

# P421 / PCSE 503

## Lecture 21

---

Central Limit Theorem  $\rightarrow$

add up  $\boxed{P(x)}$   $\rightarrow$  Gaussian.

$\uparrow$

Physics

---

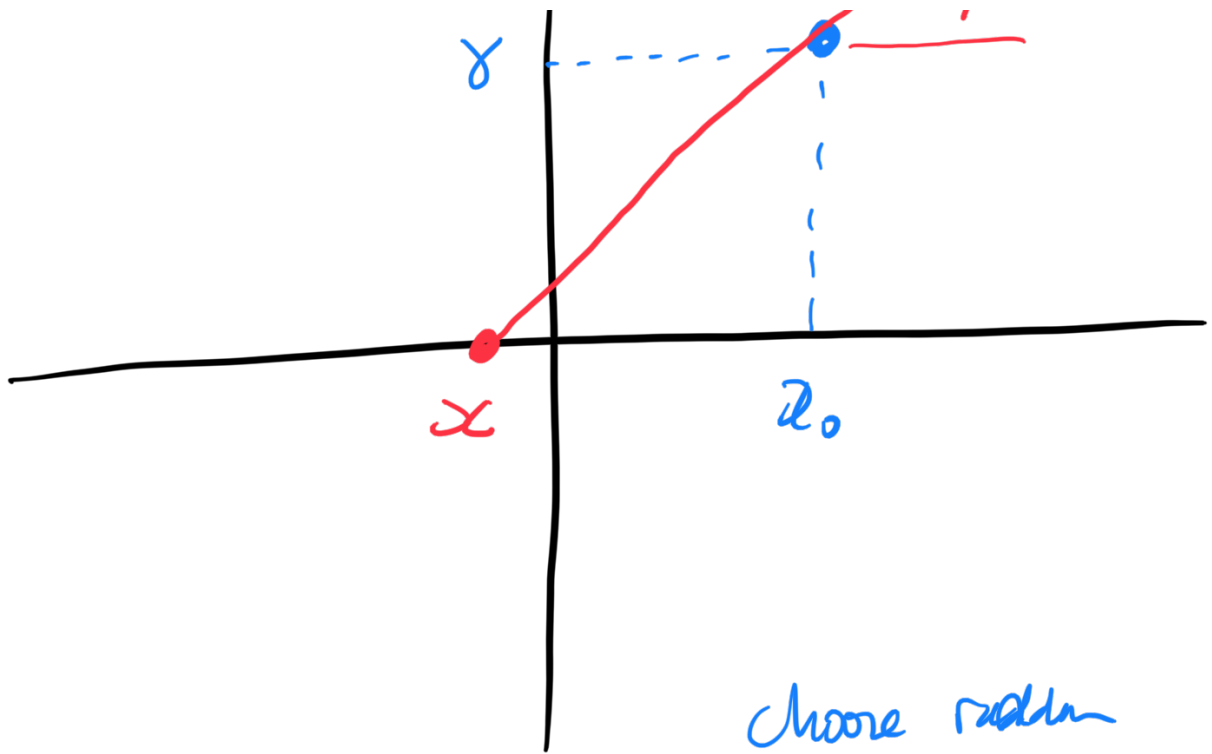
Breit-Wigner  
Lorentz  
Cauchy

} Same

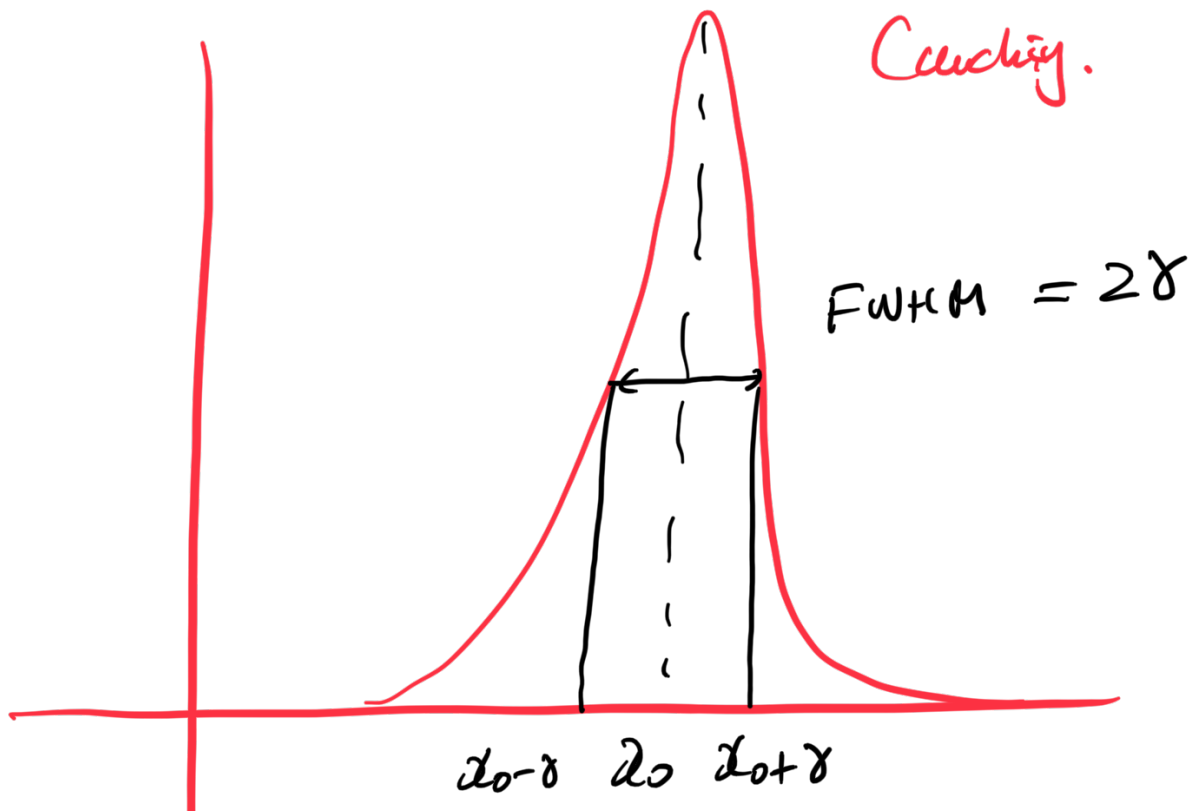
$\tan(\theta)$

$\downarrow$

$P(x, \theta, \gamma)$



choose random  
angle  $\theta$   
10000 times.



Gaussian  $\rightarrow$  FWHM  
 $= 2.35\sigma$

Atom Trapping.

