In order to read the radius you must look at the outside of the circle. This is because some of the electrons are slowed down by helium atoms. When they are slowed down their circles radius decreases. This is also what is causing the increase in width as we travel around.

* We are only interested in the fastest electrons

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Radius</th>
</tr>
</thead>
<tbody>
<tr>
<td>241VDC</td>
<td>6 cm</td>
</tr>
<tr>
<td>175VDC</td>
<td>4.9 cm</td>
</tr>
<tr>
<td>290VDC</td>
<td>6.1 cm</td>
</tr>
<tr>
<td>280VDC</td>
<td>6 cm</td>
</tr>
</tbody>
</table>

Distance to center from eye: 44 cm

**Parallax**

In order to correct for parallax we will use geometry. Parallax left uncorrected would be a systematic error that would overestimate all of our radius measurements.

Instead of this object being 2 cm's we see it to be 4 cm's due to the object being far from the ruler.

In order to correct for this we will use geometry.

This forms 2 pairs of similar triangles

We can solve for the object's actual length as follows:

\[ \frac{b}{c} = \frac{a}{d} \]

Now we are able to find b, the actual size.
44 cm from eye to center of cell

Voltage 291 VDC
Current 4.98 A
Radius 6 cm

Current

Voltage 269 V
\[ V = 247 \quad r = 6 \]
\[ V = 219 \quad r = 5.9 \]
\[ V = 196 \quad r = 5.8 \]
\[ V = 175 \quad r = 5.4 \]

Current = 0.92 A

Voltage
\[ V = 204 \quad r = 6.6 \text{ cm} \]
\[ V = 226 \quad r = 6.1 \text{ cm} \]
\[ V = 183 \quad r = 5.8 \text{ cm} \]
\[ V = 271 \quad r = 6.5 \text{ cm} \]

As it goes around the circle it frays.

Distance eye to circle
\[ 39 \text{ cm} = 0.5 \]

Distance
\[ 40 \text{ cm} = 0.5 \]

Error in \( r = 0.05 \text{ cm} \)
Error in \( V = 0.5 \text{ V} \)
Error in I = 0.005 A