Δm_s : the amplitude method

$$(1 \pm \cos \Delta m_s t) \longrightarrow (1 \pm \mathcal{A} \cos \Delta m_s t)$$

- Motivations :
  - Non parabolic likelihood $\rightarrow$ $\Delta\mathcal{L} + 1.92$ does not give the 95 % CL limit
  - A way to incorporate the systematics
  - Easy to combine several analyses
- Main properties :
  - *Measurement* for various Δm_s

    $\mathcal{A} = 0 \Longleftrightarrow$ no oscillation for this Δm_s frequency

    $\mathcal{A} = 1 \Longleftrightarrow$ oscillation for this Δm_s frequency

  - Study of systematic uncertainties on $\mathcal{A}$ by varying each parameter
  - 95 % CL limit : value of Δm_s for which $\mathcal{A} + 1.645\sigma_{\mathcal{A}} = 1$
  - Combination of various analyses : average of $\mathcal{A}$