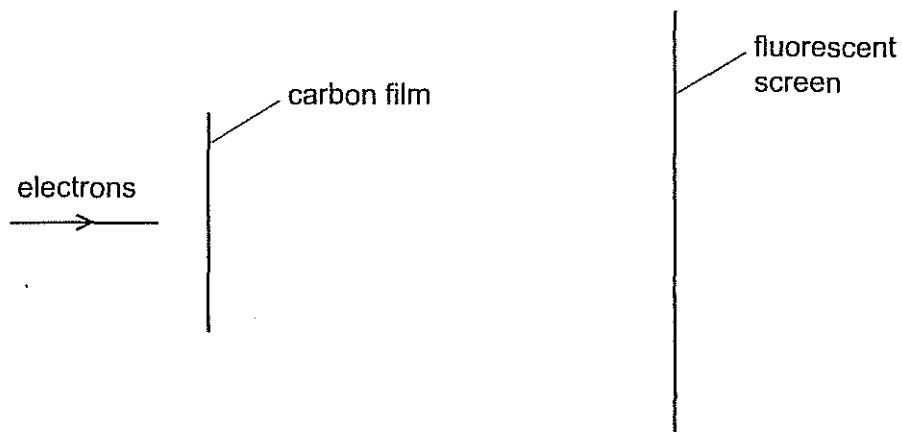


- 35 Electrons with velocity v travel through a vacuum and are incident on a thin carbon film, as shown.



The electrons produce a pattern of concentric circles on the fluorescent screen.

What causes the pattern and which change to the pattern occurs when the velocity v is increased?

| | cause | change to pattern |
|---|-------------|-------------------------------|
| A | diffraction | diameters of circles increase |
| B | diffraction | diameters of circles decrease |
| C | refraction | diameters of circles increase |
| D | refraction | diameters of circles decrease |