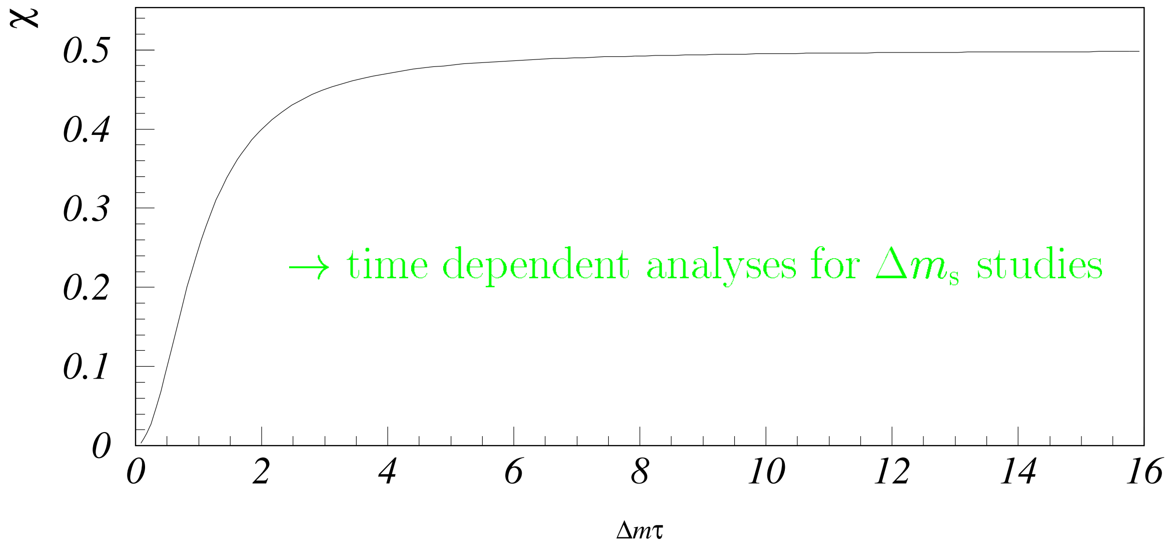
Practical aspects : Time integrated measurements

$$\chi = \frac{\int_0^{+\infty} \mathcal{P}_{\mathrm{B}^0 \to \bar{\mathrm{B}}^0}(t)\, dt}{\int_0^{+\infty} \mathcal{P}_{\mathrm{B}^0 \to \bar{\mathrm{B}}^0}(t)\, dt + \int_0^{+\infty} \mathcal{P}_{\mathrm{B}^0 \to \mathrm{B}^0}(t)\, dt} = \frac{(\Delta m \tau)^2}{2(1 + (\Delta m \tau)^2)}$$



$$\text{LEP} : \bar{\chi} = f_d \chi_d + f_s \chi_s$$

with

- $\chi_s = .5$
- $\bar{\chi} = .1215 \pm .0046$ (LEP WG)
- $\chi_d = .172 \pm .011$ (LEP + $\Upsilon(4S)$ average)
- $2f_d + f_s + f_\Lambda = 1$ and $f_\Lambda = 10.62\ ^{+3.73}_{-2.73}\%$

$\rightarrow f_s = 10.12\ ^{+1.73}_{-1.70}\%$

From BR : $f_s = 10.84\ ^{+3.31}_{-2.90}\%$

$\rightarrow$ Average : $f_s = 10.27^{+1.58}_{-1.53}\%$