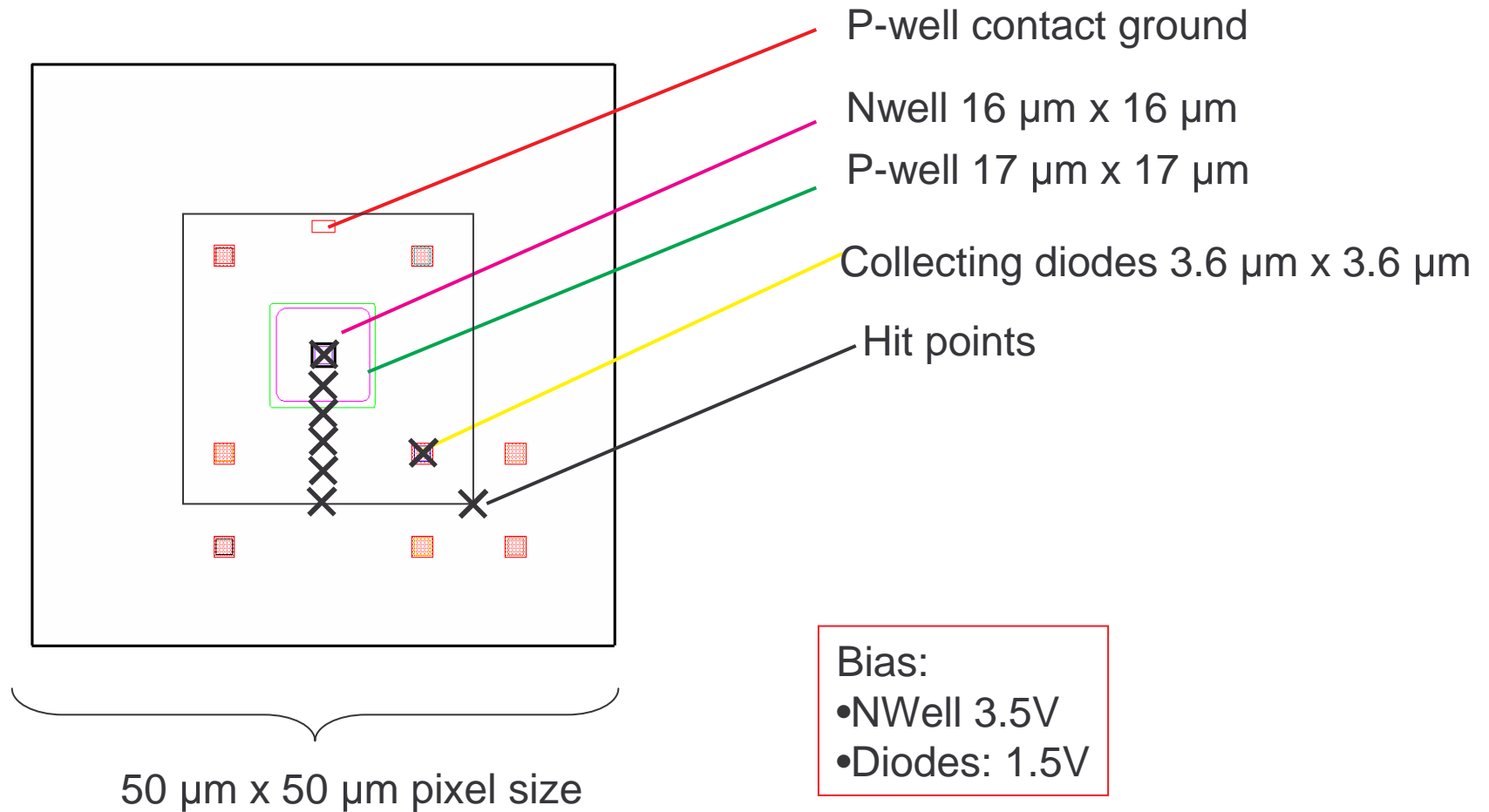
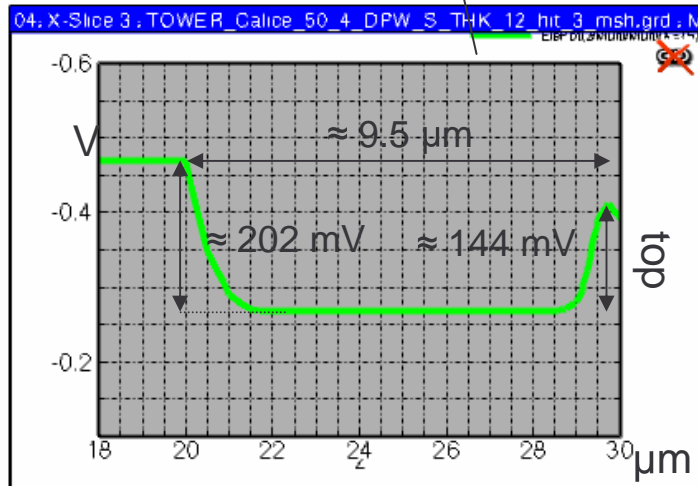
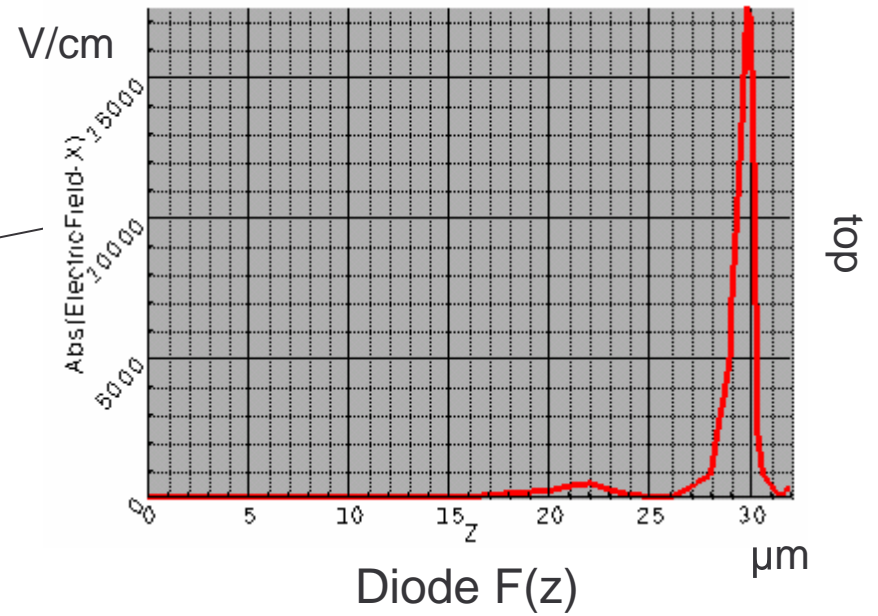
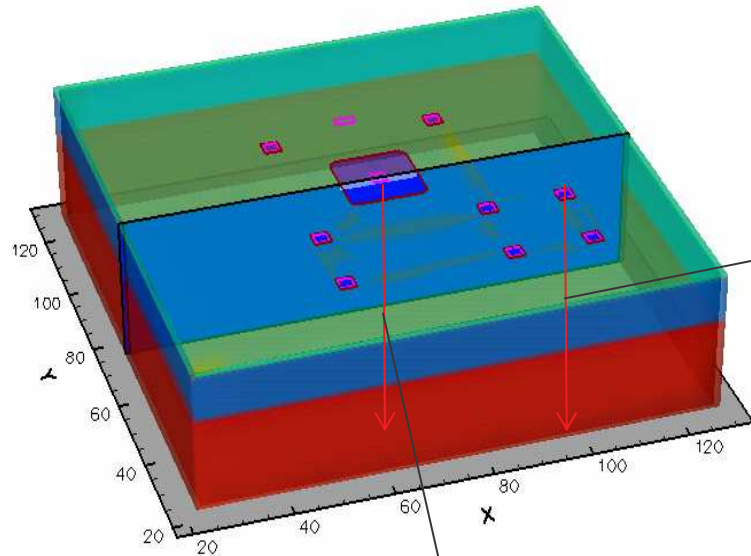


# CALICE pixel Deep P-Well results



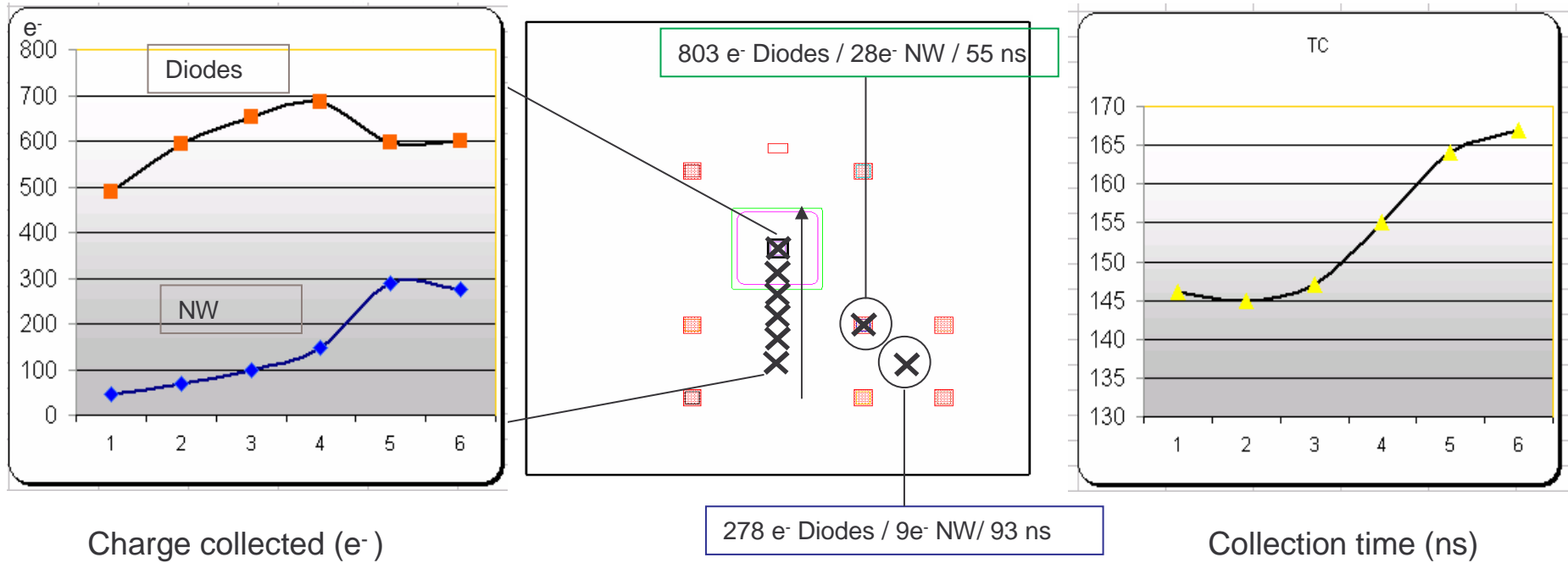
# CALICE pixel Deep P-Well results



Epitaxial layer potential well

# CALICE pixel Deep P-Well results

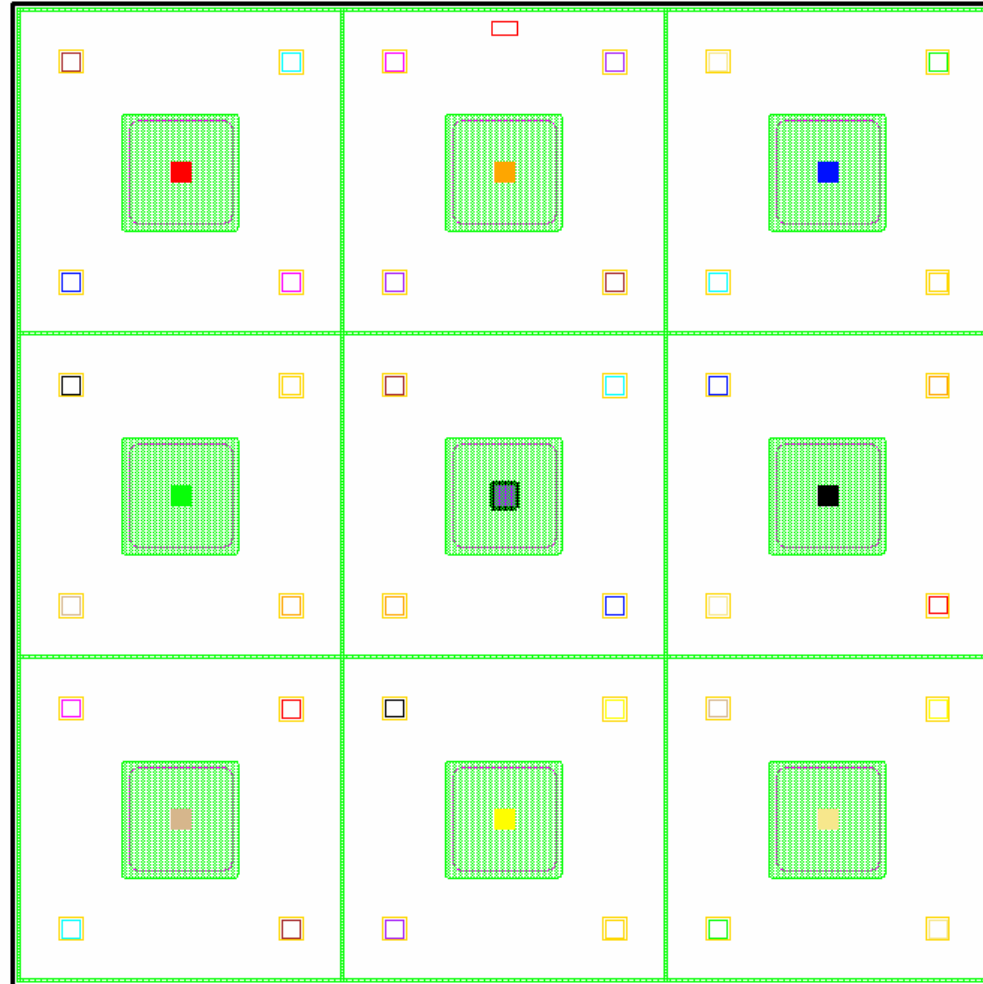
## 1 pixel results



## CALICE pixel Deep P-Well results

- **Conclusions**
- The barrier created by the Deep P-Well helps to reflect charge away from the central N-Well: major improvement in charge collection compared to non Deep P-Well process (however, the Deep P-Well extends down to  $\approx 3 \mu\text{m}$  into the epitaxial layer, thus reducing the central active region).
- Collection time below 200 ns.
- Next step:
- P-Well guard ring around the pixel to further improve charge collection
- Smaller diodes simulations (proposed:  $1.8 \mu\text{m}$ )
- Final layout simulation

# CALICE pixel Deep P-Well results



P-Well guard ring around each pixel

G.Villani jan. 07