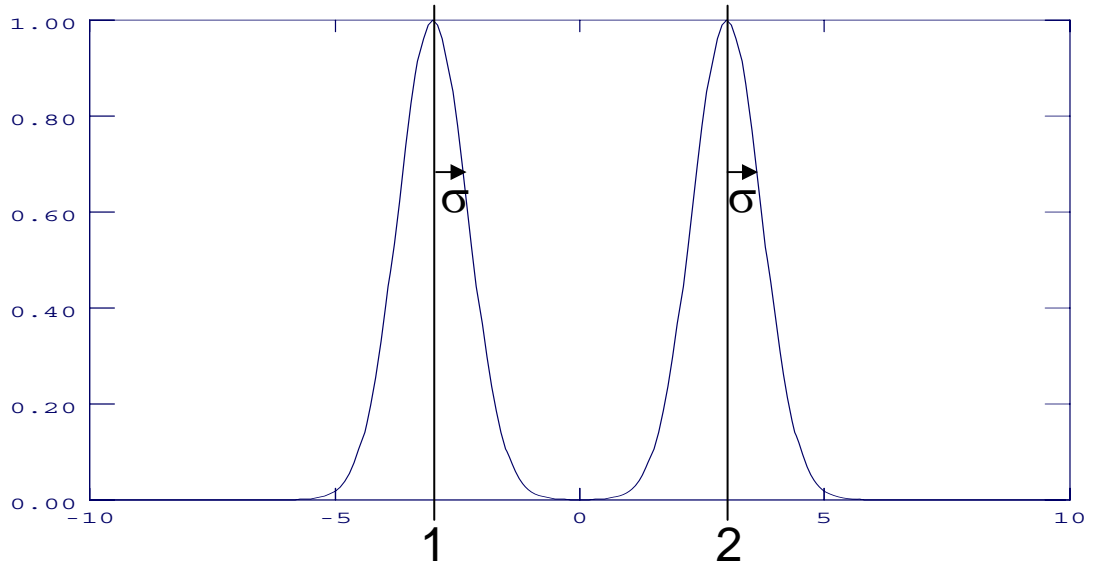


# Definition of $\sigma_{RES}$

$$N_\sigma = \frac{|p_1 - p_2|}{\sigma_{RES}}$$

what do we do if  
distribution widths  
are not the same?



$$\sigma_{RES} := (\sigma_1 + \sigma_2) / 2$$

CLEO

TAG definiton agreed at GSI

consistent with formula in B. Seitz talk

$$N_\sigma \approx \frac{|m_1^2 - m_2^2|}{2p^2\sigma(\vartheta_C)\sqrt{n^2 - 1}}$$

(Particle Data Book)

N.B.  $\beta = \frac{p}{\sqrt{p^2 + m^2}} \approx 1 - 1/2 \frac{m^2}{p^2}$

$$\sigma_{RES} := \sqrt{\sigma_1^2 + \sigma_2^2}$$

COMPASS

came up in Erlangen

error value for  $(p_1+p_2)$  or  
for  $(p_1-p_2)$ , but we measure  
**one single value**  $p_i$

$p_1$  and  $p_2$  define the scale

$|p_1-p_2|$  determined accurately  
(high statistics or by calculations)

$$\sigma_{RES} := \sigma_1 + \sigma_2$$

same information  
content as formula  
on the left

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