Executive's summary

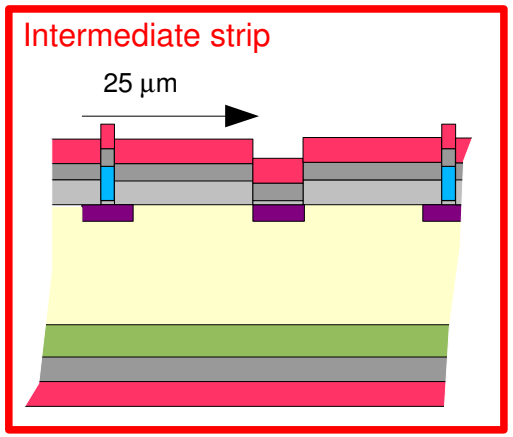
- Passivation=Anti-Reflection Coating (ARC)
- Production of 5+1 wafers paused to monitor and crosscheck intermediate results
- Therefore, missing last passivation layer (ARC **incomplete** yet!)
- Optical test structures (OTS) and sensors measured. Conclusions:

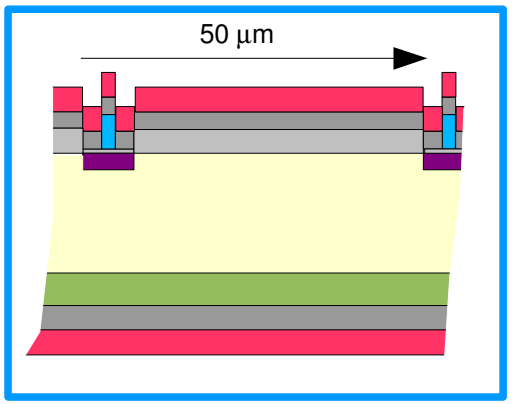
OTS: Continuous planeparallel structures T~80%-90%

That's 30% increase wrt raw Silicon

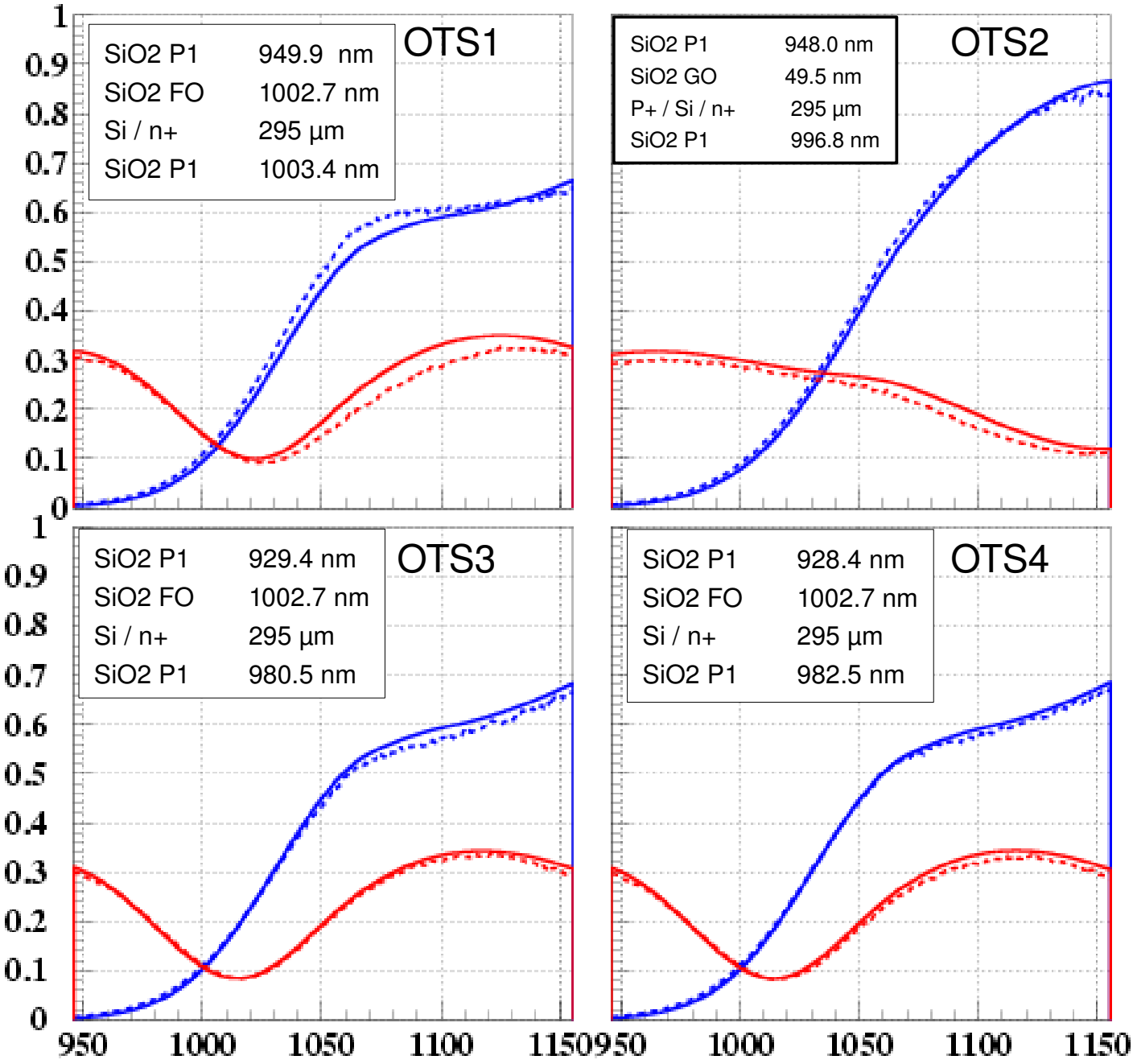
Sensors: T=20-30% **with intermediate strip**

T=35-40% **no intermediate strip**





WAFER 1: Measured optical test structures vs simulated



- Test structures simulated (no fit involved)
- n^+ and p^+ taken optically identical to Si

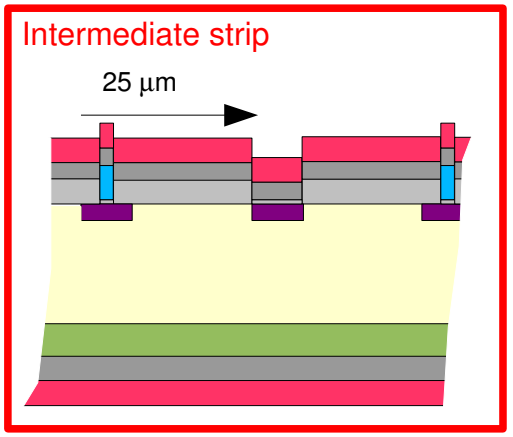
Observed differences not due to thickness measurement error (<1 nm)
Not sensible to ~5 µm change in Si thickness.

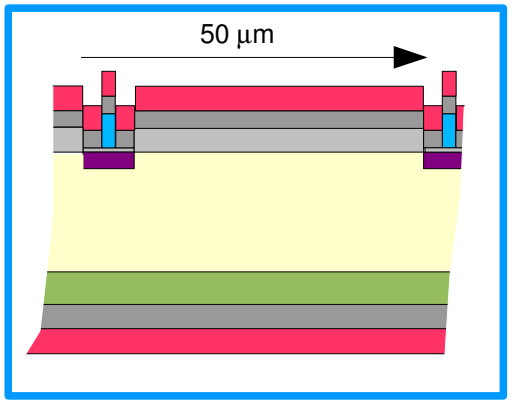
- **New parametrization** for SiO2 refr. index used !!!

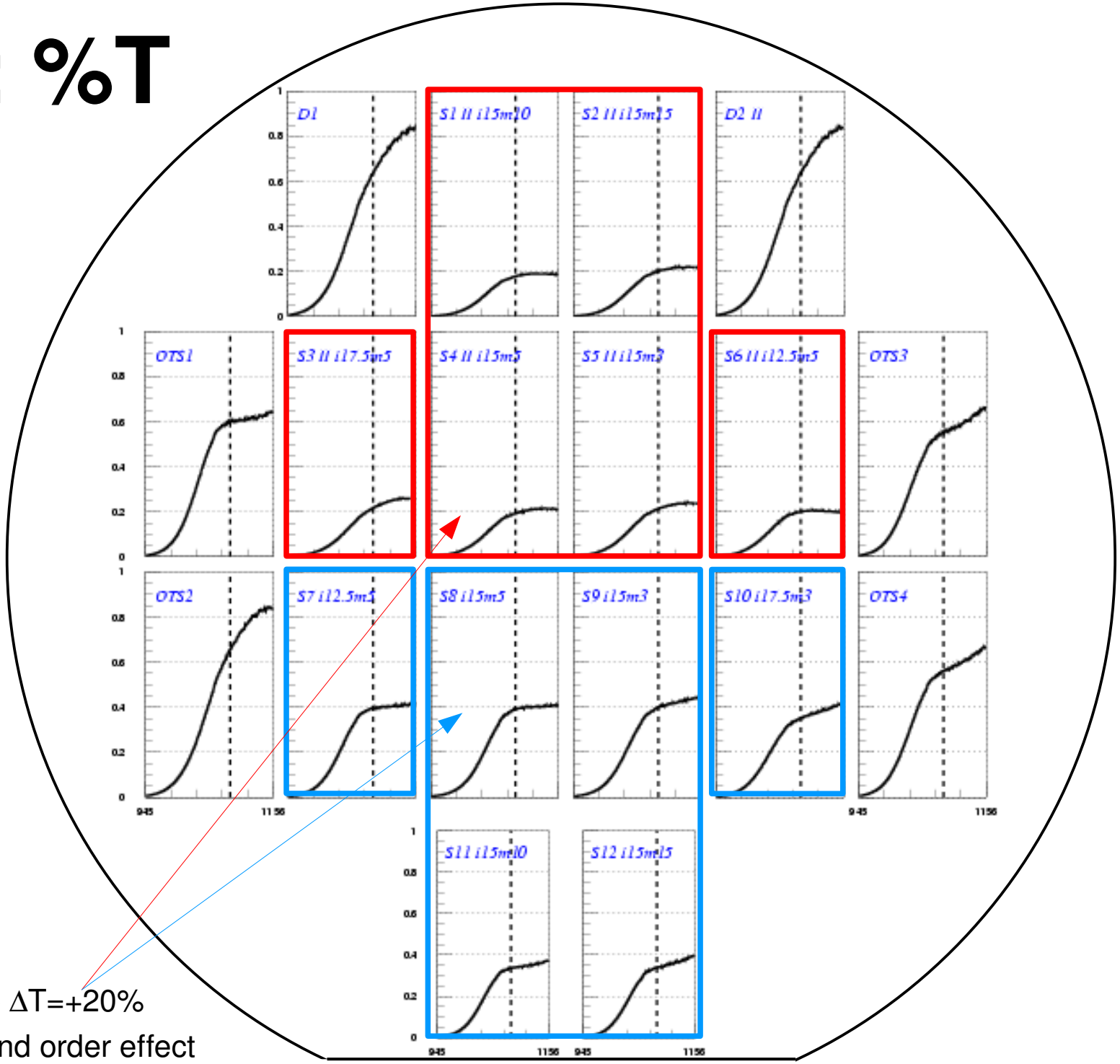
%T meas
%T sim
%R meas
%R sim

Wafer 1:: %T

measured







- T~70-80% test structures
- No intermediate implant ⇒ ΔT=+20%
- Metal width [3-5] µm: second order effect
- Metal width >10 µm: ΔT≤-5%

- Tomorrow we will measure a new wafer of Si+Si3N4 at CNM:
  Input for simulation
- Simulation for strip sensors did not match measurements
- Still trying to calculate T,R in far field configuration T=T(x,y,z;diff.order)
  Up to now we had T=T(diff. Order) (near field)
- Repeat measurements of strip sensors under different geometric configurations