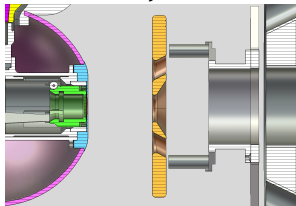


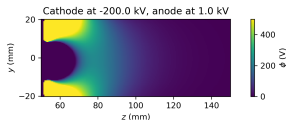
LD2501 FY25 Q2 report: A high-intensity, polarized-beam prototype photogun for the Ce^+ BAF positron source – Objectives and progress

Gun model development (Q1/Q2):

- Electrostatic model updated to reflect reality

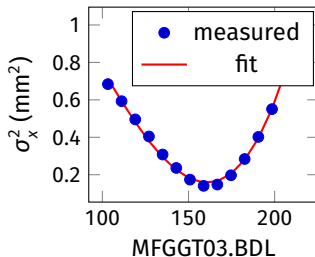


- Simulated dependency of ion rejection on anode bias



Beam-line commissioning (Q2):

- First NEA GaAs activations successful; beam operation resumed with green laser
- Refinement of optical models through phase-space measurements in progress



780 nm laser system (Q1/Q2):

- Tapered amplifier from Sacher seeded at 780 nm (avoiding frequency doubling)
- Slow negotiations with vendor; expecting to receive amplifier in early May
- Pockels cells and other optical components being ordered now, expect working laser by June

Q3 objectives:

- First lifetime measurements with 780 nm laser
- Start electrode redesign

LD2501 FY25 Q2 report: A high-intensity, polarized-beam prototype photogun for the Ce^+ BAF positron source — Financial status

Labor spending was low in Q1 but is getting on track:

- Simulation and commissioning work ongoing (\$40k in Q3+Q4)
- Hardware work about to start (\$40k in Q3+Q4)

Procurement spending delayed but expected soon:

- Laser amplifier: free demo for a month, final PR likely by June (\$50k total)
- Pockels cells etc: awaiting quote (\$20k total)

