

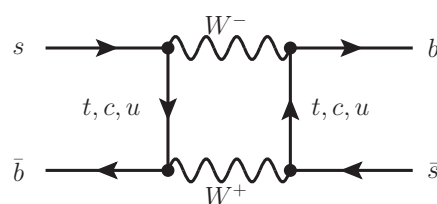
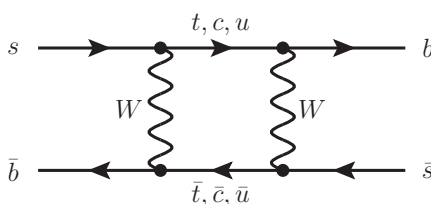
Experimentelle Elementarteilchenphysik

Ulrich Husemann
Humboldt-Universität zu Berlin
Sommersemester 2009

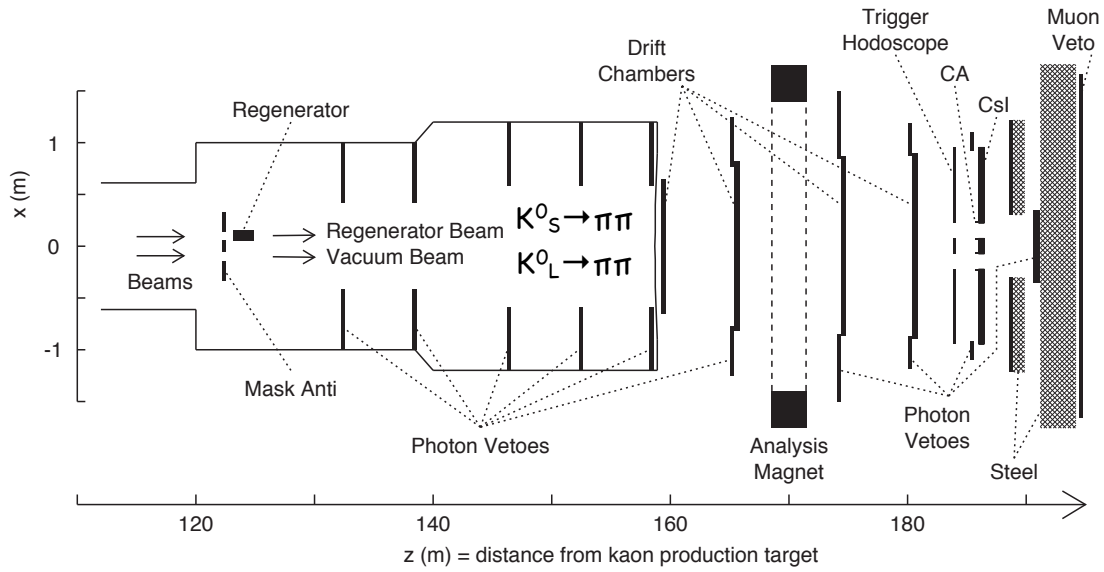
Flavor-Oszillationen

(Details zum Formalismus: U. Nierste, Three Lectures on Meson Mixing and CKM Phenomenology, arXiv:0904.1869 [hep-ph])

$$\begin{aligned}
 |K^0\rangle &= |\bar{s}d\rangle & \leftrightarrow & |\bar{K}^0\rangle = |s\bar{d}\rangle, \\
 |B_d^0\rangle &= |\bar{b}d\rangle & \leftrightarrow & |\bar{B}_d^0\rangle = |d\bar{b}\rangle, \\
 |B_s^0\rangle &= |\bar{b}s\rangle & \leftrightarrow & |\bar{B}_s^0\rangle = |s\bar{b}\rangle.
 \end{aligned}$$



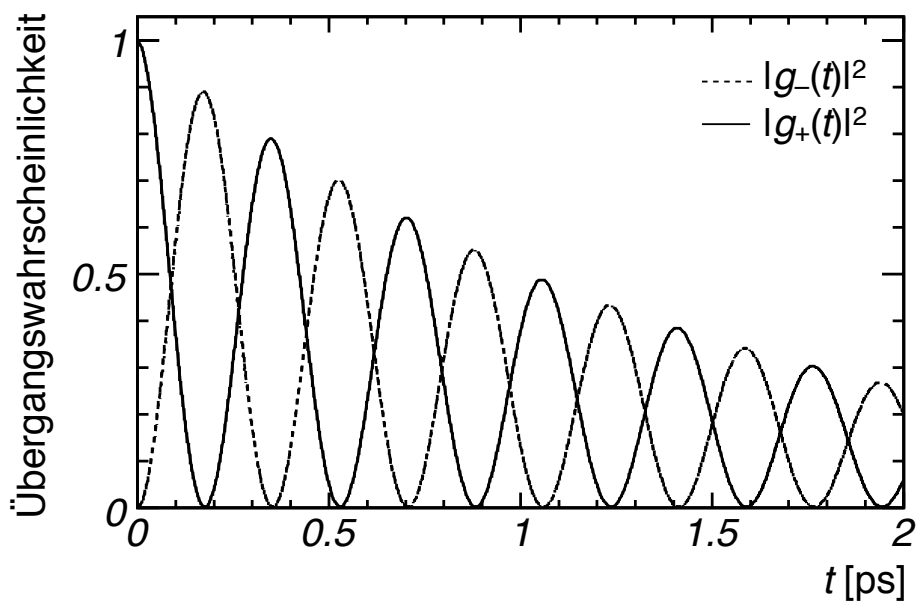
KTeV-Experiment



[A. Alavi-Harati et al., Phys. Rev. **D67** (2003), 012005]

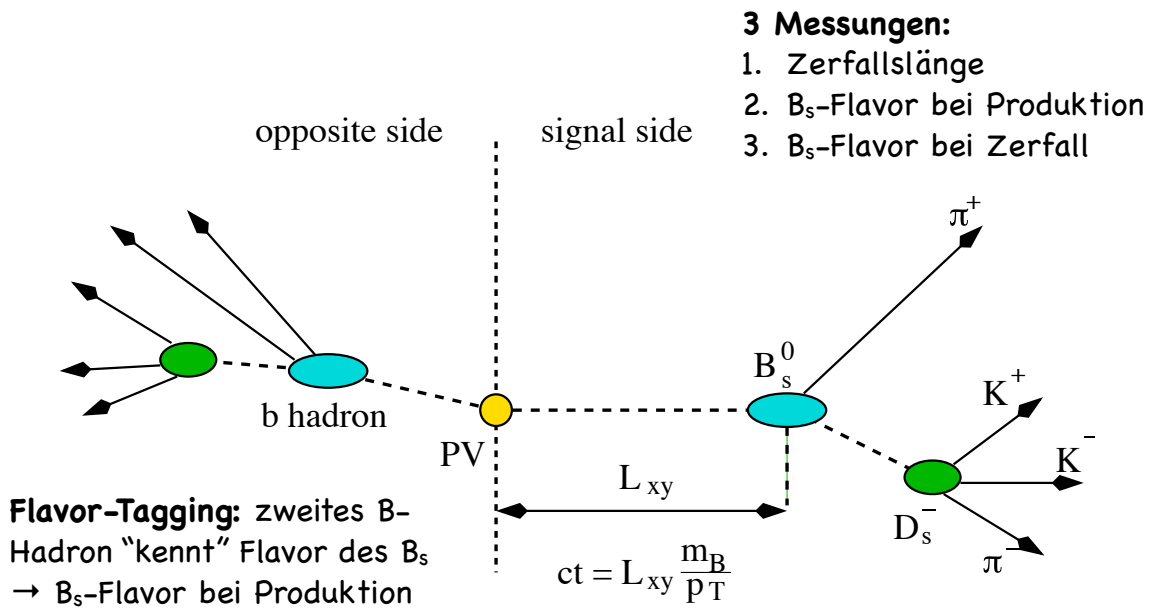
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B_s -Oszillationen



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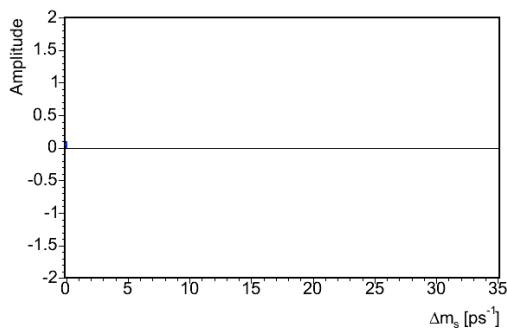
B_s-Oszillationen am Tevatron



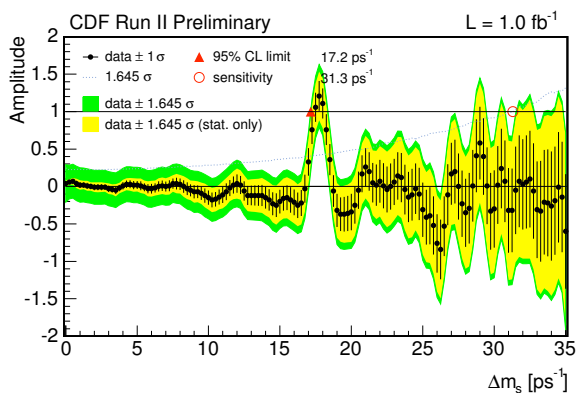
[S. Hansmann-Menzemer, DESY-Seminar, June 2006]

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B_s-Oszillationen: Resultat



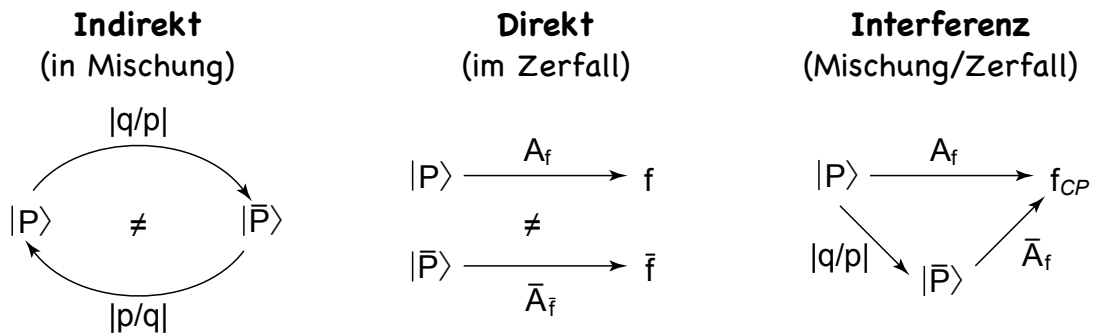
[A. Heijboer]



[A. Abulencia et al.,
 Phys. Rev. Lett. **97** (2006), 242003]

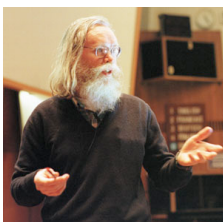
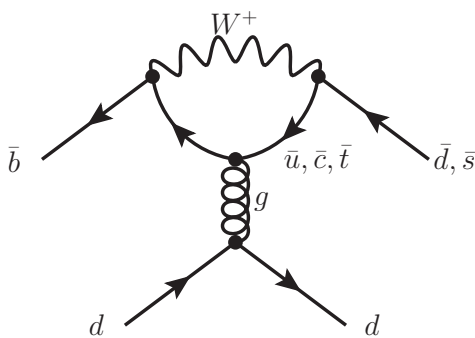
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Klassifikation: CP-Verletzung



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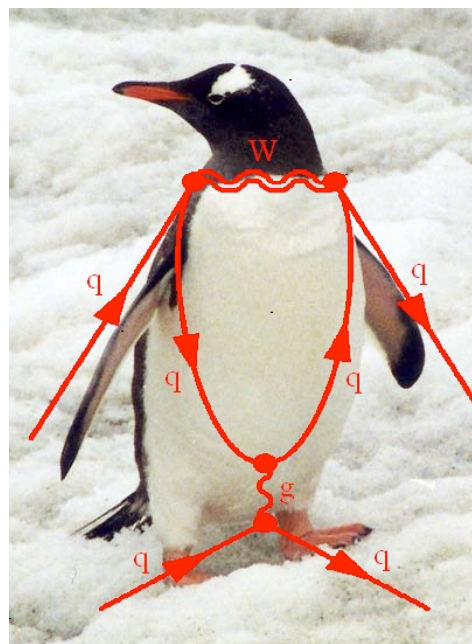
Pinguin-Diagramme



John Ellis



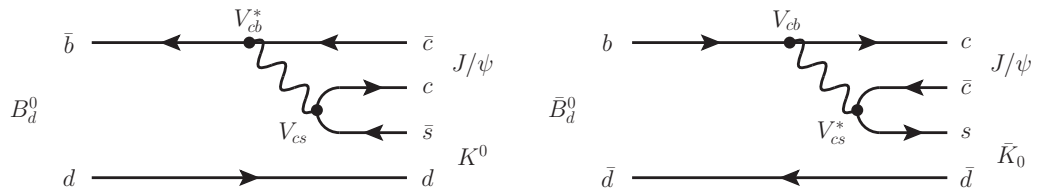
Melissa Franklin



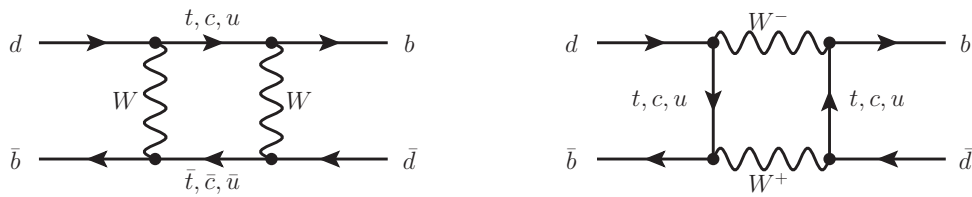
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Goldener Zerfall: $B \rightarrow J/\psi K_S$

Zerfall

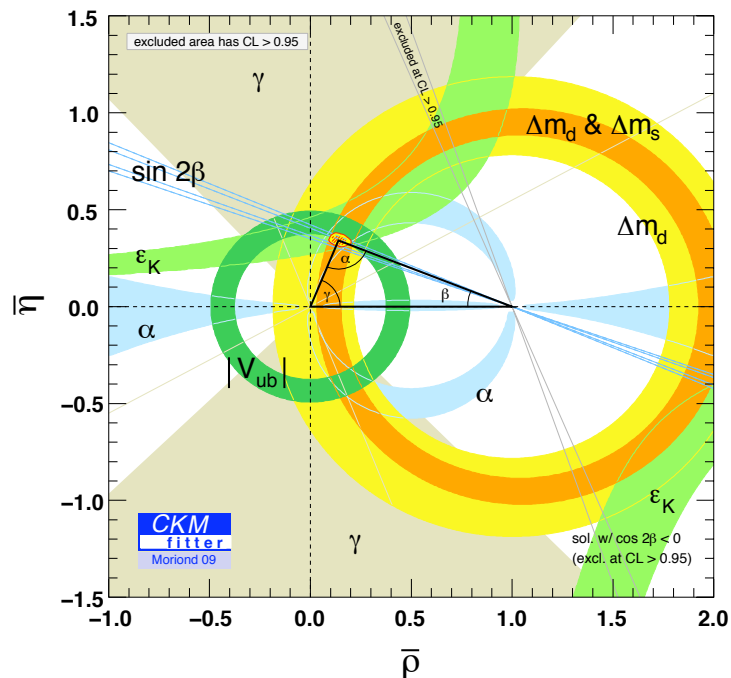


Oszillation



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Messung des Unitaritätsdreiecks



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