PROCEDURE

The data was gathered by holding the current constant at 0.90 A and applying a voltage to curve the electron beam into a circle. The diameter of the circle was then measured using the mirrored scale, being careful to ensure that the beam was lined up with the observer's pupil in the mirror. The diameter was then divided by two in order to get the radius. The voltage was recorded to complete the data pair. Once the measurements were recorded, the voltage was changed and measurements were repeated. The uncertainty in the radius seemed to be dominated by the where the mirrored scale fell in the circle. For smaller circles, the scale lies above the center of the circle rather than straight through it, so a direct measurement cannot be made by the observer. A value of 0.2 cm (.002 m) was adopted. The uncertainty in voltage is .1 V as that is the smallest value that the voltage source can differentiate between.

We have reviewed this document and fully support its content

– Aric M –Frank Z- Greg W –Jeremy W