

Lab 3 Electric Field Plotting

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February 17, 2021

Table 1: Measure the distance along the center electric field line

| Between | 0–0.75 | 0.75–1.50 | 1.50–2.25 | 2.25–3.00 | 3.00–3.75 | 3.75–4.50 | 4.50–5.25 | 5.25–6.00 |
|---------|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| cm | | | | | | | | |

Table 2: Calculate the magnitude of average electric field along the center line field with equation 3.6

| Between | 0–0.75 | 0.75–1.50 | 1.50–2.25 | 2.25–3.00 | 3.00–3.75 | 3.75–4.50 | 4.50–5.25 | 5.25–6.00 |
|---------|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| cm | | | | | | | | |

- Is the electric field constant along this?
- If not, where is the magnitude of the average electric field the greatest?

Table 3: Measure the distance along the outermost electric field line

| Between | 0–0.75 | 0.75–1.50 | 1.50–2.25 | 2.25–3.00 | 3.00–3.75 | 3.75–4.50 | 4.50–5.25 | 5.25–6.00 |
|---------|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| cm | | | | | | | | |

Table 4: Calculate the magnitude of average electric field along the outmost field line

| Between | 0–0.75 | 0.75–1.50 | 1.50–2.25 | 2.25–3.00 | 3.00–3.75 | 3.75–4.50 | 4.50–5.25 | 5.25–6.00 |
|---------|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| cm | | | | | | | | |

- Is the electric field constant along this?
- If not, where is the magnitude of the average electric field the greatest?