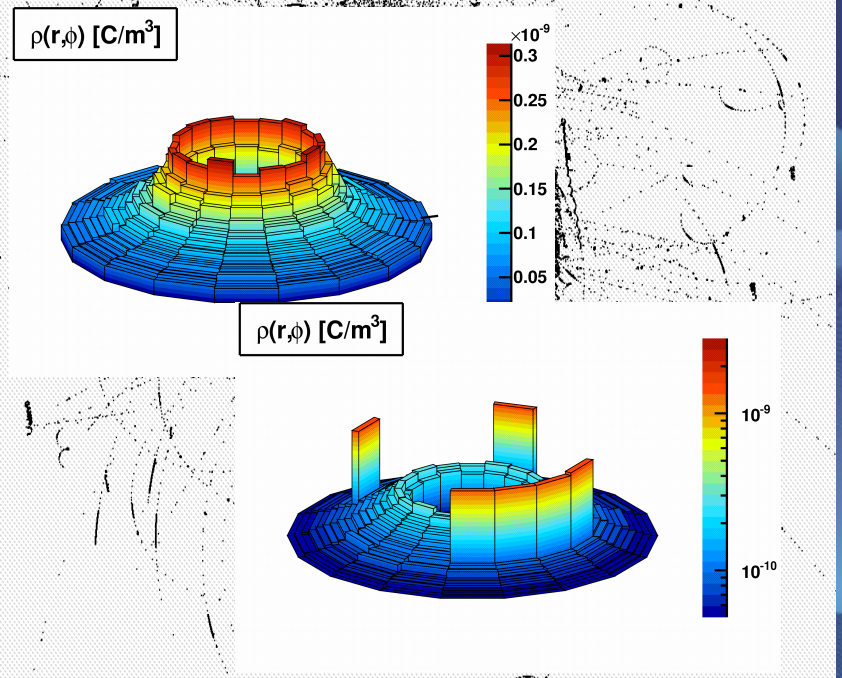
An analytical approach to space charge distortions for TPCs

Space charge distribution

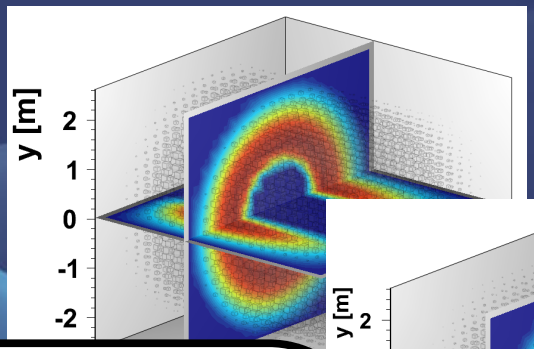
$\rho(r,\phi,z)$

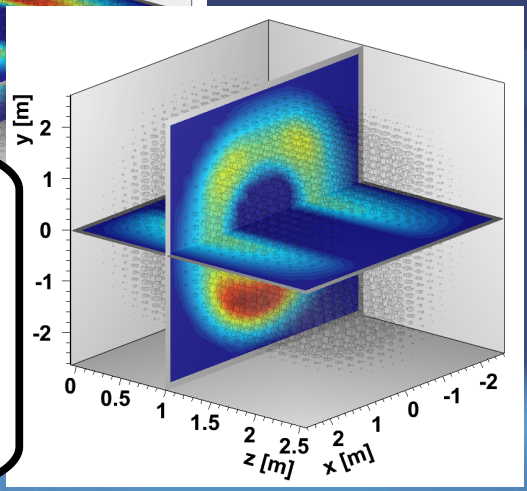


NOVEL

ANALYTICAL solution

for a TPC Geometry



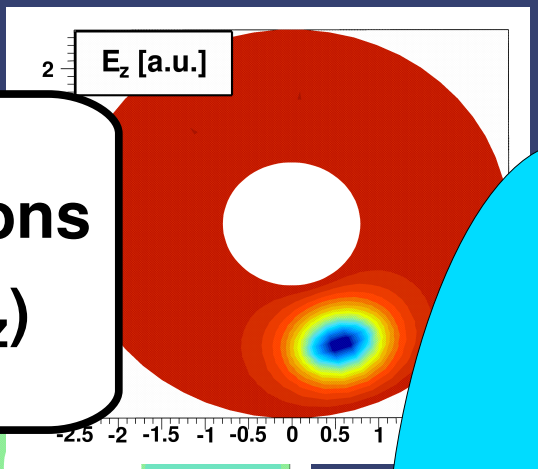


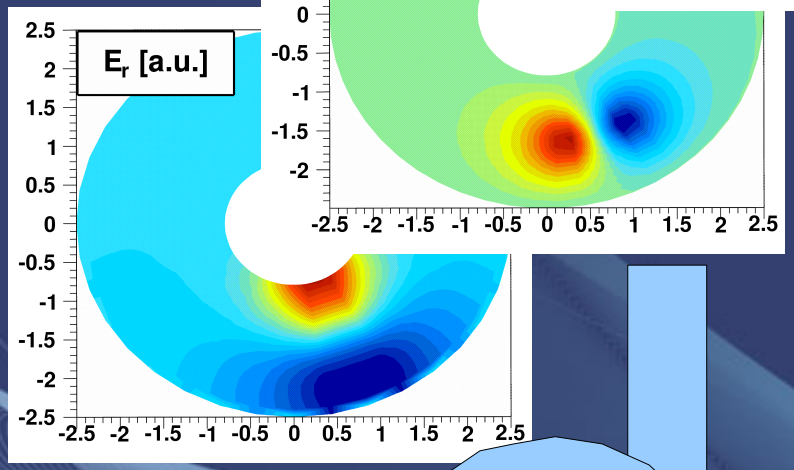
E field distortions

$(\Delta E_r, \Delta E_\phi, \Delta E_z)$

E field distortions

$(\Delta E_r, \Delta E_\phi, \Delta E_z)$

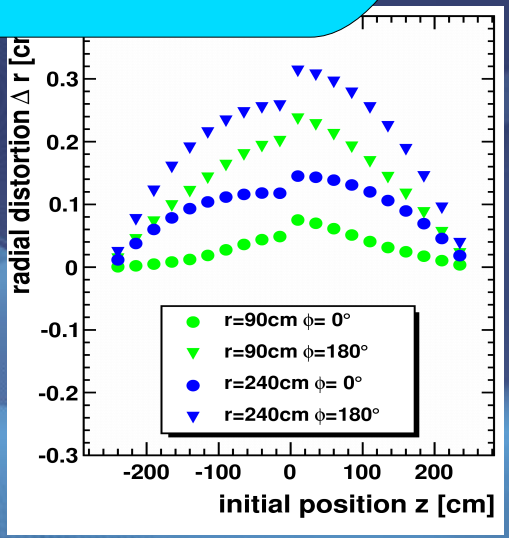




CONCLUSION

Fast and accurate calculations of drift distortions within TPCs due to Space Charges and more ...

LANGEVIN equation including B-field, E-field and gas properties

Space Point distortions

$(\Delta r, \Delta\phi, \Delta z)$