# Time resolution & depleted zone test Status and Plan

Time Resolution test

- Pico second Laser
- Beta source
- Depleted zone measurement
  - Transient current technique (TCT)

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### **Time Resolution**



- Pico-second laser: 7.5 ps width pulse, 1064 nm wavelength
- Oscilloscope should be needed: 10 GHz sampling rate, 2.5 GHz band width.
  Plan:
  - Test HPK sensor for calibration
  - Test more NDL sensor, feedback for the sensor design

### **Time Resolution**

- To study the time resolution effect of minimum ionizing particle (MIP)



## Depleted zone: TCT

- To understand the irradiation effect by measuring depleted zone
- Depleted zone: edge TCT
- Working area: top TCT



(a) Top-TCT Configuration

#### Plan:

- Setup TCT system
- Scan the NDL sensor et al



#### (b) Edge-TCT Configuration

