



Measurement of the B^0 and B^+ meson lifetimes with fully reconstructed hadronic final states

B. Aubert, D. Boutigny, J.M. Gaillard, A. Hicheur, Y. Karyotakis, J.P. Lees, P. Robbe, V. Tisserand, A. Palano, G P. Chen, et al.

► To cite this version:

B. Aubert, D. Boutigny, J.M. Gaillard, A. Hicheur, Y. Karyotakis, et al.. Measurement of the B^0 and B^+ meson lifetimes with fully reconstructed hadronic final states. Physical Review Letters, 2001, 87, pp.201803-1-201803-7. in2p3-00010648

HAL Id: in2p3-00010648

<https://hal.in2p3.fr/in2p3-00010648>

Submitted on 23 Nov 2001

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

[twocolumn,showpacs,aps,prl,superscriptaddress]revtex4b5

graphicx dcolumn amsmath epsfig

xspace

relsize

η'

$D^* D^{**} D^* + D^{*-} D^{*0}$

$\rightarrow \eta \pi^+ \pi^- \rightarrow \rho^0 \gamma$

$B^0 \rightarrow K_s^0 B^0 \rightarrow K^0$

$TeV \text{ GeV MeV keV eV GeV/c MeV/c GeV/c}^2 \text{ MeV/c}^2$

(stat) (syst)

${}^{-1}d - 0.1em E/dx \chi^2 m - mL$

$\alpha_s \overline{MSA}_{\overline{MS}}$

$\theta_W \bar{\theta}_W [1] A_{FB}^1 [1] g_V^1 [1] g_A^1 [1] \bar{g}_V^1 [1] \bar{g}_A^1$

$f_D f_{D_s} f_B f_{B_d} f_{B_s} B_B B_{B_d} B_{B_s} \hat{B}_B \hat{B}_{B_d} \hat{B}_{B_s} \hat{B}_K \Lambda_{QCD}$

[1]Section sec:1 [1]Section subsec:1 [1]Figure fig:1 [1]Table tab:1

Eur. Phys. Jour. Phys. Rev. Lett. Phys. Rev. Phys. Lett. Nucl. Instr. Meth. Nucl. Instr. and Meth. Nucl. Instr. and Methods Nucl. Instrum. Methods Nucl. Phys. Z. Phys.

[1] Acta Phys. Austr. Suppl. **1** [1] Acta Phys. Polon. **1** [1] Adv. Cry. Eng. **1** [1] Adv. Nucl. Phys. **1**

[1] Ann. Phys. **1** [1] Ann. Rev. Astr. Ap. **1** [1] Ann. Rev. Nucl. Part. Sci. **1** [1] Ann. Rev. Nucl. Sci. **1** [1]

Appl. Opt. **1** [1] Astro. Phys. J. **1** [1] Bull. Am. Phys. Soc. **1** [1] Bull. Seismological Soc. of Am. **1** [1]

Commun. Math. Phys. **1** [1] Comm. Nucl. Part. Phys. **1** [1] Comput. Phys. Commun. **1** [1] **1** [1] C **1** [1]

Fizika **1** [1] Fortschr. Phys. **1** [1] IEEE Trans. Electron. Devices **1** [1] IEEE Trans. Nucl. Sci. **1** [1] IEEE J.

Quantum Electron. **1** [1] Int. Jour. Mod. Phys. **1** [1] Int. J. Mod. Phys. **A1** [1] JETP Lett. **1** [1] JETP **1**

[1] J. Phys. **G1** [1] J. Appl. Phys. **1** [1] J. Math. Phys. **1** [1] J. Micro. Elec. Sys. **1** [1] Mod. Phys. Lett. **1**

[1] **1** [1] A **1**

[1] **1** [1] B **1** [1] Nucl. Phys. Proc. Suppl. **1** [1] Nucl. Phys. A Proc. Suppl. **1** [1] Nucl. Phys. B Proc.

Suppl. **1**

[1] Nucl. Cim. **1** [1] Opt. Lett. **1** [1] Opt. Commun. **1** [1] Particle Accelerators **1** [1] Phys. Atom.

Nuclei **1** [1] Physics of Fluids **1** [1] Physics Today **1**

[1] **1** [1] B **1** [1] Phys. Rep. **1** [1] **1** [1] **1** [1] A **1** [1] D **1** [1] E **1**

[1] Proc. Roy. Soc. Lond. **1** [1] Prog. Part. Nucl. Phys. **1** [1] Prog. Th. Phys. **1** [1] Rep. Prog. Phys.

1 [1] Rev. Mod. Phys. **1** [1] Rev. Sci. Instr. **1** [1] Science **1** [1] Sov. J. Nucl. Phys. **1** [1] Sov. Phys. Dokl.

1 [1] Sov. Phys. Usp. **1** [1] Teor. Mat. Fiz. **1** [1] Yad. Fiz. **1** [1] **1** [1] C **1** [1] ZhETF Pis. Red. **1**

[1] hep-ex/1 [1] hep-ph/1 [1] hep-th/1

$\Delta m \Delta E$

$B^0 \rightarrow D^{*-} \pi^+ B^0 \rightarrow D^{*-} \rho^+ B^0 \rightarrow D^{*-} a_1^+ B^0 \rightarrow D^- \pi^+ B^0 \rightarrow D^- \rho^+ B^0 \rightarrow D^- a_1^+ B^0 \rightarrow D^{*+} D^{*-}$

$B^+ \rightarrow \bar{D}^0 \pi^+ B^+ \rightarrow \bar{D}^0 \rho^+ B^+ \rightarrow \bar{D}^0 a_1^+$

$B^+ \rightarrow \bar{D}^{*0} \pi^+ B^+ \rightarrow \bar{D}^{*0} \rho^+ B^+ \rightarrow \bar{D}^{*0} a_1^+$

$D^{*-} \pi^+ D^{*+} \rho^+ D^0 \rightarrow K^- \pi^+ D^0 \rightarrow K^- \pi^+ \pi^0 D^0 \rightarrow K^- \pi^+ \pi^- \pi^+ D^0 \rightarrow K_s^0 \pi^+ \pi^- D^0 \rightarrow K_s^0 \pi^+ \pi^- \pi^0 \bar{K}^{*0} \pi^0 K^-$

et al.

152 13 01 06 XX 8847 001XXXX

$\Delta E B_{\text{rec}} B_{\text{opp}} B_{\text{CP}} B_{\text{TAG}}$

document

flushleft BABAR-PUB-/

Measurement of the B^0 and B^+ meson lifetimes with fully reconstructed hadronic final states

center The BABAR Collaboration