



DESY Seminar

12 June 2007, 17:00, DESY Hörsaal

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Evidence for $D^0 - \overline{D}^0$ Mixing at BaBar

The most unexpected physics result of this spring was certainly the evidence for $D^0 - \overline{D}^0$ mixing reported by the Babar and Belle collaborations. Using 384 fb^{-1} of data equivalent to 1.3 million selected tagged $\overline{D}^0 \rightarrow K \pi$ events BaBar has reported a 3.9 sigma evidence for $D^0 - \overline{D}^0$ mixing. The mixing parameters x'^2 and y' have been determined to be $x'^2 = (-0.22 \pm 0.3(\text{stat.}) \pm 0.21(\text{sys.})) 10^{-3}$ and $y' = (9.7 \pm 4.4(\text{stat.}) \pm 3.1(\text{sys.})) 10^{-3}$. No CP violation is observed. The Babar result is consistent with the observation of Belle. Details of the analysis are presented and the results are compared to other experimental data.

- Tea and cookies will be served at 16:45 in the lobby.
- After the seminar there is a chance for private discussions with the speaker over wine and pretzels also in the lobby.