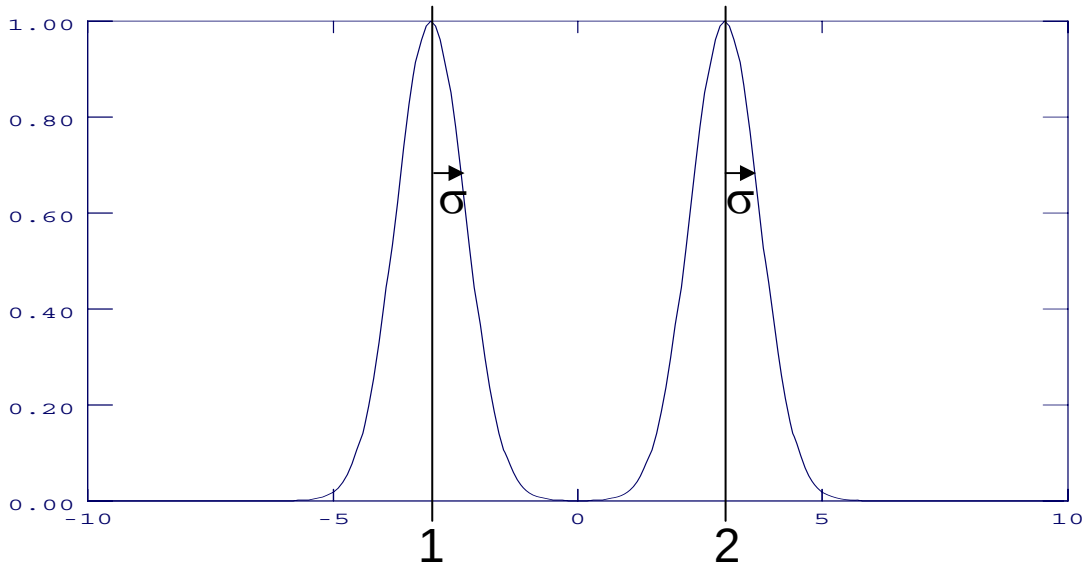
Definition of σ_{RES}

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

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

Klaus Föhl
PANDA PID-TAG
GSI 2007-09-20