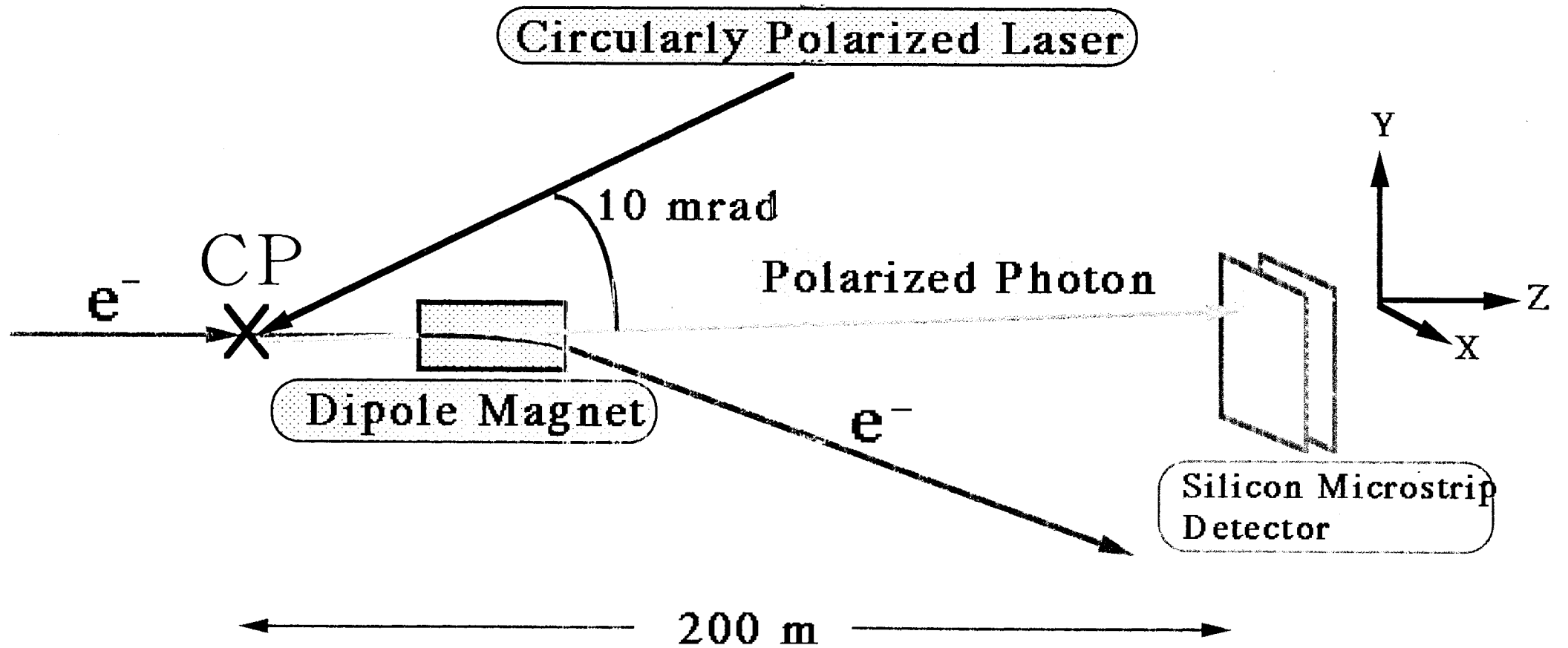
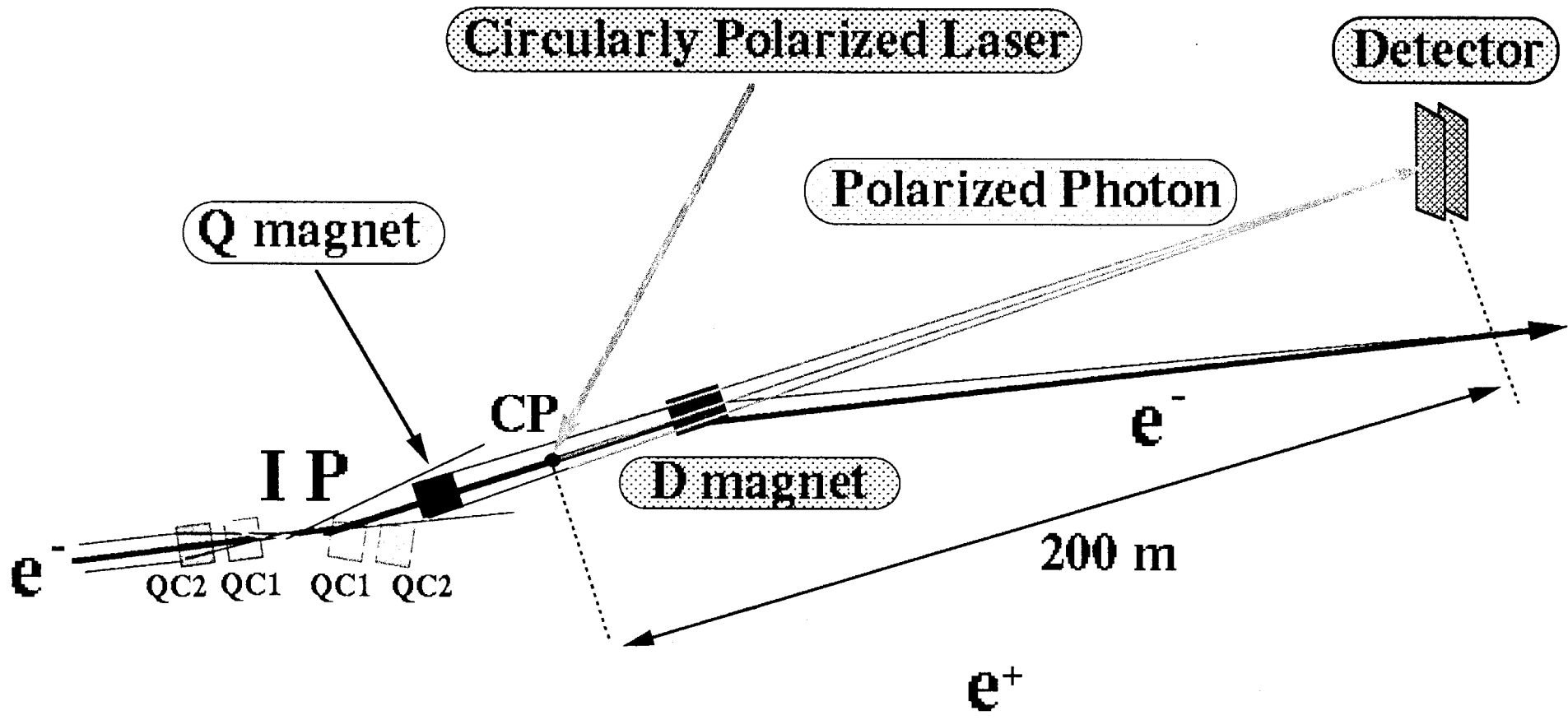


# Polarimeter with Laser-Compton Scattering



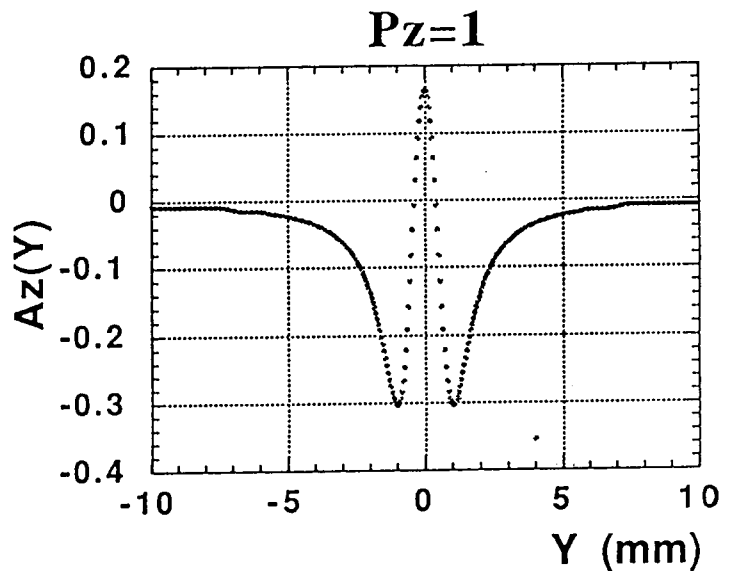
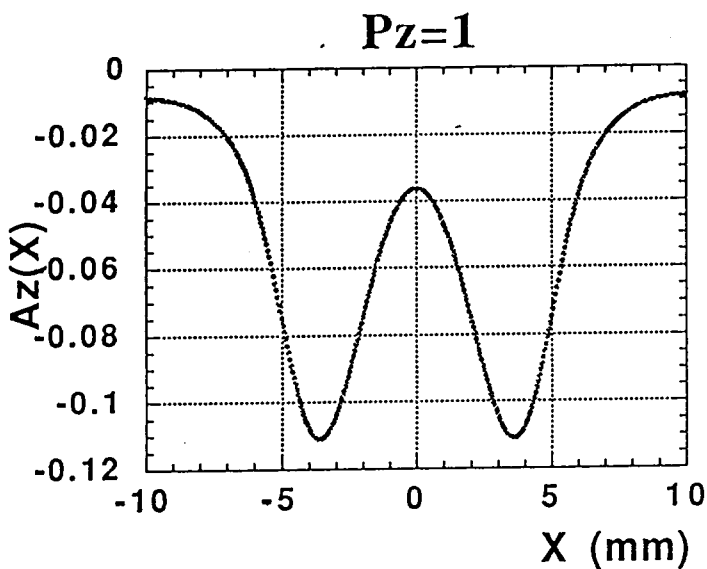
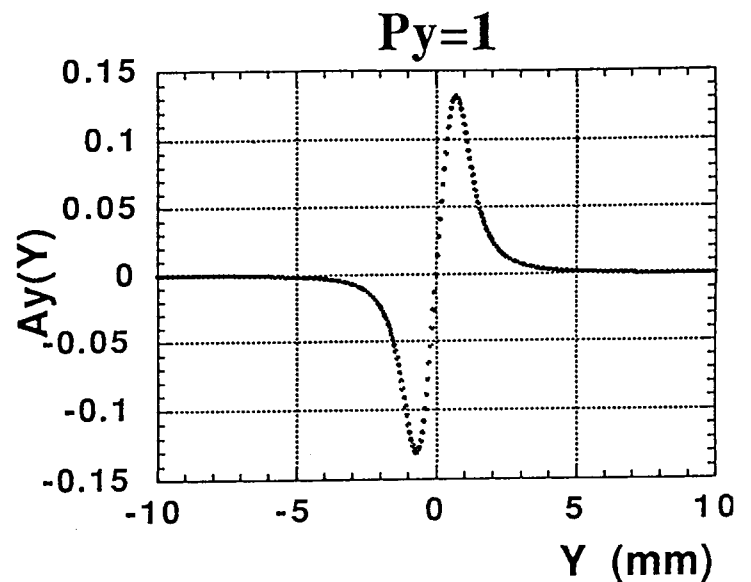
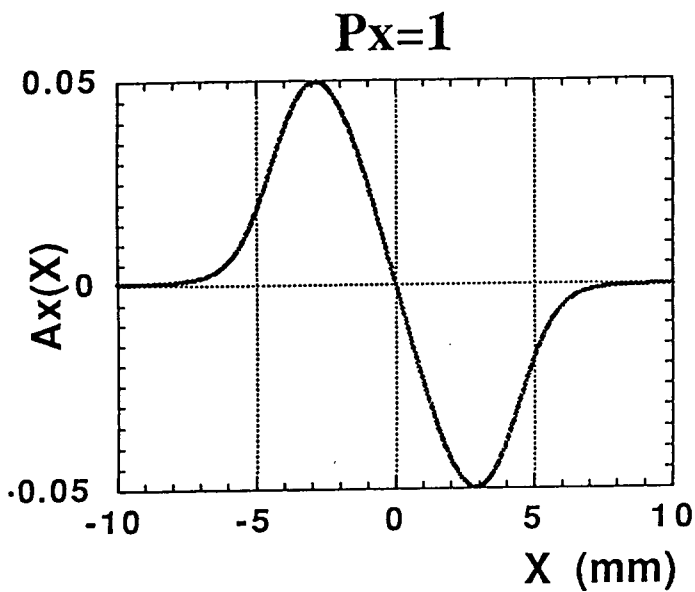
# Application to the Future Linear Collider



# Asymmetry for the right handed and left handed laser beams

Spot Size :  $\phi \approx 20 \mu m$

Strip Pitch :  $\Delta X, \Delta Y = 50 \mu m$



## **4. How to Measure the $e^\pm$ Polarization at Linear Colliders**

**Goal : To measure the x-,y-,z- components of  $e^+$  ( $e^-$ ) spin during physics runs.**

- The laser-compton scattering can provide a possibility.**
  - Focus scattered  $\gamma$  -rays at a distance of 200m downstream of the colliding point**
  
- Backgrounds of synchrotron radiations.**
  - Take advantage of large energy difference between scattered  $\gamma$  -rays and synchrotron radiations.**

$$E_{\gamma, \max} \sim 230 \text{ GeV}$$

$$E_{\text{syn}, \max} \sim 200 \text{ MeV}$$