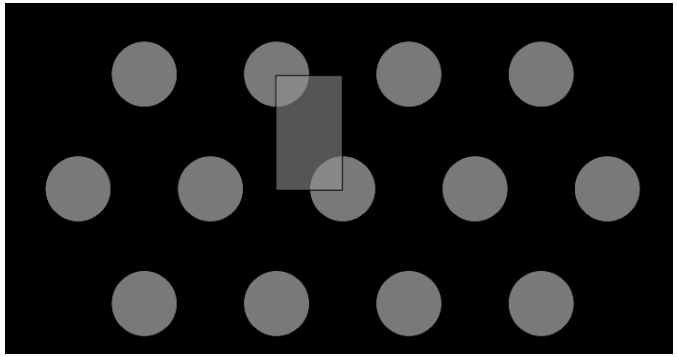
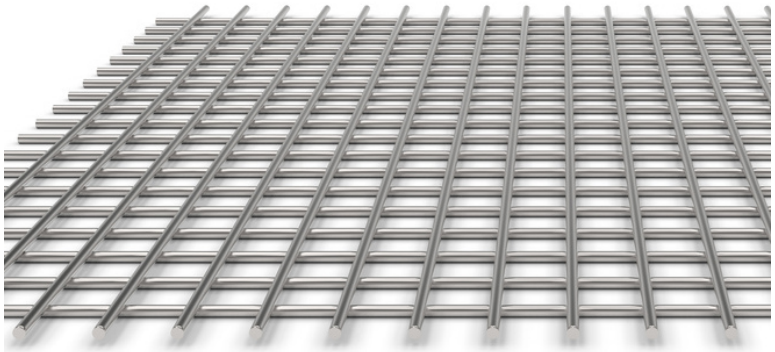
Electrons Transmission
and
Ion Blocking
for TPC Gating

Cylindrical Holes Gating



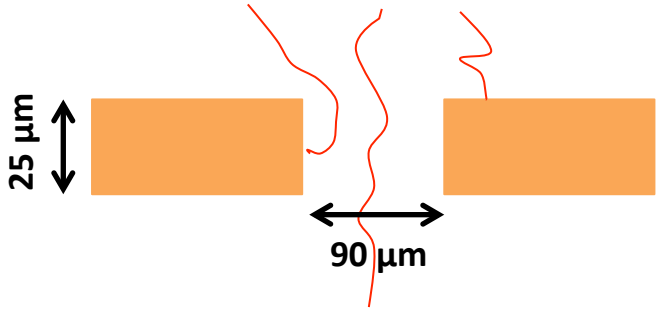
Wire Mesh Gating



Transmission = Collection eff. × Extraction eff.

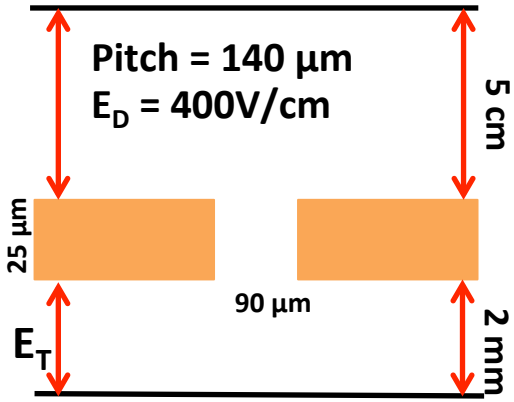
Collection eff. = #e reached at entrance of hole/ #e generated
Extraction eff. = #e extracted from hole/ #e reached to ent.

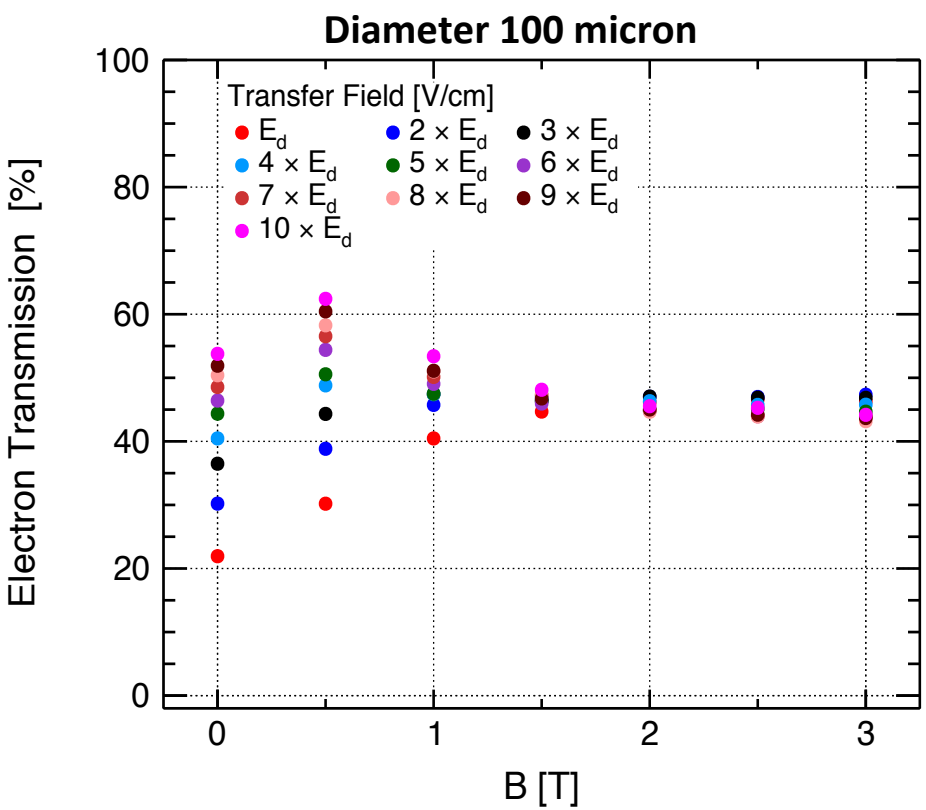
- ☑ Thinner Grid to improve extraction eff.
- ☑ Larger Diameter to improve collection eff.

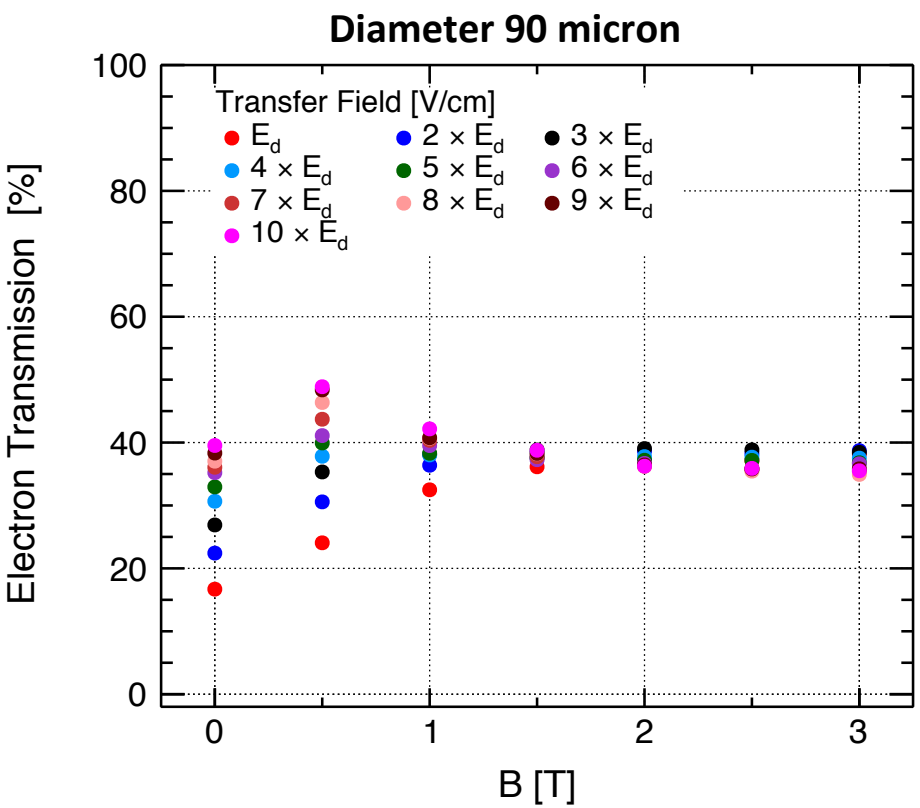


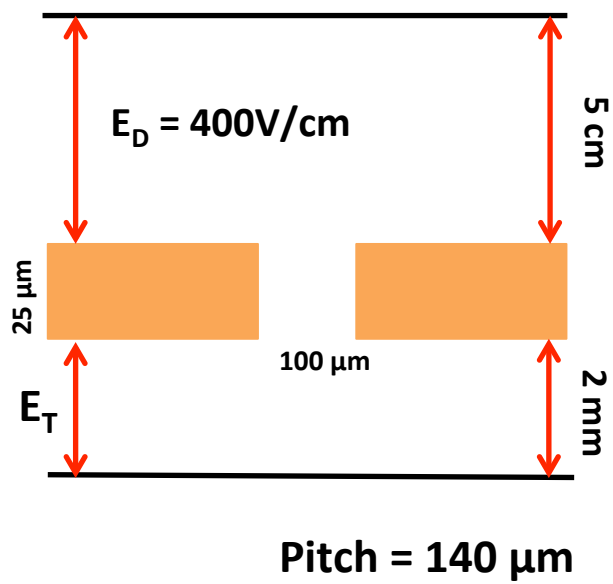
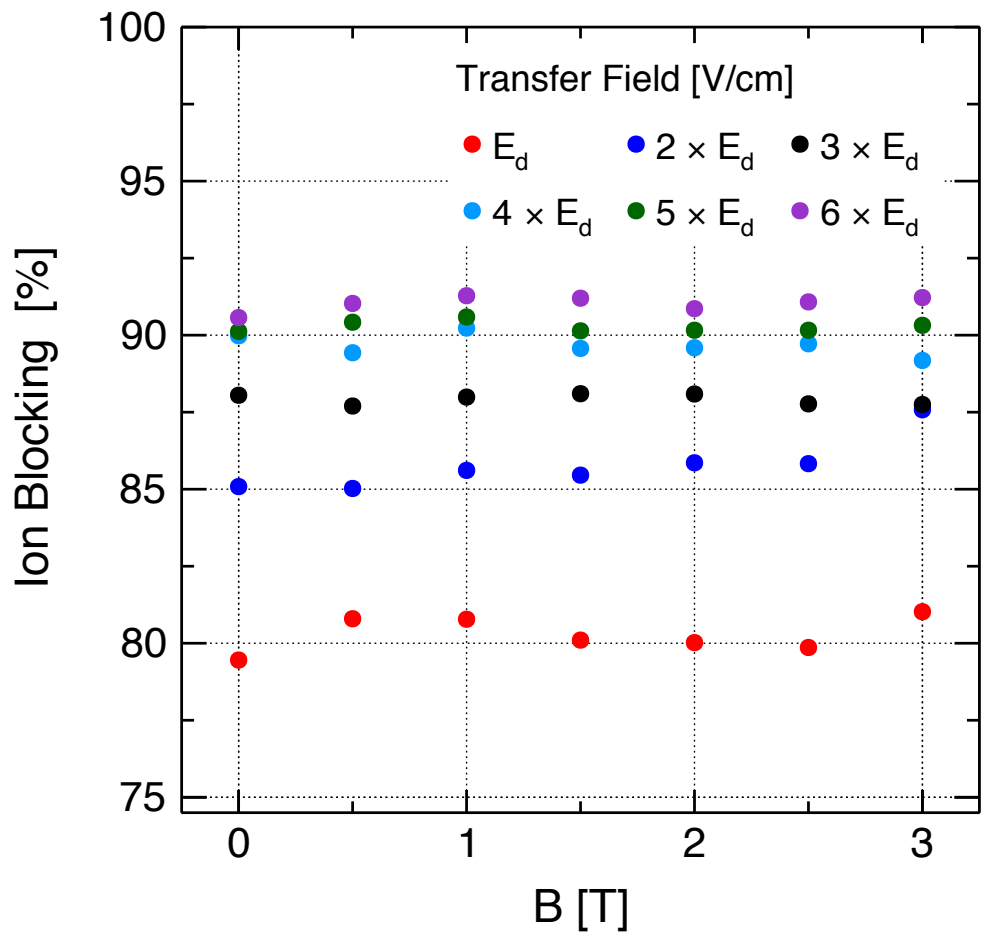
Electron Transmission

- Electrons are Dropped from 4 cm above the Grid
- Initial distribution is a Uniform square (1mm^2)







Ion Blocking

- Ne-Ions are Dropped from 2 mm below the Grid
- Initial distribution is a Uniform square ($1mm^2$)