

$\psi(4160)$

$$I^G(J^{PC}) = 0^-(1^{--})$$

 $\psi(4160)$ MASS

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
4191 \pm 5 OUR AVERAGE			
4191 $\begin{smallmatrix} +9 \\ -8 \end{smallmatrix}$	AAIJ	13BC LHCb	$B^+ \rightarrow K^+ \mu^+ \mu^-$
4191.7 \pm 6.5	¹ ABLIKIM	08D BES2	$e^+ e^- \rightarrow$ hadrons
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●			
4193 \pm 7	² MO	10 RVUE	$e^+ e^- \rightarrow$ hadrons
4151 \pm 4	³ SETH	05A RVUE	$e^+ e^- \rightarrow$ hadrons
4155 \pm 5	⁴ SETH	05A RVUE	$e^+ e^- \rightarrow$ hadrons
4159 \pm 20	BRANDELIK	78C DASP	$e^+ e^-$

¹ Reanalysis of data presented in BAI 02C. From a global fit over the center-of-mass energy region 3.7–5.0 GeV covering the $\psi(3770)$, $\psi(4040)$, $\psi(4160)$, and $\psi(4415)$ resonances. Phase angle fixed in the fit to $\delta = (293 \pm 57)^\circ$.

² Reanalysis of data presented in BAI 00 and BAI 02C. From a global fit over the center-of-mass energy 3.8–4.8 GeV covering the $\psi(4040)$, $\psi(4160)$ and $\psi(4415)$ resonances and including interference effects.

³ From a fit to Crystal Ball (OSTERHELD 86) data.

⁴ From a fit to BES (BAI 02C) data.

 $\psi(4160)$ WIDTH

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
70 \pm 10 OUR AVERAGE			
65 $\begin{smallmatrix} +22 \\ -16 \end{smallmatrix}$	AAIJ	13BC LHCb	$B^+ \rightarrow K^+ \mu^+ \mu^-$
71.8 \pm 12.3	⁵ ABLIKIM	08D BES2	$e^+ e^- \rightarrow$ hadrons
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●			
79 \pm 14	⁶ MO	10 RVUE	$e^+ e^- \rightarrow$ hadrons
107 \pm 10	⁷ SETH	05A RVUE	$e^+ e^- \rightarrow$ hadrons
107 \pm 16	⁸ SETH	05A RVUE	$e^+ e^- \rightarrow$ hadrons
78 \pm 20	BRANDELIK	78C DASP	$e^+ e^-$

⁵ Reanalysis of data presented in BAI 02C. From a global fit over the center-of-mass energy region 3.7–5.0 GeV covering the $\psi(3770)$, $\psi(4040)$, $\psi(4160)$, and $\psi(4415)$ resonances. Phase angle fixed in the fit to $\delta = (293 \pm 57)^\circ$.

⁶ Reanalysis of data presented in BAI 00 and BAI 02C. From a global fit over the center-of-mass energy 3.8–4.8 GeV covering the $\psi(4040)$, $\psi(4160)$ and $\psi(4415)$ resonances and including interference effects.

⁷ From a fit to Crystal Ball (OSTERHELD 86) data.

⁸ From a fit to BES (BAI 02C) data.

$\psi(4160)$ DECAY MODES

Due to the complexity of the $c\bar{c}$ threshold region, in this listing, “seen” (“not seen”) means that a cross section for the mode in question has been measured at effective \sqrt{s} near this particle’s central mass value, more (less) than 2σ above zero, without regard to any peaking behavior in \sqrt{s} or absence thereof. See mode listing(s) for details and references.

Mode	Fraction (Γ_i/Γ)	Confidence level
Γ_1 $e^+ e^-$	$(6.9 \pm 3.3) \times 10^{-6}$	
Γ_2 $\mu^+ \mu^-$	seen	
Γ_3 $D \bar{D}$	seen	
Γ_4 $D^0 \bar{D}^0$	seen	
Γ_5 $D^+ D^-$	seen	
Γ_6 $D^* \bar{D} + \text{c.c.}$	seen	
Γ_7 $D^*(2007)^0 \bar{D}^0 + \text{c.c.}$	seen	
Γ_8 $D^*(2010)^+ D^- + \text{c.c.}$	seen	
Γ_9 $D^* \bar{D}^*$	seen	
Γ_{10} $D^*(2007)^0 \bar{D}^*(2007)^0$	seen	
Γ_{11} $D^*(2010)^+ D^*(2010)^-$	seen	
Γ_{12} $D^0 D^- \pi^+ + \text{c.c.}$ (excl. $D^*(2007)^0 \bar{D}^0 + \text{c.c.}$, $D^*(2010)^+ D^- + \text{c.c.}$)	not seen	
Γ_{13} $D \bar{D}^* \pi + \text{c.c.}$ (excl. $D^* \bar{D}^*$)	seen	
Γ_{14} $D^0 D^{*-} \pi^+ + \text{c.c.}$ (excl. $D^*(2010)^+ D^*(2010)^-$)	not seen	
Γ_{15} $D_s^+ D_s^-$	not seen	
Γ_{16} $D_s^{*+} D_s^- + \text{c.c.}$	seen	
Γ_{17} $J/\psi \pi^+ \pi^-$	$< 3 \times 10^{-3}$	90%
Γ_{18} $J/\psi \pi^0 \pi^0$	$< 3 \times 10^{-3}$	90%
Γ_{19} $J/\psi K^+ K^-$	$< 2 \times 10^{-3}$	90%
Γ_{20} $J/\psi \eta$	$< 8 \times 10^{-3}$	90%
Γ_{21} $J/\psi \pi^0$	$< 1 \times 10^{-3}$	90%
Γ_{22} $J/\psi \eta'$	$< 5 \times 10^{-3}$	90%
Γ_{23} $J/\psi \pi^+ \pi^- \pi^0$	$< 1 \times 10^{-3}$	90%
Γ_{24} $\psi(2S) \pi^+ \pi^-$	$< 4 \times 10^{-3}$	90%
Γ_{25} $\chi_{c1} \gamma$	$< 7 \times 10^{-3}$	90%
Γ_{26} $\chi_{c2} \gamma$	$< 1.3 \%$	90%
Γ_{27} $\chi_{c1} \pi^+ \pi^- \pi^0$	$< 2 \times 10^{-3}$	90%
Γ_{28} $\chi_{c2} \pi^+ \pi^- \pi^0$	$< 8 \times 10^{-3}$	90%
Γ_{29} $h_c(1P) \pi^+ \pi^-$	$< 5 \times 10^{-3}$	90%
Γ_{30} $h_c(1P) \pi^0 \pi^0$	$< 2 \times 10^{-3}$	90%

Γ_{31}	$h_c(1P)\eta$	< 2	$\times 10^{-3}$	90%
Γ_{32}	$h_c(1P)\pi^0$	< 4	$\times 10^{-4}$	90%
Γ_{33}	$\phi\pi^+\pi^-$	< 2	$\times 10^{-3}$	90%

$\psi(4160)$ PARTIAL WIDTHS

$\Gamma(e^+e^-)$	VALUE (keV)	DOCUMENT ID	TECN	COMMENT	Γ_1
0.48±0.22		⁹ ABLIKIM	08D BES2	$e^+e^- \rightarrow$ hadrons	
• • •	We do not use the following data for averages, fits, limits, etc. • • •				
0.4 to 1.1		¹⁰ MO	10 RVUE	$e^+e^- \rightarrow$ hadrons	
0.83±0.08		¹¹ SETH	05A RVUE	$e^+e^- \rightarrow$ hadrons	
0.84±0.13		¹² SETH	05A RVUE	$e^+e^- \rightarrow$ hadrons	
0.77±0.23		BRANDELIK	78C DASP	e^+e^-	

⁹ Reanalysis of data presented in BAI 02C. From a global fit over the center-of-mass energy region 3.7–5.0 GeV covering the $\psi(3770)$, $\psi(4040)$, $\psi(4160)$, and $\psi(4415)$ resonances. Phase angle fixed in the fit to $\delta = (293 \pm 57)^\circ$.

¹⁰ Reanalysis of data presented in BAI 00 and BAI 02C. From a global fit over the center-of-mass energy 3.8–4.8 GeV covering the $\psi(4040)$, $\psi(4160)$ and $\psi(4415)$ resonances and including interference effects. Four sets of solutions are obtained with the same fit quality, mass and total width, but with different e^+e^- partial widths. We quote only the range of values.

¹¹ From a fit to Crystal Ball (OSTERHELD 86) data.

¹² From a fit to BES (BAI 02C) data.

$\psi(4160) \Gamma(i)\Gamma(e^+e^-)/\Gamma^2(\text{total})$

$\Gamma(J/\psi\eta)/\Gamma_{\text{total}} \times \Gamma(e^+e^-)/\Gamma_{\text{total}}$	VALUE (units 10^{-8})	DOCUMENT ID	TECN	COMMENT	$\Gamma_{20}/\Gamma \times \Gamma_1/\Gamma$
• • •	We do not use the following data for averages, fits, limits, etc. • • •				
2.8±0.9±0.9		¹³ WANG	13B BELL	$e^+e^- \rightarrow J/\psi\eta\gamma$	
12.8±1.7±2.0		¹⁴ WANG	13B BELL	$e^+e^- \rightarrow J/\psi\eta\gamma$	

¹³ Solution I of two equivalent solutions in a fit using two interfering resonances. Mass and width fixed at 4153 MeV and 103 MeV, respectively.

¹⁴ Solution II of two equivalent solutions in a fit using two interfering resonances. Mass and width fixed at 4153 MeV and 103 MeV, respectively.

$\psi(4160)$ BRANCHING RATIOS

$\Gamma(\mu^+\mu^-)/\Gamma_{\text{total}}$	VALUE	DOCUMENT ID	TECN	COMMENT	Γ_2/Γ
seen		¹⁵ AAIJ	13BC LHCB	$B^+ \rightarrow K^+\mu^+\mu^-$	

¹⁵ AAIJ 13BC report $B(B^+ \rightarrow K^+\psi(4160)) B(\psi(4160) \rightarrow \mu^+\mu^-) = (3.5_{-0.8}^{+0.9}) \times 10^{-9}$.

$\Gamma(D\bar{D})/\Gamma(D^*\bar{D}^*)$	VALUE	DOCUMENT ID	TECN	COMMENT	Γ_3/Γ_9
0.02±0.03±0.02		AUBERT	09M BABR	$e^+e^- \rightarrow \gamma D(*)\bar{D}^*$	

$\Gamma(D^0\bar{D}^0)/\Gamma_{\text{total}}$ Γ_4/Γ

<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
seen	CRONIN-HEN..09	CLEO	$e^+e^- \rightarrow D^0\bar{D}^0$
seen	PAKHLOVA 08	BELL	$e^+e^- \rightarrow D^0\bar{D}^0\gamma$
• • • We do not use the following data for averages, fits, limits, etc. • • •			
not seen	AUBERT 09M	BABR	$e^+e^- \rightarrow D^0\bar{D}^0\gamma$

$\Gamma(D^+D^-)/\Gamma_{\text{total}}$ Γ_5/Γ

<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
seen	CRONIN-HEN..09	CLEO	$e^+e^- \rightarrow D^+D^-$
seen	PAKHLOVA 08	BELL	$e^+e^- \rightarrow D^+D^-\gamma$
• • • We do not use the following data for averages, fits, limits, etc. • • •			
not seen	AUBERT 09M	BABR	$e^+e^- \rightarrow D^+D^-\gamma$

$\Gamma(D^*(2007)^0\bar{D}^0 + \text{c.c.})/\Gamma_{\text{total}}$ Γ_7/Γ

<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
seen	AUBERT 09M	BABR	$e^+e^- \rightarrow D^{*0}\bar{D}^0\gamma$
seen	CRONIN-HEN..09	CLEO	$e^+e^- \rightarrow D^{*0}\bar{D}^0$

$\Gamma(D^*(2010)^+D^- + \text{c.c.})/\Gamma_{\text{total}}$ Γ_8/Γ

<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
seen	AUBERT 09M	BABR	$e^+e^- \rightarrow D^{*+}D^-\gamma$
seen	CRONIN-HEN..09	CLEO	$e^+e^- \rightarrow D^{*+}D^-$
seen	PAKHLOVA 07	BELL	$e^+e^- \rightarrow D^{*+}D^-\gamma$

$\Gamma(D^*\bar{D} + \text{c.c.})/\Gamma(D^*\bar{D}^*)$ Γ_6/Γ_9

<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
0.34 ± 0.14 ± 0.05	AUBERT 09M	BABR	$e^+e^- \rightarrow \gamma D^{(*)}\bar{D}^{(*)}$

$\Gamma(D^*(2007)^0\bar{D}^{*0}(2007)^0)/\Gamma_{\text{total}}$ Γ_{10}/Γ

<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
seen	AUBERT 09M	BABR	$e^+e^- \rightarrow D^{*0}\bar{D}^{*0}\gamma$
seen	CRONIN-HEN..09	CLEO	$e^+e^- \rightarrow D^{*0}\bar{D}^{*0}$

$\Gamma(D^*(2010)^+D^*(2010)^-)/\Gamma_{\text{total}}$ Γ_{11}/Γ

<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
seen	AUBERT 09M	BABR	$e^+e^- \rightarrow D^{*+}D^{*-}\gamma$
seen	CRONIN-HEN..09	CLEO	$e^+e^- \rightarrow D^{*+}D^{*-}$
seen	PAKHLOVA 07	BELL	$e^+e^- \rightarrow D^{*+}D^{*-}\gamma$

$\Gamma(D^0D^-\pi^+ + \text{c.c. (excl. } D^*(2007)^0\bar{D}^0 + \text{c.c., } D^*(2010)^+D^- + \text{c.c.))}/\Gamma_{\text{total}}$ Γ_{12}/Γ

<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
not seen	PAKHLOVA 08A	BELL	$e^+e^- \rightarrow D^0D^-\pi^+\gamma$

$\Gamma(D\bar{D}^*\pi + \text{c.c. (excl. } D^*\bar{D}^*)/\Gamma_{\text{total}}$ Γ_{13}/Γ

<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
seen	CRONIN-HEN..09	CLEO	$e^+e^- \rightarrow D\bar{D}^*\pi$

$\Gamma(D^0 D^{*-} \pi^+ + \text{c.c. (excl. } D^*(2010)^+ D^*(2010)^-))/\Gamma_{\text{total}}$ Γ_{14}/Γ

<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
not seen	PAKHLOVA 09	BELL	$e^+ e^- \rightarrow D^0 D^{*-} \pi^+ \gamma$

$\Gamma(D_s^+ D_s^-)/\Gamma_{\text{total}}$ Γ_{15}/Γ

<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
not seen	PAKHLOVA 11	BELL	$e^+ e^- \rightarrow D_s^+ D_s^- \gamma$
not seen	DEL-AMO-SA..10N	BABR	$e^+ e^- \rightarrow D_s^+ D_s^- \gamma$
not seen	CRONIN-HEN..09	CLEO	$e^+ e^- \rightarrow D_s^+ D_s^-$

$\Gamma(D_s^{*+} D_s^- + \text{c.c.})/\Gamma_{\text{total}}$ Γ_{16}/Γ

<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
seen	PAKHLOVA 11	BELL	$e^+ e^- \rightarrow D_s^{*+} D_s^- \gamma$
seen	DEL-AMO-SA..10N	BABR	$e^+ e^- \rightarrow D_s^{*+} D_s^- \gamma$
seen	CRONIN-HEN..09	CLEO	$e^+ e^- \rightarrow D_s^{*+} D_s^-$

$\Gamma(J/\psi \pi^+ \pi^-)/\Gamma_{\text{total}}$ Γ_{17}/Γ

<u>VALUE (units 10^{-3})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<3	90	COAN 06	CLEO	4.12–4.2 $e^+ e^- \rightarrow$ hadrons

$\Gamma(J/\psi \pi^0 \pi^0)/\Gamma_{\text{total}}$ Γ_{18}/Γ

<u>VALUE (units 10^{-3})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<3	90	COAN 06	CLEO	4.12–4.2 $e^+ e^- \rightarrow$ hadrons

$\Gamma(J/\psi K^+ K^-)/\Gamma_{\text{total}}$ Γ_{19}/Γ

<u>VALUE (units 10^{-3})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<2	90	COAN 06	CLEO	4.12–4.2 $e^+ e^- \rightarrow$ hadrons

$\Gamma(J/\psi \eta)/\Gamma_{\text{total}}$ Γ_{20}/Γ

<u>VALUE (units 10^{-3})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<8	90	COAN 06	CLEO	4.12–4.2 $e^+ e^- \rightarrow$ hadrons

$\Gamma(J/\psi \pi^0)/\Gamma_{\text{total}}$ Γ_{21}/Γ

<u>VALUE (units 10^{-3})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<1	90	COAN 06	CLEO	4.12–4.2 $e^+ e^- \rightarrow$ hadrons

$\Gamma(J/\psi \eta')/\Gamma_{\text{total}}$ Γ_{22}/Γ

<u>VALUE (units 10^{-3})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<5	90	COAN 06	CLEO	4.12–4.2 $e^+ e^- \rightarrow$ hadrons

$\Gamma(J/\psi \pi^+ \pi^- \pi^0)/\Gamma_{\text{total}}$ Γ_{23}/Γ

<u>VALUE (units 10^{-3})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<1	90	COAN 06	CLEO	4.12–4.2 $e^+ e^- \rightarrow$ hadrons

$\Gamma(\psi(2S)\pi^+\pi^-)/\Gamma_{\text{total}}$ Γ_{24}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID	TECN	COMMENT
<4	90	COAN	06	CLEO 4.12–4.2 $e^+e^- \rightarrow$ hadrons

$\Gamma(\chi_{c1}\gamma)/\Gamma_{\text{total}}$ Γ_{25}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID	TECN	COMMENT
<7	90	COAN	06	CLEO 4.12–4.2 $e^+e^- \rightarrow$ hadrons

$\Gamma(\chi_{c2}\gamma)/\Gamma_{\text{total}}$ Γ_{26}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID	TECN	COMMENT
<13	90	COAN	06	CLEO 4.12–4.2 $e^+e^- \rightarrow$ hadrons

$\Gamma(\chi_{c1}\pi^+\pi^-\pi^0)/\Gamma_{\text{total}}$ Γ_{27}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID	TECN	COMMENT
<2	90	COAN	06	CLEO 4.12–4.2 $e^+e^- \rightarrow$ hadrons

$\Gamma(\chi_{c2}\pi^+\pi^-\pi^0)/\Gamma_{\text{total}}$ Γ_{28}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID	TECN	COMMENT
<8	90	COAN	06	CLEO 4.12–4.2 $e^+e^- \rightarrow$ hadrons

$\Gamma(h_c(1P)\pi^+\pi^-)/\Gamma_{\text{total}}$ Γ_{29}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID	TECN	COMMENT
<5	90	¹⁶ PEDLAR	11	CLEO $e^+e^- \rightarrow h_c(1P)\pi^+\pi^-$

¹⁶ At $\sqrt{s} = 4170$ MeV, PEDLAR 11 measures $\sigma(e^+e^- \rightarrow h_c(1P)\pi^+\pi^-) = 15.6 \pm 2.3 \pm 1.9 \pm 3.0$ pb, where the errors are statistical, systematic, and due to uncertainty in $B(\psi(2S) \rightarrow \pi^0 h_c(1P))$, respectively.

$\Gamma(h_c(1P)\pi^0\pi^0)/\Gamma_{\text{total}}$ Γ_{30}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID	TECN	COMMENT
<2	90	¹⁷ PEDLAR	11	CLEO $e^+e^- \rightarrow h_c(1P)\pi^0\pi^0$

¹⁷ At $\sqrt{s} = 4170$ MeV, PEDLAR 11 measures $\sigma(e^+e^- \rightarrow h_c(1P)\pi^0\pi^0) = 3.0 \pm 3.3 \pm 1.1 \pm 0.6$ pb, where the errors are statistical, systematic, and due to uncertainty in $B(\psi(2S) \rightarrow \pi^0 h_c(1P))$, respectively.

$\Gamma(h_c(1P)\eta)/\Gamma_{\text{total}}$ Γ_{31}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID	TECN	COMMENT
<2	90	¹⁸ PEDLAR	11	CLEO $e^+e^- \rightarrow h_c(1P)\eta$

¹⁸ At $\sqrt{s} = 4170$ MeV, PEDLAR 11 measures $\sigma(e^+e^- \rightarrow h_c(1P)\eta) = 4.7 \pm 1.7 \pm 1.0 \pm 0.9$ pb, where the errors are statistical, systematic, and due to uncertainty in $B(\psi(2S) \rightarrow \pi^0 h_c(1P))$, respectively.

$\Gamma(h_c(1P)\pi^0)/\Gamma_{\text{total}}$ Γ_{32}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID	TECN	COMMENT
<0.4	90	¹⁹ PEDLAR	11	CLEO $e^+e^- \rightarrow h_c(1P)\pi^0$

¹⁹ At $\sqrt{s} = 4170$ MeV, PEDLAR 11 measures $\sigma(e^+e^- \rightarrow h_c(1P)\pi^0) = -0.7 \pm 1.8 \pm 0.7 \pm 0.1$ pb, where the errors are statistical, systematic, and due to uncertainty in $B(\psi(2S) \rightarrow \pi^0 h_c(1P))$, respectively.

$\Gamma(\phi\pi^+\pi^-)/\Gamma_{\text{total}}$		Γ_{33}/Γ			
VALUE (units 10^{-3})	CL%	DOCUMENT ID	TECN	COMMENT	
<2	90	COAN	06	CLEO	4.12–4.2 $e^+e^- \rightarrow$ hadrons

 $\psi(4160)$ REFERENCES

AAIJ	13BC	PRL 111 112003	R. Aaij <i>et al.</i>	(LHCb Collab.)
WANG	13B	PR D87 051101	X.L. Wang <i>et al.</i>	(BELLE Collab.)
PAKHLOVA	11	PR D83 011101	G. Pakhlova <i>et al.</i>	(BELLE Collab.)
PEDLAR	11	PRL 107 041803	T. Pedlar <i>et al.</i>	(CLEO Collab.)
DEL-AMO-SA...	10N	PR D82 052004	P. del Amo Sanchez <i>et al.</i>	(BABAR Collab.)
MO	10	PR D82 077501	X.H. Mo, C.Z. Yuan, P. Wang	(BHEP)
AUBERT	09M	PR D79 092001	B. Aubert <i>et al.</i>	(BABAR Collab.)
CRONIN-HEN...	09	PR D80 072001	D. Cronin-Hennessy <i>et al.</i>	(CLEO Collab.)
PAKHLOVA	09	PR D80 091101	G. Pakhlova <i>et al.</i>	(BELLE Collab.)
ABLIKIM	08D	PL B660 315	M. Ablikim <i>et al.</i>	(BES Collab.)
PAKHLOVA	08	PR D77 011103	G. Pakhlova <i>et al.</i>	(BELLE Collab.)
PAKHLOVA	08A	PRL 100 062001	G. Pakhlova <i>et al.</i>	(BELLE Collab.)
PAKHLOVA	07	PRL 98 092001	G. Pakhlova <i>et al.</i>	(BELLE Collab.)
COAN	06	PRL 96 162003	T.E. Coan <i>et al.</i>	(CLEO Collab.)
SETH	05A	PR D72 017501	K.K. Seth	
BAI	02C	PRL 88 101802	J.Z. Bai <i>et al.</i>	(BES Collab.)
BAI	00	PRL 84 594	J.Z. Bai <i>et al.</i>	(BES Collab.)
OSTERHELD	86	SLAC-PUB-4160	A. Osterheld <i>et al.</i>	(SLAC Crystal Ball Collab.)
BRANDELIK	78C	PL 76B 361	R. Brandelik <i>et al.</i>	(DASP Collab.)