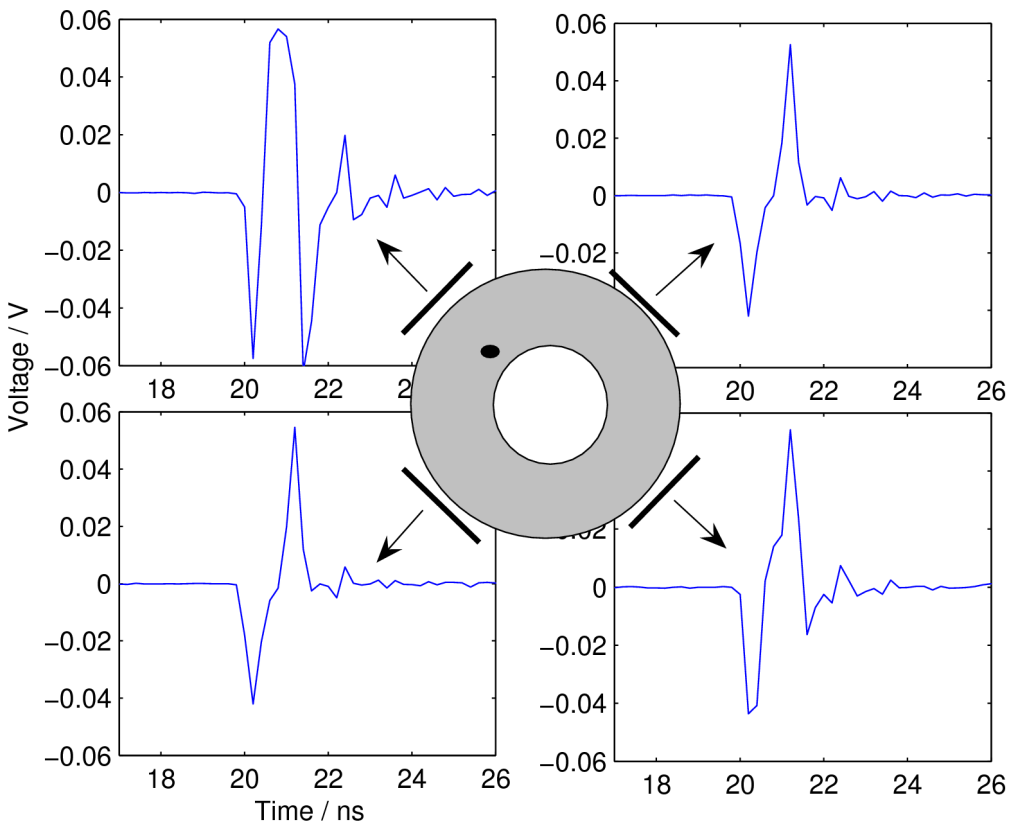


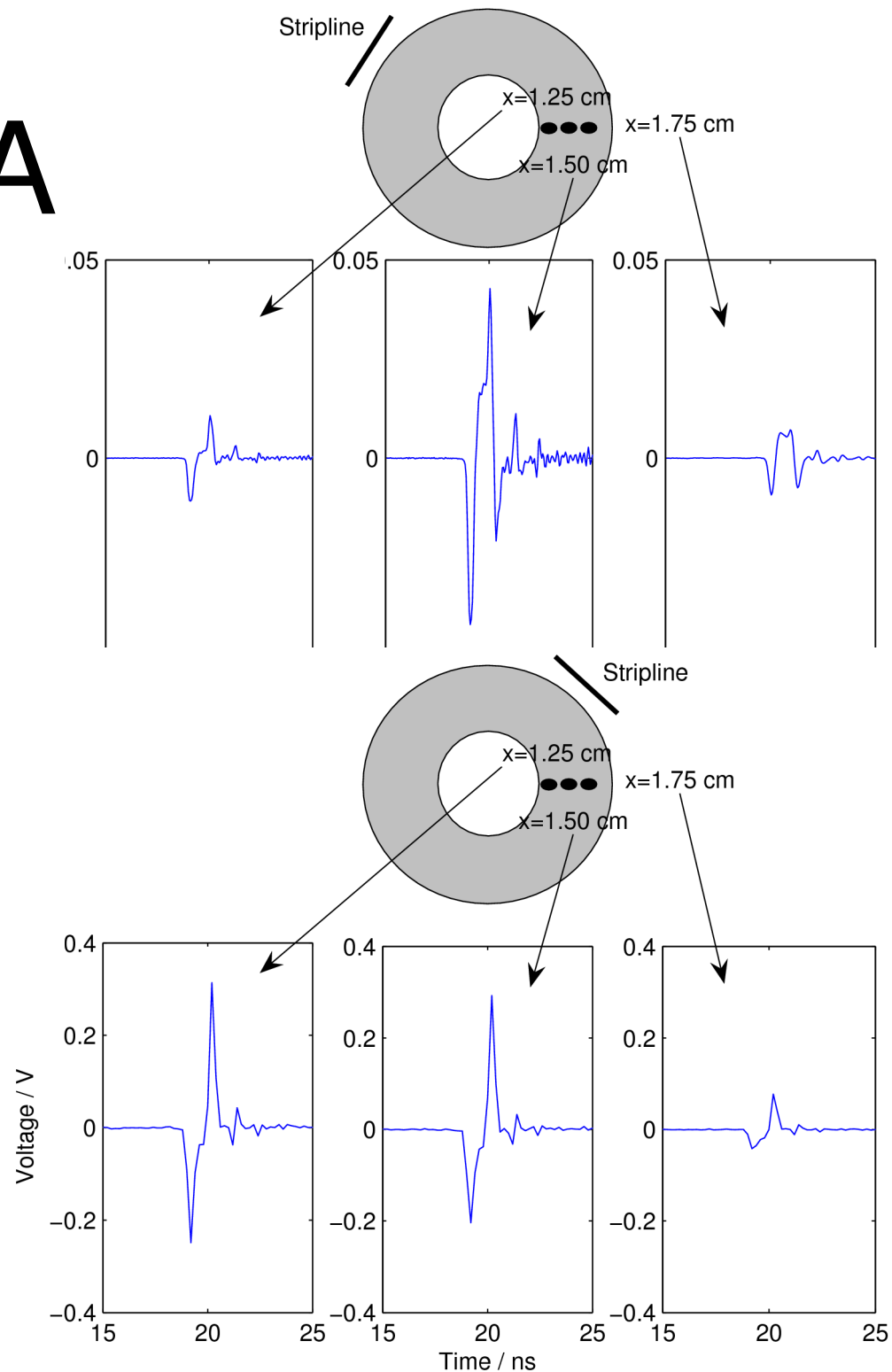
Paper logic

1. Data with Beam offaxis shows large distortion ✓
2. Simulations match the data and prove that distortion due to particle impacts on strips **more work**
3. Data with foils show no visible distortion ✓
4. Sims allow extrapolation to ILC conditions **depends on point 2**
5. **CONCLUSION:** since sims indicate that ILC worst case is 3 orders of magnitude **better** (in terms of strip hits) than the foil data then nothing to worry about for ILC **depends on point 2**

OFF-AXIS DATA



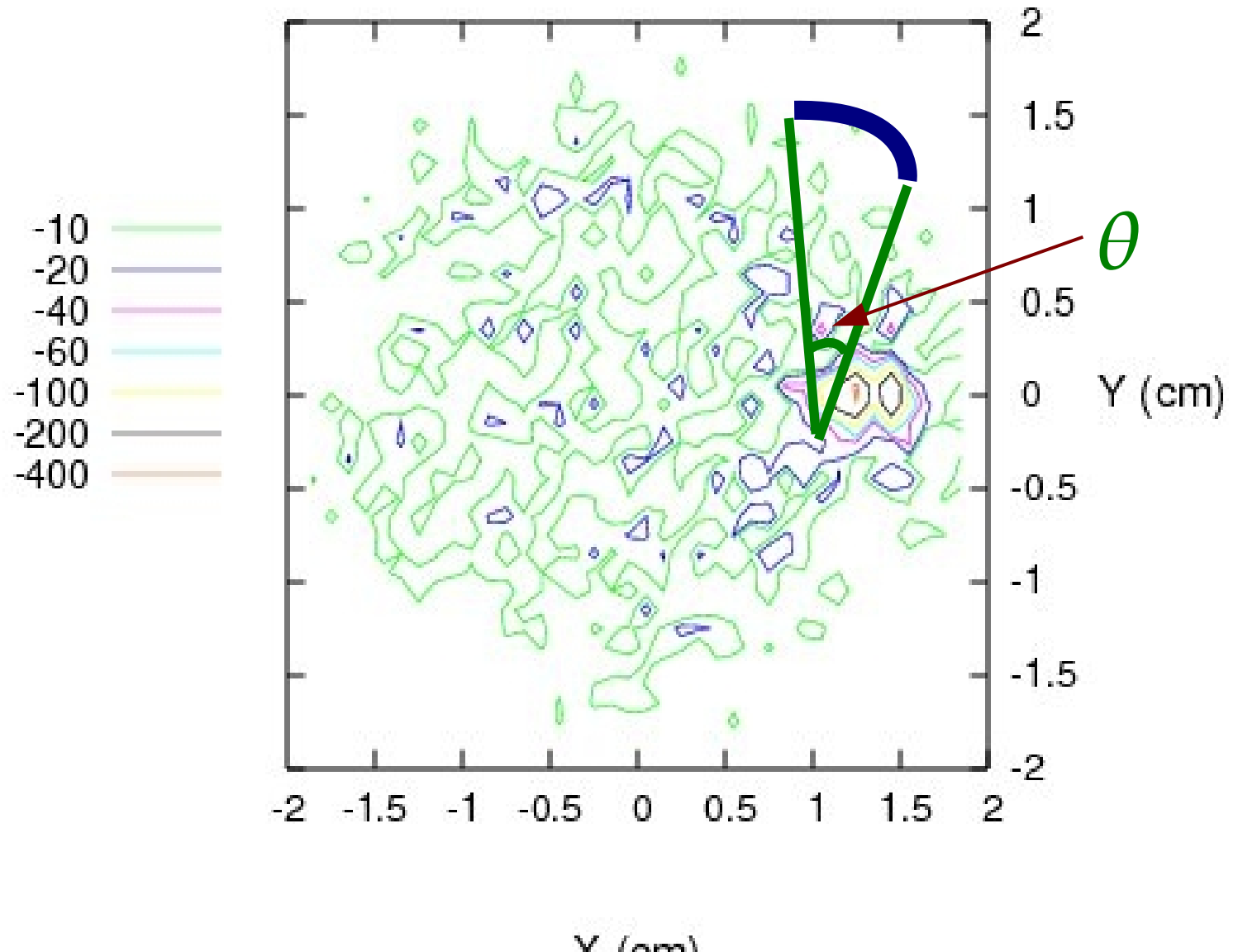
Why is the greatest distortion in the near strip for beam directly at $x=y$, but greatest distortion for the far strip when beam is directed at $y=0$?

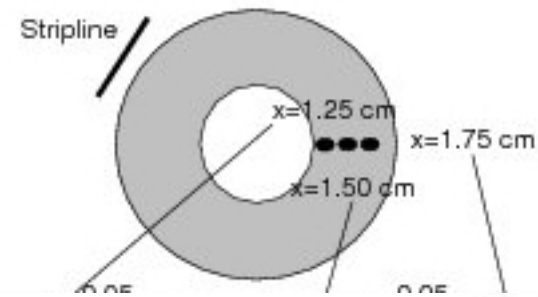


Simulation method

1. Use guinea-pig and GEANT to model ESA module
2. Count charges passing between upstream end of strips and use TOF to constitute bipolar signal
3. Count charges hitting strips and ejected charges from all incoming particles and use TOF to constitute noise
4. Apply a factor to the noise depending on the angle of entry of impacting particles
5. Match all data to establish confidence in the sims
6. Run sims using ILC beam parameters and geometry to calculate impact at ILC (and indeed CLIC – EPAC paper)

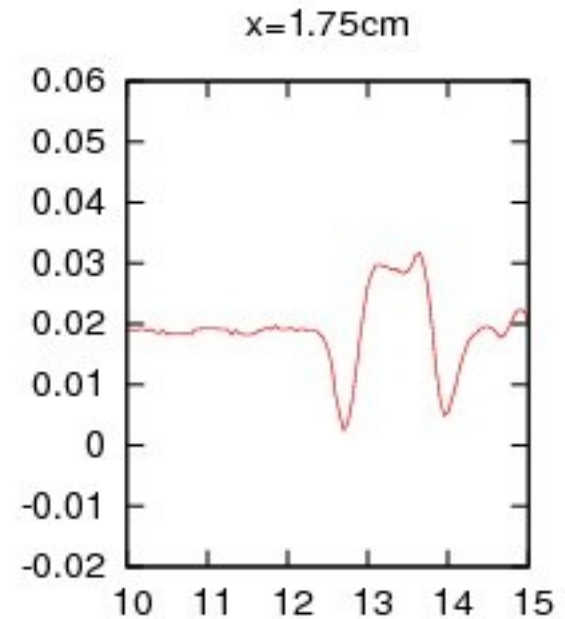
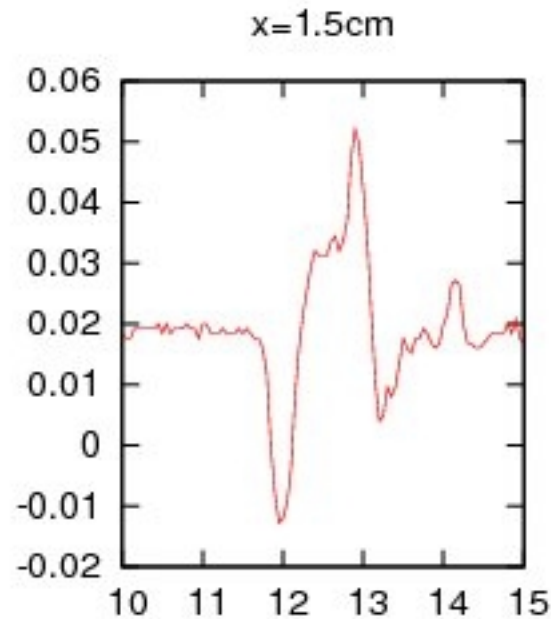
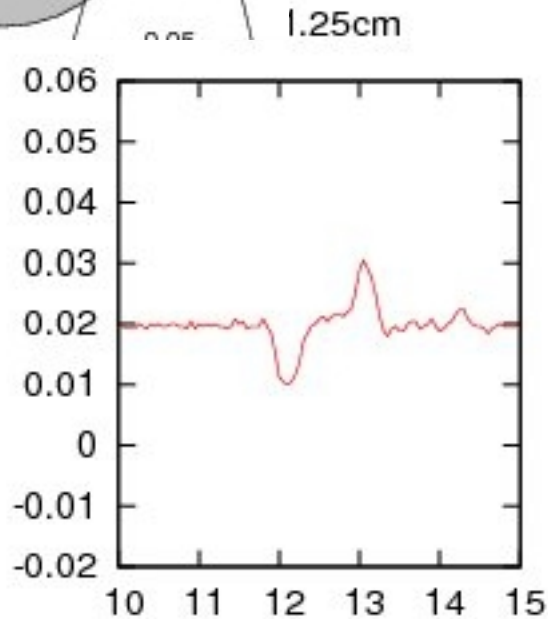
New sim work – charge density at upstream end of strips





data/sim, far strips (beam at $y=0$)

DATA



SIM

