intensity of the microwaves will go up significantly.
- (b) The intensity of the microwaves will go down significantly.
- (c) The intensity of the microwaves will remain approximately the same.

Click here for [Answer #15](#) after June 5, 2000.

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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](#).