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

also known as Y(4230); was  $\psi(4260)$ 

The original  $\psi(4260)$  (also known as Y(4260)) was observed by AUBERT,B 05I as a peak in the energy dependence of the  $e^+e^- \rightarrow \pi^+\pi^- J/\psi$  cross section and was confirmed by HE 06B, YUAN 07, LEES 12AC, and LIU 13B in the same process. A higher-statistics analysis by ABLIKIM 17B revealed an asymmetry in the cross section and resulted in a shift of the peak position to a lower mass. The  $\psi(4260)$  was therefore renamed  $\psi(4230)$ . The energy-dependent cross sections for  $e^+e^-$  to other channels also exhibit peaks in the same mass region. The parameters corresponding to those peaks are also listed here, but the number of states in this region remains to be determined.

For details see the review on "Spectroscopy of mesons containing two heavy quarks."

VALUE (MeV)	EVTS D	OCUMENT ID	TECN	COMMENT
4222.7± 2.6 0	UR AVERAG	E Error include	es scale facto	or of 1.7. See the ideogram below.
$4234.4\pm~3.2\pm$	0.2 <sup>1</sup> A	BLIKIM 2	1aj BES3	$e^+e^- \rightarrow \pi^+\pi^-\psi(2S)$
$4216.7 \pm 8.9 \pm$	4.1 <sup>2</sup> A	BLIKIM 20	0AG BES3	$e^+e^- \rightarrow \mu^+\mu^-$
$4220.4\pm~2.4\pm$	2.3 <sup>3</sup> A	BLIKIM 20	ON BES3	$e^+e^-  ightarrow \pi^0 \pi^0 J/\psi$
$4218.6\pm~3.8\pm$	2.5 <sup>3</sup> A	BLIKIM 20	00 BES3	$e^+e^-  ightarrow \eta J/\psi$
$4218.5 \pm 1.6 \pm$	4.0 <sup>4</sup> A	BLIKIM 1	9AI BES3	$e^+e^- \rightarrow \omega \chi_{c0}$
$4228.6\pm~4.1\pm$	6.3 A	BLIKIM 19	9r BES3	$e^+e^- \to \pi^+ D^0 D^{*-} + c.c.$
$4200.6^{+\ 7.9}_{-\ 13.3}\pm$	3.0 <sup>5</sup> A	BLIKIM 19	9∨ BES3	$e^+e^- \rightarrow \gamma \chi_{c1}$ (3872)
$4222.0\pm~3.1\pm$	1.4 <sup>6</sup> A	BLIKIM 1	7B BES3	$e^+e^- \rightarrow \pi^+\pi^- J/\psi$
$\begin{array}{rrrr} 4218 & + & 5.5 \\ - & 4.5 \\ \end{array} \pm$	0.9 A	BLIKIM 1	7G BES3	$e^+e^- \rightarrow \pi^+\pi^-h_c$
• • • We do no	ot use the foll	owing data for a	averages, fits	s, limits, etc. • • •
$4231.9\pm~5.3\pm$	4.9 A	BLIKIM 20	ON BES3	$e^+e^- \to \pi^0 Z_c(3900)^0, \ Z_c^0 \to$
	_			$\pi^0 J/\psi$
$4209.5\pm~7.4\pm$	1.4 <sup>7</sup> A	BLIKIM 1	7V BES3	$e^+e^- \rightarrow \pi^+\pi^-\psi(2S)$
$4209.1\pm~6.8\pm$	7.0 <sup>6</sup> Z	HANG 1	7в RVUE	$e^+e^- \rightarrow \pi^+\pi^-\psi(2S)$
$4223.3\pm~1.6\pm$	2.5 <sup>8</sup> Z	HANG 1	7c RVUE	$e^+e^- \rightarrow \pi^+\pi^- J/\psi$ or $\psi(2S)$
4230 $\pm$ 8 $\pm$	6180 <sup>9</sup> A	BLIKIM 1	5C BES3	$e^+e^- \rightarrow \omega \chi_{c0}$
$4258.6\pm~8.3\pm$	12.1 <sup>10</sup> L	IU 13	3b BELL	$e^+e^- \rightarrow \gamma \pi^+\pi^- J/\psi$
4245 $\pm$ 5 $\pm$	4 <sup>11</sup> L	EES 12	2AC BABR	10.58 $e^+e^- \rightarrow \gamma \pi^+\pi^- J/\psi$
4247 $\pm 12$ $\stackrel{+}{\_}$	17 10,12 Y	UAN 0 <sup>.</sup>	7 BELL	10.58 $e^+e^- \rightarrow \gamma \pi^+\pi^- J/\psi$
$4284 \begin{array}{c} +17\\ -16\end{array} \pm$	413.6 H	IE 0	6B CLEO	9.4–10.6 $e^+e^- \to \gamma \pi^+\pi^- J/\psi$
4259 $\pm$ 8 $\stackrel{+}{-}$	<sup>2</sup> <sub>6</sub> 125 <sup>13</sup> A	UBERT,B 0	51 BABR	10.58 $e^+e^- \rightarrow \gamma \pi^+\pi^- J/\psi$

## $\psi$ (4230) MASS



 $^1\,{\sf From}$  a three-resonance fit to the Born cross section in the range  $\sqrt{s}$  = 4.008–4.698 GeV.

<sup>2</sup>Solution 1 of 8 with equal fit quality to the  $e^+e^- \rightarrow \mu^+\mu^-$  cross section between 3.8 and 4.6 GeV to the coherent sum of four resonant amplitudes. Other solutions range from 4212.8  $\pm$  7.2  $\pm$  4.0 to 4219.4  $\pm$  11.2  $\pm$  4.1 MeV.

 $^3$  From a fit of the measured cross section in the range  $\sqrt{s} = 3.808$ –4.600 GeV.

 $^4$  From a fit of the measured cross section from  $\sqrt{s}$  = 4.178–4.278 GeV. Supersedes ABLIKIM 15C. <sup>5</sup>Simultaneous fit to  $\chi_{c1} \rightarrow \omega J/\psi$  and  $\chi_{c1} \rightarrow \pi^+ \pi^- J/\psi$ .

<sup>6</sup> From a three-resonance fit. <sup>7</sup> From a fit to the cross section for  $e^+e^- \rightarrow \pi^+\pi^-\psi(2S) \rightarrow 2(\pi^+\pi^-)\ell^+\ell^-$  obtained from 16 center-of-mass energies between 4.008 and 4.600 GeV and comprising  $5.1 \text{ fb}^{-1}$ . Superseded by ABLIKIM 21AJ.

<sup>8</sup> From a combined fit of BELLE, BABAR and BES3  $e^+e^- \rightarrow \pi^+\pi^- J/\psi$  and  $e^+e^- \rightarrow$  $\pi^+\pi^-\psi(2S)$  data.

<sup>9</sup> From a 3-parameter fit of measured cross sections from  $\sqrt{s}$  = 4.21–4.42 GeV to a phase-space modified Breit-Wigner function, using the decays  $\chi_{c0} \rightarrow \pi^+\pi^-$ ,  $\chi_{c0} \rightarrow$ 

 $K^+K^-$ , and  $\omega \rightarrow \pi^+\pi^-\pi^0$ . <sup>10</sup> From a two-resonance fit. <sup>11</sup> From a single-resonance fit. Supersedes AUBERT,B 051.

<sup>12</sup> Superseded by LIU 13B.

 $^{13}$  From a single-resonance fit. Two interfering resonances are not excluded. Superseded by LEES 12AC.

 $\psi$ (4230) MASS (MeV)

### $\psi$ (4230) WIDTH

VALUE (MeV) EVTS	DOCUMENT ID	TECN	COMMENT	
49 ± 8 OUR AVE	RAGE Error inclu	des scale facto	or of 3.5. See the ideogram	below.
$17.6 \pm 18.1 \pm 0.9$	<sup>1</sup> ABLIKIM	21AJ BES3	$e^+e^- \rightarrow \pi^+\pi^-\psi(2S)$	
https://pdg.lbl.gov	Pag	e 2	Created: 8/11/2022	09:37



 $^{1}$  From a three-resonance fit to the Born cross section in the range  $\sqrt{s}=$  4.008–4.698 GeV.

https://pdg.lbl.gov

Created: 8/11/2022 09:37

- <sup>2</sup>Solution 1 of 8 with equal fit quality to the  $e^+e^- \rightarrow \mu^+\mu^-$  cross section between 3.8 and 4.6 GeV to the coherent sum of four resonant amplitudes. Other solutions range from 36.4  $\pm$  16.8  $\pm$  8.1 to 49.6  $\pm$  22.6  $\pm$  11.0 MeV.
- <sup>3</sup> From a fit of the measured cross section in the range  $\sqrt{s} = 3.808-4.600$  GeV.
- <sup>4</sup> From a fit of the measured cross section in the range  $\sqrt{s} = 0.000$  moto GeV. <sup>4</sup> ABLIKIM 15C. <sup>5</sup> Simultaneous fit to  $\chi_{c1} \rightarrow \omega J/\psi$  and  $\chi_{c1} \rightarrow \pi^+ \pi^- J/\psi$ .
- $\frac{6}{2}$  From a three-resonance fit.

<sup>7</sup> From a fit to the cross section for  $e^+e^- \rightarrow \pi^+\pi^-\psi(2S) \rightarrow 2(\pi^+\pi^-)\ell^+\ell^-$  obtained from 16 center-of-mass energies between 4.008 and 4.600 GeV and comprising 5.1 fb $^{-1}$ . Superseded by ABLIKIM 21AJ.

<sup>8</sup> From a combined fit of BELLE, BABAR and BES3  $e^+e^- \rightarrow \pi^+\pi^- J/\psi$  and  $e^+e^- \rightarrow$  $\pi^+\pi^-\psi(2S)$  data.

 $^9$  From a 3-parameter fit of measured cross sections from  $\sqrt{s}$  = 4.21–4.42 GeV to a phase-space modified Breit-Wigner function, using the decays  $\chi_{c0} \rightarrow \pi^+\pi^-$ ,  $\chi_{c0} \rightarrow$  $K^+ K^-$ , and  $\omega \to \pi^+ \pi^- \pi^0$ . <sup>10</sup> From a two-resonance fit. <sup>11</sup> From a single-resonance fit. Supersedes AUBERT, B 051.

- <sup>12</sup>Superseded by LIU 13B.
- $^{13}$  From a single-resonance fit. Two interfering resonances are not excluded. Superseded by LEES 12AC.
- $\psi$ (4230) WIDTH (MeV)

#### $\psi$ (4230) DECAY MODES

	Mode	Fraction $(\Gamma_i/\Gamma)$
Г1	$e^{+}e^{-}$	
Γ <sub>2</sub>	$\mu^+\mu^-$	$(3.1\pm2.8) imes10^{-5}$
Γ <sub>3</sub>	$\eta_c(1S)\pi^+\pi^-$	not seen
Γ <sub>4</sub>	$\eta_c(1S)\pi^+\pi^-\pi^0$	seen
Г <sub>5</sub>	$J/\psi \pi^+ \pi^-$	seen
Г <sub>6</sub>	$J/\psi f_0(980), f_0(980) \rightarrow \pi^+ \pi^-$	seen
Γ <sub>7</sub>	$Z_{c}(3900)^{\pm}\pi^{\mp}, \ Z_{c}^{\pm} \rightarrow \ J/\psi\pi^{\pm}$	seen
Г <sub>8</sub>	$J/\psi \pi^0 \pi^0$	seen
Г9	$J/\psi K^+ K^-$	seen
Γ <sub>10</sub>	$J/\psi K^0_S K^0_S$	not seen
$\Gamma_{11}$	$J/\psi \eta$	seen
$\Gamma_{12}$	$J/\psi \pi^0$	not seen
Г <sub>13</sub>	$J/\psi \eta'$	seen
Γ <sub>14</sub>	$J/\psi \pi^+\pi^-\pi^0$	not seen
Γ <sub>15</sub>	$J/\psi \eta \pi^0$	not seen
Г <sub>16</sub>	$J/\psi \eta \eta$	not seen
Γ <sub>17</sub>	$\psi(2S)\pi^+\pi^-$	seen
Γ <sub>18</sub>	$\psi(2S)\eta$	not seen
Г <sub>19</sub>	$\chi_{c0}\omega$	seen
Γ <sub>20</sub>	$\chi_{c1}\pi^+\pi^-\pi^0$	not seen
2 <sub>21</sub>	$\chi_{c2}\pi^+\pi^-\pi^0$	not seen
I 22	$h_c(1P)\pi^+\pi^-$	seen

Г <sub>23</sub>	$\phi \pi^+ \pi^-$	not seen
Γ <sub>24</sub>	$\phi f_0(980) \rightarrow \phi \pi^+ \pi^-$	not seen
Γ <sub>25</sub>	$D\overline{D}$	not seen
Г <sub>26</sub>	$D^0 \overline{D}{}^0$	not seen
Γ <sub>27</sub>	$D^{+}D^{-}$	not seen
Γ <sub>28</sub>	$D^*\overline{D}$ +c.c.	not seen
Γ <sub>29</sub>	$D^*(2007)^0 \overline{D}{}^0 + c.c.$	not seen
Г <sub>30</sub>	<u>D*(2010)</u> +D-+c.c.	not seen
Г <sub>31</sub>	D* D*	
Г <sub>32</sub>	$D^{*}(2007)^{0}D^{*}(2007)^{0}$	not seen
Г <sub>33</sub>	$\underline{D}^{*}(2010)^{+}D^{*}(2010)^{-}$	not seen
Г <sub>34</sub>	$DD\pi$ +c.c.	
Г <sub>35</sub>	$D^0 D^- \pi^+ + c.c.$ (excl.	not seen
	$D^{*}(2007)^{0}D^{*0}$ +c.c.,	
_	$D^*(2010)^+ D^- + c.c.)$	
Г <sub>36</sub>	$DD^*\pi$ +c.c. (excl. $D^*D^*$ )	not seen
Г <sub>37</sub>	$D^{0}D^{*-}\pi^{+}+\text{c.c.}$ (excl.	not seen
_	$D^{*}(2010)^{+}D^{*}(2010)^{-})$	
Г <sub>38</sub>	$D^{0}D^{*}(2010)^{-}\pi^{+}+\text{c.c.}$	seen
l <sub>39</sub>	$D_1(2420) D + c.c.$	not seen
4 <sub>0</sub>	$D^* D^* \pi$	not seen
I <sub>41</sub>	$D_{s}^{\dagger}D_{s}$	not seen
Г <sub>42</sub>	$D_{s}^{*+}D_{s}^{-}+c.c.$	not seen
Г <sub>43</sub>	$D_{s}^{*+}D_{s}^{*-}$	not seen
Г <sub>44</sub>	<i>pp</i>	not seen
Γ <sub>45</sub>	$p \overline{p} \pi^0$	not seen
Γ <sub>46</sub>	$p \overline{p} \eta$	not seen
Γ <sub>47</sub>	$p \overline{p} \omega$	not seen
l <sub>48</sub>	$\underline{z}^{-}\underline{z}^{+}$	not seen
I 49	$\pi^+\pi^+\pi^-\pi^-$	not seen
I 50	$\pi^+\pi^+\pi^-\pi^-\pi^0$	not seen
I 51	$K_{S}K^{\pm}\pi^{\pm}$	not seen
I <sub>52</sub>	$K_{S}^{o}K^{\perp}\pi^{+}\pi^{0}$	not seen
Г <sub>53</sub>	$K^0_{S}K^{\pm}\pi^+\eta$	not seen
Г <sub>54</sub>	$K^+ K^- \pi^0$	not seen
Г <sub>55</sub>	$K^{+}K^{-}\pi^{+}\pi^{-}$	not seen
Г <sub>56</sub>	$K^{+}K^{-}\pi^{+}\pi^{-}\pi^{0}$	not seen
Γ <sub>57</sub>	$K^+ K^+ K^- K^-$	not seen
Г <sub>58</sub>	$K^{+}K^{+}K^{-}K^{-}\pi^{0}$	not seen
l <sub>59</sub>	$p \overline{p} \pi^+ \pi^-$	not seen
6 <sub>60</sub>	$p \overline{p} \pi^+ \pi^- \pi^0$	not seen
l <sub>61</sub>	p <u>p</u> pp	not seen
1 62	ΛΛ	not seen

	Radiative decays					
Г <sub>63</sub>	$\eta_c(1S)\gamma_c$	possibly seen				
Г <sub>64</sub>	$\eta_c(1S)\pi^0\gamma$	not seen				
Г <sub>65</sub>	$\chi_{c1}\gamma$	not seen				
Г <sub>66</sub>	$\chi_{c2}\gamma$	not seen				
Г <sub>67</sub>	$\chi_{c1}(3872)\gamma$	seen				

## $\psi$ (4230) PARTIAL WIDTHS

$\Gamma(\mu^+\mu^-)$				Г2	
VALUE (keV)	DOCUMENT ID		TECN	COMMENT	
$1.53 {\pm} 1.26 {\pm} 0.54$	<sup>1,2</sup> ABLIKIM	<b>20</b> AG	BES3	$e^+e^-  ightarrow \ \mu^+\mu^-$	
<sup>1</sup> From a fit to the $e^+e^- \rightarrow \mu^+\mu^-$ cross section between 3.8 and 4.6 GeV to the coherent sum of four resonant amplitudes assuming $\Gamma(\mu^+\mu^-) = \Gamma(e^+e^-)$ . <sup>2</sup> From solution 1 of 8 with equal fit quality. Other solutions range from $1.09 \pm 0.84 \pm 0.39$ to $1.53 \pm 1.26 \pm 0.54$ keV.					

## $\psi$ (4230) $\Gamma$ (i) $\times \Gamma(e^+e^-)/\Gamma$ (total)

$\Gamma(J/\psi \pi^+\pi^-)$	) х Г	$(e^+e^-)/\Gamma_{total}$			$\Gamma_5\Gamma_1/\Gamma$
VALUE (eV)	EVTS	DOCUMENT ID		TECN	COMMENT
9.2±1.0 OUR	AVERA	GE			
$9.2\!\pm\!0.8\!\pm\!0.7$		<sup>1</sup> LEES	12AC	BABR	10.58 $e^+e^- \rightarrow \gamma \pi^+\pi^- J/\psi$
$8.9^{+3.9}_{-3.1}{\pm}1.8$	8.1	HE	<b>06</b> B	CLEO	9.4–10.6 $e^+e^- \to \gamma \pi^+ \pi^- J/\psi$
• • • We do no	t use tl	ne following data fo	or avei	rages, fit	s, limits, etc. ● ● ●
$6.4 \pm 0.8 \pm 0.6$		<sup>2</sup> LIU	<b>13</b> B	BELL	$e^+e^- \rightarrow \gamma \pi^+\pi^- J/\psi$
$20.5\!\pm\!1.4\!\pm\!2.0$		<sup>3</sup> LIU	<b>13</b> B	BELL	$e^+e^- \rightarrow \gamma \pi^+\pi^- J/\psi$
$6.0\!\pm\!1.2^{+4.7}_{-0.5}$		<sup>2,4</sup> YUAN	07	BELL	10.58 $e^+e^- \rightarrow \gamma \pi^+\pi^- J/\psi$
$20.6\!\pm\!2.3^{+9.1}_{-1.7}$		<sup>3,4</sup> YUAN	07	BELL	10.58 $e^+e^- \rightarrow \gamma \pi^+\pi^- J/\psi$
$5.5\!\pm\!1.0^{+0.8}_{-0.7}$	125	<sup>5</sup> AUBERT,B	051	BABR	10.58 $e^+e^- \rightarrow \gamma \pi^+\pi^- J/\psi$

<sup>1</sup> From a single-resonance fit. Supersedes AUBERT,B 051.

<sup>2</sup>Solution I of two equivalent solutions in a fit using two interfering resonances.

<sup>3</sup>Solution II of two equivalent solutions in a fit using two interfering resonances.

<sup>4</sup> Superseded by LIU 13B.

 <sup>5</sup> From a single-resonance fit. Two interfering resonances are not excluded. Superseded by LEES 12AC.

$\Gamma(J/\psi K^+)$	⁻ <i>K</i> −) ×	: Г(e <sup>+</sup> e <sup>-</sup> )/Г <sub>tol</sub>	al		Г <sub>9</sub> Г <sub>1</sub> /Г
VALUE (eV)	CL%	DOCUMENT ID		TECN	COMMENT
<1.7	90	<sup>1</sup> SHEN	14	BELL	9.4–10.9 $e^+e^- \to \gamma K^+ K^- J/\psi$
• • • We d	lo not use	the following data	for a	verages,	fits, limits, etc. • • •
<1.2	90	<sup>2</sup> YUAN	08	BELL	$e^+e^-  ightarrow \gamma K^+ K^- J/\psi$

<sup>1</sup> From a fit of the broad  $K^+ K^- J/\psi$  enhancement including a coherent  $\psi$ (4260) amplitude with mass and width from LIU 13B. Supersedes YUAN 08. The shape of the cross section observed by ABLIKIM 18N between 2.2 and 2.3 GeV is incompatible with that of

 $e^+e^- \rightarrow \pi^+\pi^- J/\psi$  in ABLIKIM 13T and ABLIKIM 17B. They also observe a broad enhancement around 2.5 GeV.

<sup>2</sup> From a fit of the broad  $K^+ K^- J/\psi$  enhancement including a coherent  $\psi(4260)$  amplitude with mass and width from YUAN 07.

$\Gamma(J/\psi K_S^0 H)$	$(S_{S}^{0}) \times$	$\Gamma(e^+e^-)/\Gamma_{tota}$	l			Γ <sub>10</sub> Γ <sub>1</sub> /Γ
VALUE (eV)	CL%	DOCUMENT ID	)	TECN	COMMENT	
<0.85	90	<sup>1</sup> SHEN	14	BELL	$9.4-10.9 \ e^+ e^-$	$\rightarrow \gamma K^0_S K^0_S J/\psi$

<sup>1</sup> From a fit of the  $K_S^0 K_S^0 J/\psi$  mass range from 4.4 to 5.5 GeV including a coherent  $\psi(4260)$  amplitude with mass and width from LIU 13B.

VALUE (eV)CL%DOCUMENT IDTECNCOMMENT• • • We do not use the following data for averages, fits, limits, etc. • • • $8.0 \pm 1.7$ 1 ABLIKIM200BES3 $e^+ e^- \rightarrow \eta J/\psi$ $4.8 \pm 1.0$ 2 ABLIKIM200BES3 $e^+ e^- \rightarrow \eta J/\psi$ $7.0 \pm 1.5$ 3 ABLIKIM200BES3 $e^+ e^- \rightarrow \eta J/\psi$ <14.290WANG13BBELL $e^+ e^- \rightarrow J/\psi \eta \gamma$	$\Gamma(J/\psi\eta) \times \Gamma(e)$	e <sup>+</sup> e <sup>-</sup> )/Γ <sub>total</sub>					Γ <sub>11</sub> Γ	1/L
• • We do not use the following data for averages, fits, limits, etc. • • 8.0±1.7 $\begin{array}{c} 1 \\ 4.8\pm1.0 \\ 7.0\pm1.5 \end{array}$ $\begin{array}{c} 1 \\ ABLIKIM \\ 2 \\ ABLIKIM \\ 3 \\ ABLIKIM \\ 200 \\ BES3 \\ e^+e^- \rightarrow \eta J/\psi \\ 200 \\ BES3 \\ e^+e^- \rightarrow \eta J/\psi \\ 3 \\ ABLIKIM \\ 200 \\ BES3 \\ e^+e^- \rightarrow \eta J/\psi \\ 3 \\ ABLIKIM \\ 200 \\ BES3 \\ e^+e^- \rightarrow \eta J/\psi \\ 3 \\ ABLIKIM \\ 200 \\ BES3 \\ e^+e^- \rightarrow \eta J/\psi \\ 3 \\ ABLIKIM \\ 200 \\ BES3 \\ e^+e^- \rightarrow \eta J/\psi \\ 3 \\ ABLIKIM \\ 200 \\ BES3 \\ e^+e^- \rightarrow \eta J/\psi \\ 3 \\ ABLIKIM \\ 200 \\ BES3 \\ e^+e^- \rightarrow \eta J/\psi \\ 3 \\ ABLIKIM \\ 200 \\ BES3 \\ e^+e^- \rightarrow \eta J/\psi \\ 3 \\ ABLIKIM \\ 200 \\ BES3 \\ e^+e^- \rightarrow \eta J/\psi \\ 3 \\ ABLIKIM \\ 200 \\ BES3 \\ e^+e^- \rightarrow \eta J/\psi \\ 3 \\ ABLIKIM \\ 200 \\ BES3 \\ e^+e^- \rightarrow \eta J/\psi \\ 3 \\ ABLIKIM \\ 200 \\ BES3 \\ e^+e^- \rightarrow \eta J/\psi \\ 4 \\ ABLIKIM \\ 200 \\ BES3 \\ e^+e^- \rightarrow \eta J/\psi \\ 4 \\ ABLIKIM \\ 200 \\ BES3 \\ e^+e^- \rightarrow \eta J/\psi \\ 4 \\ ABLIKIM \\ 200 \\ BES3 \\ e^+e^- \rightarrow \eta J/\psi \\ 4 \\ ABLIKIM \\ 200 \\ BES3 \\ e^+e^- \rightarrow \eta J/\psi \\ 4 \\ ABLIKIM \\ 200 \\ BES3 \\ e^+e^- \rightarrow \eta J/\psi \\ 4 \\ ABLIKIM \\ 200 \\ BES3 \\ e^+e^- \rightarrow \eta J/\psi \\ 4 \\ ABLIKIM \\ 200 \\ BES3 \\ e^+e^- \rightarrow \eta J/\psi \\ 4 \\ ABLIKIM \\ 2 \\ ABLIK$	VALUE (eV)	CL%	DOCUMENT IL	)	TECN	COMMENT		
$8.0\pm1.7$ 1 ABLIKIM200 BES3 $e^+e^- \rightarrow \eta J/\psi$ $4.8\pm1.0$ 2 ABLIKIM200 BES3 $e^+e^- \rightarrow \eta J/\psi$ $7.0\pm1.5$ 3 ABLIKIM200 BES3 $e^+e^- \rightarrow \eta J/\psi$ $<14.2$ 90WANG13B BELL $e^+e^- \rightarrow J/\psi\eta\gamma$	• • • We do not us	se the following	data for averag	es, fits,	limits,	etc. • • •		
$4.8 \pm 1.0$ $^2$ ABLIKIM $200$ BES3 $e^+e^- \rightarrow \eta J/\psi$ $7.0 \pm 1.5$ $^3$ ABLIKIM $200$ BES3 $e^+e^- \rightarrow \eta J/\psi$ $<14.2$ 90WANG $138$ BELL $e^+e^- \rightarrow J/\psi\eta\gamma$	$8.0 \pm 1.7$		<sup>1</sup> ABLIKIM	200	BES3	$e^+e^- \rightarrow$	$\eta J/\psi$	
7.0±1.5 $<14.2$ $3$ ABLIKIM $200$ BES3 $e^+e^- \rightarrow \eta J/\psi$ $13B$ BELL $e^+e^- \rightarrow J/\psi \eta \gamma$	$4.8 \pm 1.0$		<sup>2</sup> ABLIKIM	200	BES3	$e^+e^-  ightarrow$	$\eta  {f J}/\psi$	
<14.2 90 WANG 13B BELL $e^+e^- \rightarrow J/\psi \eta \gamma$	$7.0 \pm 1.5$		<sup>3</sup> ABLIKIM	200	BES3	$e^+e^-  ightarrow$	$\eta  {f J}/\psi$	
, , , , ,	<14.2	90	WANG	<b>13</b> B	BELL	$e^+ e^-  ightarrow$	$J/\psi \eta \gamma$	

 $^1$ Solution 1 of three equivalent fit solutions using three resonant structures.

 $^{2}$ Solution 2 of three equivalent fit solutions using three resonant structures.

 $^3$  Solution 3 of three equivalent fit solutions using three resonant structures.

\ *\_\_* 

- / 1

$\Gamma(J/\psi\eta') \times \Gamma(e^{+})$	e <sup>-</sup> )/l <sub>tot</sub>	tal			<sub>13</sub>   <sub>1</sub> /
VALUE (eV)	EVTS	DOCUMENT ID	TECN	COMMENT	
$\bullet$ $\bullet$ $\bullet$ We do not use	the followir	ng data for averag	es, fits, limits,	etc. • • •	
$0.06 \pm 0.03$	46	<sup>1,2</sup> ABLIKIM	20A BES3	$e^+e^-  ightarrow$	$\eta^{\prime}  {\sf J}/\psi$
$1.38 \!\pm\! 0.11$	46	<sup>1,3</sup> ABLIKIM	20A BES3	$e^+e^-  ightarrow$	$\eta^{\prime}  J/\psi$
1 Record on a fit to a	$(a^+a^-)$	$m' I(w)$ from $\sqrt{a}$	-118 + 0.160	CoV accumi	ag interforing

<sup>1</sup> Based on a fit to  $\sigma(e^+e^- \rightarrow \eta' J/\psi)$  from  $\sqrt{s} = 4.18$  to 4.60 GeV assuming interfering  $\psi(4160)$  and  $\psi(4260)$  contributions. At  $\sqrt{s} = 4.23$  GeV,  $\sigma(e^+e^- \rightarrow \eta' J/\psi) = 3.6 \pm 0.6 \pm 0.3$  pb.

<sup>2</sup>Solution I of the fit, corresponding to a phase of  $-0.03 \pm 0.44$  rad.

 $^3$ Solution II of the fit, corresponding to a phase of 2.54  $\pm$  0.04 rad.

$\Gamma(\psi(2S)\pi^+\pi$	r-) ×	$\Gamma(e^+e^-)/\Gamma_{tota}$	Γ <sub>17</sub> Γ <sub>1</sub> /Γ	
VALUE (eV)	<u>CL%</u>	DOCUMENT IL	D TECN	COMMENT
• • • We do no	ot use th	e following data f	or averages, fit	s, limits, etc. ● ● ●
$1.59 \pm 0.75$		<sup>1</sup> ABLIKIM	21AJ BES3	$e^+e^-  ightarrow \pi^+\pi^-\psi(2S)$
$1.63 \pm 0.78$		<sup>2</sup> ABLIKIM	21AJ BES3	$e^+e^- \rightarrow \pi^+\pi^-\psi(2S)$
$0.02 \pm 0.01$		<sup>3</sup> ABLIKIM	21AJ BES3	$e^+e^- \rightarrow \pi^+\pi^-\psi(2S)$
$1.6\ \pm 1.3$		<sup>4</sup> ABLIKIM	19K BES3	$e^+e^- \rightarrow \pi^+\pi^-\psi(2S)$
$1.8 \pm1.4$		<sup>5</sup> ABLIKIM	19K BES3	$e^+e^- \rightarrow \pi^+\pi^-\psi(2S)$
<4.3	90	<sup>6</sup> LIU	08H RVUE	10.58 $e^+e^- \rightarrow \psi(2S)\pi^+\pi^-\gamma$
$7.4\begin{array}{c}+2.1\\-1.7\end{array}$		<sup>7</sup> LIU	08H RVUE	10.58 $e^+e^- \rightarrow \psi(2S)\pi^+\pi^-\gamma$

<sup>1</sup>Solution I of four equivalent solutions in a fit using three interfering resonances.

 $^2$ Solution II of four equivalent solutions in a fit using three interfering resonances

 $^3$ Solutions III and IV of four equivalent solutions in a fit using three interfering resonances.

<sup>4</sup>Solution I of two equivalent solutions in a fit using two interfering resonances.

 $^5$  Solution II of two equivalent solutions in a fit using two interfering resonances.

https://pdg.lbl.gov

-/....

Created: 8/11/2022 09:37

- $^6$  For constructive interference with the  $\psi(4360)$  in a combined fit of AUBERT 07S and WANG 07D data with three resonances.  $^7$  For destructive interference with the  $\psi(4360)$  in a combined fit of AUBERT 07S and WANG 07D data with three resonances.

$\Gamma(\chi_{c0}\omega)$ ×	Г(е+е	<sup>-</sup> )/Γ <sub>total</sub>					$\Gamma_{19}\Gamma_1/\Gamma$
VALUE (eV)		EVTS	DOCUMENT IL	)	TECN	COMMENT	
$2.5 \pm 0.2 \pm 0.3$			<sup>1</sup> ABLIKIM	19AI	BES3	$e^+e^-  ightarrow$	$^{\omega\chi}c0$
• • • We do r	not use th	he following	g data for averag	es, fits,	limits,	etc. • • •	
$2.7\!\pm\!0.5\!\pm\!0.4$		180	<sup>2</sup> ABLIKIM	15C	BES3	$e^+e^-  ightarrow$	$^{\omega\chi}c0$
<sup>1</sup> From a fit ABLIKIM <sup>2</sup> From a 3-	: of the 15C. paramete	measured of er fit of mo	cross section fro easured cross se	om $\sqrt{s}$	= 4.17	8-4.278 GeV $\overline{s} = 4.21-4.4$	Supersedes 42 GeV to a $\pi^{-}$
<i>К<sup>+</sup>К<sup>-</sup></i> , а	and $\omega \rightarrow$	$\pi^+\pi^-\pi^0$		sing the	e decays	x <sub>c</sub> 0 -	, x <sub>c</sub> 0 -
$\Gamma(h_c(1P)\pi^+$	<sup>-</sup> π <sup>-</sup> ) ×	< Γ(e <sup>+</sup> e <sup>-</sup>	<sup>-</sup> )/Γ <sub>total</sub>				$\Gamma_{22}\Gamma_1/\Gamma$
VALUE (eV)	-	·	DOCUMENT IL	)	TECN	COMMENT	
$4.6^{+2.9}_{-1.4}{\pm}0.8$			ABLIKIM	17G	BES3	$e^+e^-  ightarrow$	$\pi^+\pi^-h_c$
$\Gamma(\phi \pi^+ \pi^-)$	× <b>Г(е</b> <sup>⊀</sup>	+ e <sup>-</sup> )/Γ <sub>tc</sub>	ntal MENT ID 7	ECN	COMMEN	IT	$\Gamma_{23}\Gamma_1/\Gamma$
<0.4	90	AUBE	RT,BE 06D E	BABR	10.6 e <sup>+</sup>	$e^- \rightarrow K^+$	$K^{-}\pi^{+}\pi^{-}\gamma$
<b>Γ(φ f<sub>0</sub>(980)</b> - VALUE (eV)	$\rightarrow \phi \pi^+$	π <sup>-</sup> ) × Γ	-(e <sup>+</sup> e <sup>-</sup> )/Γ <sub>tot</sub>	al ECN	COMMEN	IT	$\Gamma_{24}\Gamma_1/\Gamma$
<0.28	90	$^1$ AUBE	RT 07ак Е	BABR	10.6 e <sup>+</sup>	$e^- \rightarrow \pi^+ \tau$	$r^- K^+ K^- \gamma$
$^1$ AUBERT $e^+e^-)/\Gamma_1$ value B( $\phi($	07АК гер <sub>total</sub> ] × (1020) →	ports $[\Gamma(\psi($ $[B(\phi(1020) + K^+K^-)$	$ \begin{array}{rcl} 4230) &\to & \phi f_0 \\                                    $	〔980) — < 0.14 .	$ ightarrow \phi \pi^+$ FeVwh	$^{-}\pi^{-}) \times \Gamma$ ich we divide	$ig(\psi(4230) ight) ightarrow i$ e by our best
г( <i>Ξ</i> <sup>-</sup> <u>Ξ</u> +)	× Г(е <sup>+</sup>	<sup>-</sup> e <sup>-</sup> )/Γ <sub>tot</sub>	al				Г <sub>48</sub> Г <sub>1</sub> /Г
VALUE (eV)		<u>CL%</u>	DOCUMENT IL	)	TECN	COMMENT	
$< 2.7 \times 10^{-4}$		90	ABLIKIM	200	BES3	$e^+e^- \rightarrow$	<u>=</u> +
				200	8200		= = '
$\Gamma(\pi^+\pi^+\pi^-$	π <sup>-</sup> ) ×	Γ(e <sup>+</sup> e <sup>-</sup>	)/Γ <sub>total</sub>	200	2200		= = ' Γ <sub>49</sub> Γ <sub>1</sub> /Γ
$\Gamma(\pi^+\pi^+\pi^-$	π <sup>-</sup> ) ×	Г(е <sup>+</sup> е <sup>-</sup>	)/F <sub>total</sub> <u>DOCUMENT II</u>	)	TECN	<u>COMMENT</u>	= = ' Γ <sub>49</sub> Γ <sub>1</sub> /Γ
$\frac{\Gamma(\pi^+\pi^+\pi^-}{^{VALUE(eV)}}$	π <sup>-</sup> ) ×	<b>Г(е+е-</b> 	)/F <sub>total</sub> <u>Document IL</u> ABLIKIM	) 21AV	<u>TECN</u> VBES3	$\frac{COMMENT}{e^+e^-} \rightarrow$	= = ' Γ <sub>49</sub> Γ <sub>1</sub> /Γ <sub>2π<sup>+</sup>2π<sup>-</sup></sub>
$ \frac{\Gamma(\pi^+\pi^+\pi^-)}{<32} = \Gamma(\pi^+\pi^+\pi^-) $	$\pi^{-}) \times \pi^{-}\pi^{0}$	Γ(e <sup>+</sup> e <sup>-</sup> <u><sup>CL%</sup></u> 90 × Γ(e <sup>+</sup>	)/F <sub>total</sub> <u>DOCUMENT IL</u> ABLIKIM e <sup>—</sup> )/F <sub>total</sub>	200 )21AW	<u>TECN</u> VBES3	$\frac{COMMENT}{e^+e^-} \rightarrow$	= = ' Γ <sub>49</sub> Γ <sub>1</sub> /Γ 2π <sup>+</sup> 2π <sup>-</sup> Γ <sub>50</sub> Γ <sub>1</sub> /Γ
$\Gamma(\pi^+\pi^+\pi^-$ <u>VALUE (eV)</u> <32 $\Gamma(\pi^+\pi^+\pi^-$ <u>VALUE (eV)</u>	$(\pi^{-}) \times \pi^{-}\pi^{0})$	Γ(e <sup>+</sup> e <sup>-</sup> 90 × Γ(e <sup>+</sup>	)/F <sub>total</sub> <u>DOCUMENT IL</u> ABLIKIM e <sup>-</sup> )/F <sub>total</sub> <u>DOCUMENT IL</u>	200 ) )	<u>TECN</u> v BES3 <u>TECN</u>	$\frac{COMMENT}{e^+e^-} \rightarrow \frac{COMMENT}{e^+e^-}$	= = ' Γ <sub>49</sub> Γ <sub>1</sub> /Γ 2π <sup>+</sup> 2π <sup>-</sup> Γ <sub>50</sub> Γ <sub>1</sub> /Γ

$\Gamma(K^0_S K^{\pm} \pi^{\mp})$	< Г(e <sup>+</sup> e <sup>-</sup> )/	Γ <sub>total</sub>			$\Gamma_{51}\Gamma_1/\Gamma$
VALUE (eV)	<u></u>	OCUMENT ID	TECN	COMMENT	
$\bullet$ $\bullet$ $\bullet$ We do not u	ise the following	g data for aver	ages, fits, lim	its, etc. • • •	
$2.04 \pm 0.19 \pm 0$	.09 <sup>1</sup> A	BLIKIM	19AE BES3	$e^+e^- \rightarrow K^0_S K$	$\pm_{\pi}\mp$
$0.0027 \pm 0.0023 \pm 0$	.0001 <sup>2</sup> A	BLIKIM	19AE BES3	$e^+e^- \rightarrow \kappa_c^{0} \kappa$	$\pm_{\pi}\mp$
< 0.5 at 90% CL	A	UBERT	08s BABR	$10.6 \ e^+ e^- \rightarrow K^0_C \ K^\pm \pi^\pm \gamma$	
$^{1}$ Solution I of th MeV from PD $56.0 \pm 3.6 \pm 6$ $^{2}$ Solution II of tl MeV from PD $56.0 \pm 3.6 \pm 6$	e fit including t G 16 and the 5.9 MeV from G he fit including G 16 and the 5.9 MeV from G	the $\psi(4160)$ w $\psi(4230)$ with GAO 17. the $\psi(4160)$ w $\psi(4230)$ with GAO 17.	ith mass 4191 mass 4219.6 /ith mass 419 mass 4219.6	$1\pm5$ MeV and wi $\pm3.3\pm5.1$ MeV $1\pm5$ MeV and wi $\pm3.3\pm5.1$ MeV $\pm3.3\pm5.1$ MeV	dth 70 $\pm$ 10 / and width idth 70 $\pm$ 10 / and width
$\Gamma(K^0_{S}K^{\pm}\pi^{\mp}\pi^0$	) × $\Gamma(e^+e^-)$	<sup>-</sup> )/Γ <sub>total</sub>			$\Gamma_{52}\Gamma_1/\Gamma$
VALUE (eV)	<u>CL%</u>	DOCUMENT IL	D <u>TECN</u>		
<0.05	90	ABLIKIM	19 BES3	$3 e^+e^- \rightarrow K_{2}^{0}$	$\xi \kappa^{\pm} \pi^{\mp} \pi^{0}$
$\Gamma(K^0_S K^{\pm} \pi^{\mp} \eta)$	$\times \Gamma(e^+e^-)$	/Γ <sub>total</sub>			$\Gamma_{53}\Gamma_1/\Gamma$
VALUE (eV)	CL%	DOCUMENT I	D TEC	N COMMENT	
<0.19	90	ABLIKIM	19 BES	$63 e^+e^- \to K$	$S^{0} \kappa^{\pm} \pi^{\mp} \eta$
$\Gamma(K^+K^-\pi^0) >$ VALUE (eV)	к <b>Г(е<sup>+</sup>е<sup>-</sup>)/</b> І	T <b>total</b> CUMENT ID	TECN C	OMMENT	$\Gamma_{54}\Gamma_1/\Gamma$
• • • We do not u	ise the following	g data for aver	ages, fits, lim	its, etc. • • •	
<0.6	90 AU	BERT 0	8s BABR 1	$0.6 \ e^+ \ e^- \rightarrow \ K^-$	$+ \kappa - \pi^0 \gamma$
$\Gamma(K^+K^-\pi^+\pi^-)$	-) × Γ(e <sup>+</sup> e <sup>-</sup>	<sup>-</sup> )/Γ <sub>total</sub>			$\Gamma_{55}\Gamma_1/\Gamma$
VALUE (eV)	<u>CL%</u>	DOCUMENT ID	TECN	COMMENT	
<20	90	ABLIKIM	21AW BES3	$e^+e^- \rightarrow K^+$	$K^{-}\pi^{+}\pi^{-}$
$\Gamma(K^+K^-\pi^+\pi^-)$	$(\pi^0) \times \Gamma(e^{-1})$	<sup>⊢</sup> e <sup>−</sup> )/Γ <sub>total</sub>			Г <sub>56</sub> Г <sub>1</sub> /Г
VALUE (eV)	<u>CL%</u> <u>DC</u>	CUMENT ID	TECN	COMMENT	
<43	90 AE	BLIKIM 2	21AW BES3	$e^+e^- \rightarrow K^+K^+$	$\pi^+\pi^-\pi^0$
$\Gamma(K^+K^+K^-K)$	<sup>-</sup> ) × Γ(e <sup>+</sup> e	e <sup>-</sup> )/Γ <sub>total</sub>		CN COMMENT	$\Gamma_{57}\Gamma_1/\Gamma$
VALUE (EV)	00		<u>10</u> <u>11</u> 01 M/ DE	$\frac{comment}{comment}$	$\nu \kappa^{\pm} 2 \kappa^{\pm}$
<3.0	90	ADLIKIW		$255 e^{+}e^{-} \rightarrow 2$	
$\Gamma(K^+K^+K^-K$	$(-\pi^0) \times \Gamma(\epsilon)$	e <sup>+</sup> e <sup>-</sup> )/Γ <sub>tota</sub>			Г <sub>58</sub> Г <sub>1</sub> /Г
VALUE (eV)	<u> </u>	DOCUMENT IL		$\frac{COMMENT}{+}$	$x + \alpha y - 0$
<2.1	90	ARTIKIM	21AW BES	$s e e \rightarrow 2K$	'2Κ πς
$\Gamma(p\overline{p}\pi^+\pi^-)$ ×	Г(е+е-)/Г	total			Г <sub>59</sub> Г <sub>1</sub> /Г
VALUE (eV)	<u>CL%</u>	DOCUMENT	ID <u>TE</u>	CN COMMENT	
<7.2	90	ABLIKIM	21AW BE	$e^+e^- \rightarrow \mu$	$\sigma \overline{p} \pi^+ \pi^-$

$\Gamma(\rho \overline{\rho} \pi^+ \pi^- \pi^0)$	$\times \Gamma(e^+e^-)$	⁻)/Γ <sub>total</sub>				Г <sub>60</sub> Г <sub>1</sub> /Г
VALUE (eV)	CL%	DOCUMENT ID		TECN	COMMENT	
<15	90	ABLIKIM	21AW 8	BES3	$e^+e^- \rightarrow p$	$\overline{p}\pi^{+}\pi^{-}\pi^{0}$
$\Gamma(\Lambda\overline{\Lambda}) \times \Gamma(e^+)$	e <sup>-</sup> )/Γ <sub>total</sub>					$Γ_{62}Γ_1/Γ$
VALUE (eV)	CL%	DOCUMENT I	D	TECN	COMMENT	
<0.8 × 10 <sup>-3</sup>	90	<sup>1</sup> ABLIKIM	21A	s BES3	$e^+e^- \rightarrow$	$\psi$ (4260)
$^1$ From a measure	ement of the	${ m e^+e^-} ightarrow~\Lambda\overline{\Lambda}~{ m cr}$	oss sect	ion bet	ween 3.5 and	4.6 GeV.
$\Gamma(\chi_{c1}\gamma) \times \Gamma(e^{-1})$	+ e <sup>-</sup> )/Γ <sub>tota</sub>	al				Г <sub>65</sub> Г <sub>1</sub> /Г
VALUE (eV)	CL%	DOCUMENT I	D	TECN	COMMENT	
<1.4	90	<sup>1</sup> HAN	15	BELL	. 10.58 $e^+e^-$	$e^- \rightarrow \chi_{c1}\gamma$
$^1$ Using B( $\eta  ightarrow \gamma$	$\gamma\gamma) = (39.41)$	$\pm$ 0.21)%.				
$\Gamma(\chi_{c2}\gamma) \times \Gamma(e^{-1})$	<sup>+</sup> e <sup>-</sup> )/Γ <sub>tota</sub>	al				Г <sub>66</sub> Г <sub>1</sub> /Г
VALUE (eV)		DOCUMENT I	D	TECN	COMMENT	
<4.0	90	<sup>1</sup> HAN	15	BELL	. 10.58 $e^+e^-$	$e^- \rightarrow \chi_{c2} \gamma$
$^1$ Using B( $\eta  ightarrow \gamma$	$\gamma\gamma) = (39.41)$	$\pm$ 0.21)%.				
	ψ(42	30) BRANCHI	NG R/	ATIOS		

$$\begin{split} & \Gamma(\eta_c(1S)\pi^+\pi^-)/\Gamma_{\text{total}} & \Gamma_3/\Gamma \\ \hline \\ \hline \\ \hline \text{value} & 1 \\ \hline \text{ABLIKIM} & 21B \\ \hline \\ \text{BES3} & \hline \\ e^+e^- \rightarrow \pi^+\pi^-\eta_c \\ \hline \\ e^+e^- \rightarrow \pi^+\pi^-\pi^0\eta_c \\ \hline \\ \hline \\ e^+e^- \rightarrow \pi^+\pi^-\pi^0\eta_c \\ \hline \\ e^+e^- \rightarrow \pi^+\pi^$$

$\Gamma(J/\psi\pi^+\pi^-)/\Gamma_{total}$					Г <sub>5</sub> /Г
VALUE	DOCUMENT	ID	TECN	<u>COMMENT</u>	
seen	ABLIKIM	<b>17</b> B	BES3	$e^+e^- \rightarrow$	$\pi^+\pi^-J/\psi$
$\Gamma(J/\psi f_0(980), f_0(980) -$	$\rightarrow \pi^+\pi^-)/\Gamma(J/\eta)$	$(\psi \pi^+ \pi^-)$			Γ <sub>6</sub> /Γ <sub>5</sub>
VALUE	DOCUMENT ID	TECN	COMN	1ENT	
$\bullet$ $\bullet$ We do not use the following	owing data for avera	ages, fits,	limits, e	etc. • • •	
0.17±0.13	<sup>1</sup> LEES 12	AC BABR	10.58	$e^+e^- \rightarrow$	$\gamma \pi^+ \pi^- J/\psi$
<sup>1</sup> Systematic uncertainties	not estimated.				

VALUE		DOCUMENT IL	)	<u>TECN</u>	<u>COMMENT</u>	
0.215±0.033±0.075	1	ABLIKIM	13T	BES3	$e^+e^- \rightarrow \pi^+\pi$	$T^{-}J/\psi$
• • • We do not use th	e following	g data for ave	erages, f	its, limit	s, etc. ● ● ●	, .
$0.29 \pm 0.08$	2	LIU	<b>13</b> B	BELL	$e^+e^- \rightarrow \gamma \pi^+$	$\pi^{-}J/\psi$
<sup>1</sup> Assuming that the o <sup>2</sup> Systematic error not	cross sections t evaluated	on of $e^+e^-$ .	$\rightarrow \pi^+$	$\pi^{-}J/\psi$	is fully due to the	$ e \psi$ (4260).
$\Gamma(J/\psi\pi^0\pi^0)/\Gamma_{\text{total}}$		DOCUMEN	ד וח	TEC	N COMMENT	Г <sub>8</sub> /Г
seen		<sup>1</sup> ABLIKIM	2	0N BES	$\frac{e^{-}e^{-}}{53} e^{+}e^{-} \rightarrow \pi$	$0_{\pi}0_{J/\psi}$
<sup>1</sup> From a fit to the cr 3.808 and 4.600 Ge	oss sectior V.	$e^+e^- \to \pi$	$0_{\pi}0_{J/\psi}$	b at cen	ter-of-mass energ	ies between
$\Gamma(J/\psi K^0_S K^0_S)/\Gamma_{\text{total}}$		ENT ID	TECN	COMM	ENT	Г <sub>10</sub> /Г
not seen	SHEN	14	BELL	9.4–10	$0.9 \ e^+ e^- \rightarrow \gamma P$	$\kappa^0_S \kappa^0_S J/\psi$
$\Gamma(J/\psi\eta)/\Gamma_{\text{total}}$		DOCUMEN	T ID	TEC	N <u>COMMENT</u>	Г <sub>11</sub> /Г
seen		ABLIKIM	2	00 BES	$63  e^+ e^- \rightarrow \eta$	$J/\psi$
$\Gamma(J/\psi\eta\pi^0)/\Gamma_{\text{total}}$	<u>I</u>	<u>DOCUMENT ID</u> ABLIKIM	150	<u>TECN</u> BES3	<u>COMMENT</u> 4.0–4.6 e <sup>+</sup> e <sup>-</sup> –	<b>Γ<sub>15</sub>/Γ</b>
$\Gamma(\psi(2S)\pi^+\pi^-)/\Gamma_{to}$	otal	DOCUMENT ID		TECN	COMMENT	Г <sub>17</sub> /Г
seen	1	ABLIKIM	17v	BES3	$e^+e^- \rightarrow \pi^+\pi^-$	$-\psi(2S)$
<sup>1</sup> From a fit to the cro from 16 center-of-m	ss section t ass energie	for $e^+e^- \rightarrow$ es between 4.0	$\pi^+\pi^-$	ψ(2 <i>S</i> ) - 4.600 G	$ ightarrow 2(\pi^+\pi^-)\ell^+\ell$ eV and comprisin	g 5.1 fb <sup>-1</sup> .
$\Gamma(\psi(2S)\pi^+\pi^-)/\Gamma(z)$	$J/\psi \pi^+\pi$	r <b>-)</b> DOCUMEN	T ID	TEC	N COMMENT	Γ <sub>17</sub> /Γ <sub>5</sub>
• • • We do not use th	e following	g data for ave	erages, f	its, limit	s, etc. ● ● ●	
$(0.11\pm 0.03\pm 0.03)$ to ( $0.18\pm 0.19)$	$(0.55\pm$	<sup>1</sup> ZHANG	1	7c RVI	JE $e^+e^-  ightarrow \pi$ or $\psi(2S)$	$+\pi^{-}J/\psi$
$^1$ From a combined fit $\pi^+  \pi^-  \psi(2S)$ data.	of BELLE	, BABAR and	BES3 6	e <sup>+</sup> e <sup>-</sup> -	$\rightarrow \pi^+\pi^- J/\psi$ and	d e $^+e^-  ightarrow$
$\Gamma(\chi_{c0}\omega)/\Gamma_{total}$	EVTS		תו ד	TEC	N COMMENT	Г <sub>19</sub> /Г
VILUL	190		<u></u> 1	50 BES	$\frac{connchine}{connchine} \rightarrow connchine}{connchine}$	2
seen	TOO			JC 111	$JJ \in E \rightarrow D$	x -//

 $K^+K^-$ , and  $\omega \rightarrow \pi^+\pi^-\pi^0$ .

https://pdg.lbl.gov

I

$\Gamma(h_c(1P)\pi^+\pi^-)/\Gamma_{tc}$	otal			TECN	COMMENT	Г <sub>22</sub> /Г
<u>value</u>		ABLIKIM	176	BES3	$e^+e^- \rightarrow$	$\pi^+\pi^-h$
		, Delixini	110	DESS		~ ~ "c
$\Gamma(h_c(1P)\pi^+\pi^-)/\Gamma(.$	$J/\psi \pi^+\pi^-$	-)				$\Gamma_{22}/\Gamma_5$
VALUE C	<u>L%</u>	OCUMENT ID	<u> </u>	ECN C	OMMENT	
<b>&lt;1.0</b> 9	0 <sup>1</sup> P	EDLAR 1	1 C	LEO e	$+ e^- \rightarrow h_0$	$(1P)\pi^{+}\pi^{-}$
<sup>1</sup> At $\sqrt{s} =$ 4260 MeV, F 6 pb, where the error $\pi^0 h_c(1P)$ ), respectiv	PEDLAR 11 s are statist vely.	measures $\sigma(e^+)$ ical, systematic,	$e^{-} \rightarrow$ and $\phi$	→ <i>h<sub>C</sub></i> (1 <i>P</i> due to u	$(\pi^{+}\pi^{-}) =$	$32\pm17\pm6\pm$ n B( $\psi(2S)$ $ ightarrow$
$\Gamma(D\overline{D})/\Gamma(J/\psi\pi^+\pi^-)$	-)					$\Gamma_{25}/\Gamma_5$
VALUE	<u>CL%</u>	DOCUMENT ID		TECN	COMMENT	
<1.0	90 1	AUBERT	<b>07</b> BE	BABR	$e^+e^-  ightarrow$	$D\overline{D}\gamma$
$\bullet$ $\bullet$ $\bullet$ We do not use the	following d	ata for averages	, fits,	limits, e	tc. • • •	
<4.0	90	CRONIN-HEN.	.09	CLEO	$e^+e^-$	
$^1$ Using 4259 $\pm$ 10 Me'	V for the m	ass and 88 $\pm$ 24	MeV	for the	width of $\psi$ (	4260).
$\Gamma(D^0 \overline{D}{}^0) / \Gamma_{\text{total}}$						Г <sub>26</sub> /Г
VALUE		DOCUMENT ID		TECN	COMMENT	
not seen		CRONIN-HEN.	.09	CLEO	$e^+e^- \rightarrow$	$D^0 \overline{D}^0$
• • • We do not use the	following d	ata for averages	, fits,	limits, e	tc. ● ● ●	
not seen		AUBERT	<b>09</b> M	BABR	$e^+e^- \rightarrow$	$D^0 \overline{D}^0 \gamma$
not seen		PAKHLOVA	08	BELL	$e^+e^- \rightarrow$	$D^0 \overline{D}{}^0 \gamma$
$\Gamma(D^+D^-)/\Gamma_{\text{total}}$						Г <sub>27</sub> /Г
VALUE		DOCUMENT ID		TECN	COMMENT	,
not seen		CRONIN-HEN.	.09	CLEO	$e^+e^- \rightarrow$	$D^+ D^-$
$\bullet \bullet \bullet$ We do not use the	following d	ata for averages	, fits,	limits, e	tc. ● ● ●	
not seen		AUBERT	09м	BABR	$e^+e^-  ightarrow$	$D^+ D^- \gamma$
not seen		PAKHLOVA	08	BELL	$e^+e^- \rightarrow$	$D^+ D^- \gamma$
$\Gamma(D^*\overline{D}+\text{c.c.})/\Gamma(J/\psi)$	$(\pi^+\pi^-)$					Γ <sub>28</sub> /Γ <sub>5</sub>
VALUE	<u>CL%</u>	DOCUMENT ID		TECN	COMMENT	
<34	90	AUBERT	<b>09</b> M	BABR	$e^+e^- \rightarrow$	$\gamma D^* \overline{D}$
• • • We do not use the	following d	ata for averages	, fits,	limits, e	tc. ● ● ●	
<45	90	CRONIN-HEN.	.09	CLEO	$e^+e^-$	
$\Gamma(D^*(2007)^0\overline{D}^0+c.c)$	.)/Γ <sub>total</sub>					Г <sub>29</sub> /Г
VALUE		DOCUMENT ID		TECN	COMMENT	
not seen	си · ·	CRONIN-HEN.	.09	CLEO	$e^+e^- \rightarrow$	$D^{*\vee}D^{\vee}$
• • • We do not use the	tollowing d	ata for averages	, tits,	limits, e	tc. ● ● ●	
not seen		AUBERT	<b>09</b> M	BABR	$e^+e^- \rightarrow$	$D^{*0}\overline{D}{}^{0}\gamma$

 $\Gamma(D^*(2010)^+D^-+\text{c.c.})/\Gamma_{\text{total}}$  $\Gamma_{30}/\Gamma$ VALUE TECN COMMENT DOCUMENT ID CLEO  $e^+e^- \rightarrow D^{*+}D^-$ CRONIN-HEN..09 not seen BELL  $e^+e^- \rightarrow D^{*+}D^-\gamma$ not seen PAKHLOVA 07 We do not use the following data for averages, fits, limits, etc. 09M BABR  $e^+e^- \rightarrow D^{*+}D^-\gamma$ not seen AUBERT  $\Gamma(D^*D^*)/\Gamma(J/\psi\pi^+\pi^-)$  $\Gamma_{31}/\Gamma_5$ VALUE CI % DOCUMENT ID TECN COMMENT <11 90 CRONIN-HEN..09 CLEO  $e^+e^-$ • • • We do not use the following data for averages, fits, limits, etc. • • • 09M BABR  $e^+e^- \rightarrow \gamma D^* \overline{D}^*$ AUBERT <40 90  $\Gamma(D^{*}(2007)^{0}\overline{D}^{*}(2007)^{0})/\Gamma_{total}$  $\Gamma_{32}/\Gamma$ VALUE DOCUMENT ID TECN COMMENT CLEO  $e^+e^- \rightarrow D^{*0}\overline{D}^{*0}$ not seen CRONIN-HEN..09 • • We do not use the following data for averages, fits, limits, etc. • • • 09M BABR  $e^+e^- \rightarrow D^{*0}\overline{D}^{*0}\gamma$ AUBERT not seen  $\Gamma(D^*(2010)^+ D^*(2010)^-) / \Gamma_{total}$  $\Gamma_{33}/\Gamma$ VALUE DOCUMENT ID TECN COMMENT CLEO  $e^+e^- \rightarrow D^{*+}D^{*-}$ CRONIN-HEN..09 not seen BELL  $e^+e^- \rightarrow D^{*+}D^{*-}\gamma$ PAKHLOVA 07 not seen • • We do not use the following data for averages, fits, limits, etc. • • • 09M BABR  $e^+e^- \rightarrow D^{*+}D^{*-}\gamma$ AUBERT not seen  $\Gamma(D^0 D^- \pi^+ + \text{c.c.} (\text{excl. } D^*(2007)^0 \overline{D}^{*0} + \text{c.c.}, D^*(2010)^+ D^- + \text{c.c.}))/$  $\Gamma_{35}/\Gamma$ Γ<sub>total</sub> VALUE TECN COMMENT DOCUMENT ID 08A BELL 10.6  $e^+e^- \rightarrow D^0 D^- \pi^+ \gamma$ not seen PAKHLOVA  $\Gamma(D\overline{D}^*\pi + \text{c.c.} (\text{excl. } D^*\overline{D}^*))/\Gamma_{\text{total}}$  $\Gamma_{36}/\Gamma$ VALUE DOCUMENT ID TECN COMMENT CRONIN-HEN..09 CLEO  $e^+e^- \rightarrow D^*\overline{D}\pi$ not seen  $\Gamma(D\overline{D}^*\pi + \text{c.c.} (\text{excl. } D^*\overline{D}^*))/\Gamma(J/\psi\pi^+\pi^-)$  $\Gamma_{36}/\Gamma_{5}$ <u>VALUE</u> CL% DOCUMENT ID \_\_\_\_<u>TECN\_\_\_COMMENT</u> <15 CRONIN-HEN..09 CLEO  $e^+e^-$ 90  $\Gamma(D^0 D^{*-} \pi^+ + \text{c.c.} (\text{excl. } D^*(2010)^+ D^*(2010)^-)) / \Gamma_{\text{total}}$  $\Gamma_{37}/\Gamma$ <u>VALU</u>E DOCUMENT ID TECN COMMENT BELL  $e^+e^- \rightarrow D^0 D^{*-}\pi^+\gamma$ 09 not seen PAKHLOVA  $\Gamma(D^0 D^*(2010)^- \pi^+ + \text{c.c.}) / \Gamma_{\text{total}}$  $\Gamma_{38}/\Gamma$ VALUE DOCUMENT ID TECN COMMENT  $e^+e^- \rightarrow \pi^+ D^0 D^{*-} + c.c.$ seen ABLIKIM 19R BES3

$\Gamma(D^0 D^*(2010)^- \pi^+$	+c.c.)/Γ(	$(J/\psi \pi^+\pi^-)$				Г <sub>38</sub> /Г <sub>5</sub>
VALUE	CL%	DOCUMENT ID	TE	ECN	COMMENT	
<9	90	PAKHLOVA 0	)9 BI	ELL	$e^+e^- \rightarrow$	$D^0 D^{*-} \pi^+$
$\Gamma(D^0 D^*(2010)^- \pi^+)$	+c.c.)/Γ <sub>t</sub>	$rat_{otal} \times \Gamma(e^+e^-)$	)/Γ <sub>tot</sub>	tal ECN	Γ <sub>3</sub>	$_8/\Gamma  imes \Gamma_1/\Gamma$
<0.42 × 10 <sup>-6</sup>	<u> </u>	<sup>1</sup> PAKHLOVA 0	<u> </u>	FLI	$e^+e^- \rightarrow$	$D^0 D^{*-} \pi^+$
<sup>1</sup> Using 4263 $^{+8}_{-0}$ MeV	for the mas	ss of $\psi(4260)$ .				
$\Gamma(D_1(2420)\overline{D} + c.c.)$	)/F <sub>total</sub>					Γ30/Γ
VALUE		DOCUMENT ID	TE	ECN	COMMENT	337
not seen		<sup>1</sup> ABLIKIM 1	9ar BI	ES3	$e^+e^- \rightarrow$	$\pi^+\pi^- D\overline{D}$
<sup>1</sup> Results from a meas 4.6 GeV.	urement of a	$\sigma(e^+e^- \rightarrow D_1(2e^+))$	420) <u>D</u>	+ c.c.	) between	$\sqrt{s}=$ 4.3 and
$\Gamma(D^*\overline{D}^*\pi)/\Gamma_{total}$						Г <sub>40</sub> /Г
VALUE		DOCUMENT ID	TE	ECN	COMMENT	
not seen		CRONIN-HEN0	)9 CI	LEO	$e^+e^- \rightarrow$	$D^* \overline{D}^* \pi$
$\Gamma(D^*\overline{D}^*\pi)/\Gamma(J/\psi\pi)$	r <sup>+</sup> π <sup>-</sup> )					Γ <sub>40</sub> /Γ <sub>5</sub>
VALUE	<u>CL%</u>	DOCUMENT ID	TE	ECN	COMMENT	
<8.2	90	CRONIN-HEN0	)9 CI	LEO	$e^+e^-$	
$\Gamma(D_s^+ D_s^-) / \Gamma_{\text{total}}$			Ŧ		COMMENT	Г <sub>41</sub> /Г
			<u>//</u>			ρ <sup>+</sup> ρ <sup>-</sup>
not seen		DEL-AMO-SAI	UN BA		$e + e \rightarrow + -$	$D_{s}^{+}D_{s}^{-}\gamma$
not seen • • • We do not use th	e following	CRONIN-HENU	19 CI fits lim	LEO nits e	$e \cdot e \rightarrow$	D D s s
not seen		PAKHLOVA 1	.1 Bl	ELL	$e^+e^- \rightarrow$	$D_{s}^{+}D_{s}^{-}\gamma$
$\Gamma(D_{\epsilon}^{+}D_{\epsilon}^{-})/\Gamma(J/\psi\pi)$	+π <sup>-</sup> )					$\Gamma_{41}/\Gamma_5$
VALUE	<u>CL%</u>	DOCUMENT ID	TE	ECN	COMMENT	
<0.7	95	DEL-AMO-SA1	.0N B	ABR	$10.6 e^+ e^-$	-
• • • We do not use th	e following o	data for averages, f	fits, lin	nits, e	tc. ● ● ●	
<1.3	90	CRONIN-HEN0	)9 CI	LEO	e <sup>+</sup> e <sup>-</sup>	
$\Gamma(D_s^{*+}D_s^-+\text{c.c.})/\Gamma_1$	total					Г <sub>42</sub> /Г
VALUE		DOCUMENT ID	<u> </u>		<u>COMMENT</u>	0*+ 0-
not seen		DEL-AMO-SAI	UN BA		$e + e \rightarrow + -$	$D_{s}^{+}D_{s}^{-}\gamma$
not seen	o following	CRONIN-HEN0	19 CI fita lim	LEO	$e \cdot e \rightarrow$	$D_s^+ D_s^-$
	e tonowing (			riis, e		ס*+ ס− .
not seen		PAKHLOVA I	.і ы	ELL	$e \cdot e \rightarrow$	$D_{s}$ , $D_{s}$ , $\gamma$
$\Gamma(D_s^{*+}D_s^-+\text{c.c.})/\Gamma$	$(J/\psi \pi^+ \pi$	-)				$\Gamma_{42}/\Gamma_5$
VALUE	<u>CL%</u>	DOCUMENT ID	<u></u>	ECN	COMMENT	
< 0.8	90 e following (	CRONIN-HEN0	)9 Cl fits lim	LEO	e <sup>+</sup> e <sup>−</sup>	
<44	95	DEL-AMO-SA1	.0N B	ABR	10.6 e <sup>+</sup> e <sup>-</sup>	-
https://pdg.lbl.gov		Page 14	(	Create	ed: 8/11/	2022 09:37

Citation: R.L. Workman et al. (Particle Data Group), Prog. Theor. Exp. Phys. 2022, 083C01 (2022)

$\Gamma(D_s^{*+}D_s^{*-})/\Gamma_{total}$						Г <sub>43</sub> /Г
VALUE		DOCUMENT ID		TECN	COMMENT	
not seen		CRONIN-HEN	09	CLEO	$e^+e^- \rightarrow$	$D_{s}^{*+}D_{s}^{*-}$
• • • We do not use the	following	data for averages	s, fits,	limits, e	etc. • • •	
not seen		PAKHLOVA	11	BELL	$e^+e^- \rightarrow$	$D_s^{*+} D_s^{*-} \gamma$
not seen		DEL-AMO-SA.	10N	BABR	$e^+e^- \rightarrow$	$D_{s}^{*+}D_{s}^{*-}\gamma$
$\Gamma(D_s^{*+}D_s^{*-})/\Gamma(J/\psi)$	$(\pi^{+}\pi^{-})$					Γ <sub>43</sub> /Γ <sub>5</sub>
VALUE	<u>CL%</u>	DOCUMENT ID		TECN	COMMENT	
< 9.5	90	CRONIN-HEN	09	CLEO	e <sup>+</sup> e <sup>-</sup>	
• • • We do not use the	following	data for averages	s, fits,	limits, e	etc. • • •	
<30	95	DEL-AMO-SA.	10N	BABR	10.6 e <sup>+</sup> e <sup>-</sup>	_
$\Gamma(p \overline{p}) / \Gamma(J/\psi \pi^+ \pi^-)$						$\Gamma_{44}/\Gamma_5$
VALUE	<u>CL%</u>	DOCUMENT ID		<u>TECN</u>	<u>COMMENT</u>	
<0.13	90	<sup>+</sup> AUBERT	<b>06</b> B	BABR	$e^+e^- \rightarrow$	<b>ΡΡ</b> γ
<sup>1</sup> Using 4259 $\pm$ 10 MeV	/ for the n	hass and 88 $\pm$ 24	l MeV	for the	width of $\psi$ (	(4260).
$\Gamma(p\overline{p}\pi^0)/\Gamma(J/\psi\pi^+\pi)$	r <sup>-</sup> )					$\Gamma_{45}/\Gamma_5$
VALUE	<u>CL%</u>	DOCUMENT ID		TECN	COMMENT	
<2 × 10 <sup></sup>	90	ABLIKIM	17F	BES3	$e^+e^- \rightarrow hadrons$	$\psi$ (4260) $ ightarrow$
Γ(ρ <u>ρ</u> η)/Γ <sub>total</sub>		DOCUMENT ID		TECN	COMMENT	Г <sub>46</sub> /Г
not seen		ABLIKIM	21AN	BES3	$e^+e^- \rightarrow$	p <u></u> <i>p</i> η
$\Gamma(n\overline{n}\omega)/\Gamma_{total}$						Γ47/Γ
VALUE		DOCUMENT ID		TECN	COMMENT	
not seen		ABLIKIM	21AN	BES3	$e^+e^- \rightarrow$	p <u>p</u> ω
Γ(pppp)/Γ <sub>total</sub>						Г <sub>61</sub> /Г
VALUE	<u>I</u>	DOCUMENT ID	Т	ECN C	OMMENT	
not seen	/	ABLIKIM 2	1D B	ES3 4	.0–4.6 $e^+e$	$^{-} \rightarrow p \overline{p} p \overline{p}$
-		Radiative deca	ays –		-	
$\Gammaig(\eta_{c}(1S)\gammaig)/\Gamma_{ ext{total}}$						Г <sub>63</sub> /Г
VALUE		DOCUMENT ID		COMME	NT	
possibly seen		<sup>1</sup> ABLIKIM	17W	e <sup>+</sup> e <sup>-</sup>	$\rightarrow \gamma \eta_{c} (15)$	5)
<sup>1</sup> Significance ranges fr spectrum. Needs cont	firmation.	to as low as 1.5	σfo	r a flat	component	plus $\psi$ (4260)
$\Gamma(\eta_c(1S)\pi^0\gamma)/\Gamma_{\rm total}$						Г <sub>64</sub> /Г
VALUE		DOCUMENT ID		TECN	COMMENT	
not seen	-	<sup>+</sup> ABLIKIM	<b>21</b> B	BES3	$e^+ e^- \rightarrow$	$\gamma \pi^{O} \eta_{C}$
<sup>1</sup> Not seen in $e^+e^- \rightarrow$ cross section of 11.2	$\rightarrow \gamma \pi^0 \eta_c$ , pb.	at $\sqrt{s}=$ 4.226 G	ieV w	ith a 909	% C.L. uppe	er limit on the

https://pdg.lbl.gov

Created: 8/11/2022 09:37

Citation: R.L. Workman et al. (Particle Data Group), Prog.Theor.Exp.Phys. 2022, 083C01 (2022)

$\Gamma(\chi_{c1}(3872)\gamma)/\Gamma_{c1}$	Г <sub>67</sub> /Г					
VALUE	EVTS	DOCUMENT ID		TECN	COMMENT	
seen		ABLIKIM	19v	BES3	$e^+e^- \rightarrow$	$\gamma \chi_{c1}$ (3872)
seen	$20\pm5$	ABLIKIM	14	BES3	$e^+ e^-  ightarrow$	$J/\psi \pi^+ \pi^- \gamma$

# $\psi$ (4230) REFERENCES

ABLIKIM         21AN         PR D104 109104         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         21AS         PR D104 112009         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         21AV         PR D103 032006         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         21D         PR D103 052003         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         20A         PR D102 112009         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         20A         PR D102 012009         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         20A         PR D102 012009         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         20A         PR D102 012003         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A         PR D99 012003         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A         PR D99 012003         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A         PR D99 012003         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A         PR D99 01903         (erat.)         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM<	ABLIKIM	21AJ	PR D104 052012	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM         21AS         PR D104 11209         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         21AW         PR D103 052006         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         21D         PR D103 052007         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         20A         PR D101 012008         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         20A         PR D102 112009         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         20A         PR D102 012009         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         20A         PR D102 012009         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A         PR D99 012003         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A         PR D99 01903 (errat.)         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A         PR D99 01903 (errat.)         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A         PR D90 01903 (errat.)         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A         PR L12 02020         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM	ABLIKIM	21AN	PR D104 092008	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM         21AW         PR D104 112009         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         21B         PR D103 032006         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         20A         PR D101 012008         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         20A         PR D102 112009         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         20A         PR D102 03100         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         20A         PR D102 03100         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         20A         PR D190 01203         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A         PR D99 012003         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A         PR D99 01100         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A         PR D99 01100         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A         PR D99 01100         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A         PR D99 01903 (erat.)         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A	ABLIKIM	21AS	PR D104 L091104	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM         21B         PR D103 052006         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         21D         PR D101 012008         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         20A         PR D102 112009         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         20A         PR D102 012009         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         20N         PR D102 012009         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         20N         PR D99 012003         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A         PR D99 012003         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A         PR D99 019003         (Frat.)         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A         PR D99 019003         (Frat.)         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19V         PR D70 70110         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19V         PR D90 70100         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17F         PL B77 45         M. Ablikim et al.         (BESIII Collab.)	ABLIKIM	21AW	PR D104 112009	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM         21D         PR D103 052003         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         20A G         PR D102 112009         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         20C FRL 124 032002         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         20N FR D102 112009         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         20N FR D102 03101         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A FR D99 012003         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A FR D99 012003         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A FR D99 012003         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A FR D99 012003         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19K FR D99 012903 (errat.)         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19V FR L22 122002         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19V FR L22 122002         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17V FR D96 052001         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17G FRI 118 092001001 <td>ABLIKIM</td> <td>21B</td> <td>PR D103 032006</td> <td>M. Ablikim <i>et al.</i></td> <td>(BESIII Collab.)</td>	ABLIKIM	21B	PR D103 032006	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM         20A         PR D101 012008         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         20C         PR. 124 032002         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         200         PR D102 012009         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         200         PR D102 012009         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         200         PR D102 012005         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19AF         PD 99 01203         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19AF         PR D99 01203         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19AF         PR D99 01203         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19AF         PR D99 01203         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A         PR 122 2120202         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A         PR 122 120200         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17F         PR 171 45         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17P	ABLIKIM	21D	PR D103 052003	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM         20AG         PR D102 112009         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         200         PR D102 012009         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         200         PR D102 012003         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19         PR D99 012003         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A         PR D99 012003         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A         PR D99 019033         (M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A         PR D99 01903 (errat.)         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19K         PR D99 01903 (errat.)         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19V         PR 122 1220202         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17F         PL B771 45         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17F         PL B771 45         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17F         PL B71 45         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17F <td>ABLIKIM</td> <td>20A</td> <td>PR D101 012008</td> <td>M. Ablikim <i>et al.</i></td> <td>(BESIII Collab.)</td>	ABLIKIM	20A	PR D101 012008	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM         20C         PR. 124 032002         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         200         PR D102 012009         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19         PR D99 012005         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19AF         PD 99 012005         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19AF         PD 99 01903 (errat.)         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19AF         PD 99 01903 (errat.)         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19K         PR 122 1202005         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19K         PR 122 1202005         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19K         PR 07 071101         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17F         PL 871 45         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17G         PR 118 092002         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17G         PR 118 092002         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17G<	ABLIKIM	20AG	PR D102 112009	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM         200         PR D102 012009         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19         PR D99 012003         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         194         PR D99 072005         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19AF         PR D99 072005         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19AF         PR D99 01903 (errat.)         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19AF         PR D99 01903 (errat.)         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19V         PRL 122 122002         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19V         PRL 122 223002         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17B         PR D97 071101         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17F         PL B771 45         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17V         PR D96 051101         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17V         PR D96 054008         J. Zhang. L. Yuan         (EdstiII Collab.)           AABLIKIM <t< td=""><td>ABLIKIM</td><td>20C</td><td>PRL 124 032002</td><td>M. Ablikim <i>et al.</i></td><td>(BESIII Collab.)</td></t<>	ABLIKIM	20C	PRL 124 032002	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM         200         PK D102 031101         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         194         PR D99 012003         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A         PR D99 01203         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A         PR D100 032005         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A         PR D122 210202         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19V         PRL 122 232002         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19V         PRL 122 232002         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         18V         PR D97 07110         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17V         PR D99 019903 (errat.)         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17V         PR D99 019903 (errat.)         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17V         PR D99 019903 (errat.)         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17V         PR D96 052101         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM	ABLIKIM	20N	PR D102 012009	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM         19         PK D99 012003         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19AP         PK D99 072005         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19AR         PK D99 072005         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19AR         PK D99 0120305         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A         PK D99 072005         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A         PR D99 072002         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19V         PR D97 071101         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17F         PL B771 45         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17V         PR D96 032004         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17V         PR D96 052007         X.Yang, J. Zhang, J. Zhang         (BESIII Collab.)           ABLIKIM         17V         PR D96 052007         X.Yang, J. Zhang         (BESIII Collab.)           ABLIKIM         17V         PR D96 052007         X.Yang, J. Zhang         (BESIII Collab.)           ABLIKIM         17V	ABLIKIM	200	PR D102 031101	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM         19A         PK         D99         01/2005         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A         PK         D100         032005         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19A         PK         D100         032005         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19V         PR L         122         232002         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19V         PR L         122         232002         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17V         PR D910         071101         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17F         PL T71         5         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17V         PR D96         03100         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17V         PR D96         05101         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17V         PR D96         051007         X. Cao, C.P. Shen, C.Z. Yuan         ZHANG         (PDG Collab.)           ZHANG         17E         PR D96         052007	ABLIKIM	19	PR D99 012003	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM         19AR         PK         D99 01103         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19AR         PK         D100 032005         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19V         PR 122 102002         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19V         PR 122 102002         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19V         PR 122 232002         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17V         PR D97 071101         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17V         PR D96 032004         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17V         PR D96 051101         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17V         PR D96 051101         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17V         PR D96 051001         X. Parig. J. Lang.         (BESIII Collab.)           ABLIKIM         17V         PR D96 05008         J. Zhang. J. Zhang.         (POG Collab.)           ABLIKIM         17V         PR D92 012010         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM<	ABLIKIM	19AE	PR D99 072005	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM         19M         PK         DIOU 032005         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19K         PR D99 019903 (errat.)         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19V         PRL 122 23002         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19V         PRL 122 23002         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         18V         PR 122 23002         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17V         PR D96 032004         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17V         PR D96 051001         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17V         PR D96 051007         XY. Gao, C.P. Shen, C.Z. Yuan         (EASIII Collab.)           ZHANG         17B         PR D96 054008         J. Zhang, L. Yuan         (EDSIII Collab.)           PDG         16         CP C40 100001         C. Patrignani et al.         (EBSIII Collab.)           ABLIKIM         15C         PRL 114 092003         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         15C         PRL 114 092003         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM	ABLIKIM	19AI	PR D99 091103	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM         19K         PK D99 019903 (crrat.)         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19V         PRL 122 102002         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         19W         PRL 122 102002         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17B         PRL 118 092001         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17B         PRL 118 092002         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17F         PL B771 45         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17W         PR D96 0502004         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17W         PR D96 051101         M. Ablikim et al.         (BESIII Collab.)           GAO         17         PR D96 0502007         X.Y. Gao, C.P. Shen, C.Z. Yuan         ZHANG           JHANG         17C         EPJ C77 727         J. Zhang, J. Zhang         Zhang         BESIII Collab.)           ABLIKIM         15C         PR N D92 012010         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         15C         PR D92 01201         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM	ABLIKIM	19AR	PR D100 032005	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM         19K         PKL         122         102002         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         18V         PR D97 071101         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17B         PRL 118 092001         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17F         PL 118 092002         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17F         PL D90 019903         (errat.)         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17V         PR D96 019903         (errat.)         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17W         PR D96 054008         J. Zhang, L. Yuan         (PDG Collab.)           ZHANG         17         PR D95 092007         X.Y. Gao, C.P. Shen, C.Z. Yuan         (PDG Collab.)           ZHANG         17         PR D95 092007         X.Y. Gao, C.P. Shen, C.Z. Yuan         (PDG Collab.)           ABLIKIM         15C         PR RU 114 092003         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         15Q         PR D92 012011         Y.L. Han et al.         (BESIII Collab.)           ABLIKIM         15Q         PR D92 012011         Y.L. Han et al. <t< td=""><td>ABLIKIM</td><td>19K</td><td>PR D99 019903 (errat.)</td><td>M. Ablikim <i>et al.</i></td><td>(BESIII Collab.)</td></t<>	ABLIKIM	19K	PR D99 019903 (errat.)	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM         19V         PRL 122 23/2002         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         18N         PR D97 07101         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17F         PL B771 45         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17G         PR L118 092002         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17G         PR D90 019903 (errat.)         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17W         PR D96 051101         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17W         PR D96 054008         J. Zhang, J. Zhang         (PDG Collab.)           ZHANG         17E         PJ C77 727         J. Zhang, L. Yuan         (BESIII Collab.)           ABLIKIM         15C         PR L114 092003         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         15C         PR D92 012008         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         15C         PR D92 012003         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         15C         PR D92 012001         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         15C	ABLIKIM	19R	PRL 122 102002	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM         18N         PR         D9         07101         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17F         PL         B7145         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17G         PRL         118         092002         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17V         PR         D96         032004         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17V         PR         D96         032004         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17V         PR         D96         05101         M. Ablikim et al.         (BESIII Collab.)           GAO         17         PR         D96         054008         J. Zhang, J. Zhang         Zhang           ZHANG         17E         PR         D96         054003         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         15C         PR.1         114         092003         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         15Q         PR.1112         092001         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         15Q         PR D92         012011	ABLIKIM	19V	PRL 122 232002	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM         ITF         PRL 118         092001         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         ITF         PR         181         092002         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         ITF         PR         D99         019003         (errat.)         (BESIII Collab.)           ABLIKIM         TV         PR         D99         019003         (errat.)         (BESIII Collab.)           ABLIKIM         TV         PR         D99         01903         (errat.)         (BESIII Collab.)           ABLIKIM         TV         PR         D96         051001         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         TTC         EPJ C77         T.Zhang, L.Yuan         (PDG Collab.)           ABLIKIM         15C         PR L110         02003         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         15C         PR L110         0201201         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         15C         PRL 110         02001         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         15C         PRL 110         0201201         M. Ablikim et al.         (BELLE Collab.)	ABLIKIM	18N	PR D97 071101	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM         ITP         FPL D1/1 45         Mit. Addixim et al.         (BESIII Collab.)           ABLIKIM         ITV         PR D96 032004         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         ITV         PR D99 019903 (errat.)         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         ITV         PR D96 051101         M. Ablikim et al.         (BESIII Collab.)           GAO         IT         PR D96 054008         J. Zhang, J. Zhang         (PDG Collab.)           ZHANG         ITC         EPJ C77 727         J. Zhang, L. Yuan         (PDG Collab.)           PDG         16         CP C40 100001         C. Patrignani et al.         (BESIII Collab.)           ABLIKIM         15Q         PR D192 012018         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         15Q         PR D111 022001         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         14         PR D110 252002         C.Q. Liu et al.         (BELLE Collab.)           ABLIKIM         13T         PRL 110 252002         C.Q. Liu et al.         (BELLE Collab.)           VANG         13B         PR D87 051101         X.L. Wang et al.         (BELLE Collab.)           VANG         13B         PR D82 052004 </td <td></td> <td>17B</td> <td>PRL 118 092001</td> <td>M. Ablikim <i>et al.</i></td> <td>(BESIII Collab.)</td>		17B	PRL 118 092001	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM         ITV         PR         D96         032004         M. Ablikim et al.         (BESIII Collab.)           Also         PR         D99         019903 (errat.)         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17V         PR         D96         051001         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         17W         PR         D96         052007         X.Y. Gao, C.P. Shen, C.Z. Yuan           ZHANG         17E         PR         D96         054008         J. Zhang, L. Yuan           PDG         16         CP         C40         100001         C. Patrignani et al.         (BESIII Collab.)           ABLIKIM         15C         PR         D92         012008         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         15C         PR         D92         012008         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         15C         PR D92         012001         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         15         PR D92         012011         Y.L. Han et al.         (BESIII Collab.)           ABLIKIM         13T         PR D89         072015         C.P. Shen et al.         (BESIII Collab.)		17C	PL B//1 45	IVI. ADIIKIM <i>et al.</i>	(BESIII Collab.)
Abs         PR D99 032004         M. Ablikim et al.         (BESIII Collab.)           Also         PR D99 01903 (errat.)         M. Ablikim et al.         (BESIII Collab.)           GAO         17         PR D95 092007         X.Y. Gao, C.P. Shen, C.Z. Yuan         (BESIII Collab.)           ZHANG         178         PR D96 054008         J. Zhang, L. Yuan         (PDG           PDG         16         CP C40 100001         C. Patrignani et al.         (BESIII Collab.)           ABLIKIM         15C         PR D92 012008         M. Ablikim et al.         (BESIII Collab.)           ABLIKIM         15C         PR D92 012011         Y.L. Han et al.         (BESIII Collab.)           ABLIKIM         14         PR D92 012011         Y.L. Han et al.         (BELLE Collab.)           ABLIKIM         14         PR D92 012011         Y.L. Han et al.         (BELLE Collab.)           ABLIKIM         14         PR D92 012011         Y.L. Han et al.         (BELLE Collab.)           ABLIKIM         13         PR L110 252001         M. Ablikim et al.         (BELLE Collab.)           ABLIKIM         13         PR D10 02101         X.L. Wang et al.         (BELLE Collab.)           LEES         12AC         PR D83 01101         X.P celar et al.         (BA		17G	PRL 118 092002	IVI. ADIIKIM <i>et al.</i>	(BESIII Collab.)
Also       PR D99 019903 (errat.)       M. Ablikim et al.       (BESIII Collab.)         GAO       17       PR D96 051001       M. Ablikim et al.       (BESIII Collab.)         GAO       17       PR D96 054008       J. Zhang, L. Yuan       (PDG Collab.)         ZHANG       178       PR D96 054008       J. Zhang, L. Yuan       (PDG Collab.)         ABLIKIM       150       PR D92 012008       M. Ablikim et al.       (BESIII Collab.)         ABLIKIM       150       PR D92 012011       YL. Han et al.       (BESIII Collab.)         ABLIKIM       150       PR D92 012011       YL. Han et al.       (BESIII Collab.)         ABLIKIM       14       PR D12 02001       M. Ablikim et al.       (BELLE Collab.)         ABLIKIM       14       PR D80 072015       C.P. Shen et al.       (BELLE Collab.)         ABLIKIM       137       PR L110 252001       M. Ablikim et al.       (BELLE Collab.)         UWANG       138       PR D7 051101       XL. Wang et al.       (BELLE Collab.)         VANA       11       PR D83 051102       J.P. Lees et al.       (CLEO Collab.)         PEDLAR       11       PR D83 052004       P. del Amo Sanchez et al.       (BABAR Collab.)         QERONIV-HEN09       PR D78 092001	ABLIKIIVI	17V	PR D90 032004	IVI. ADIIKIM <i>et al.</i>	(BESIII Collab.)
ABLINIM       11/W       PR D95 031101       W. Abirkin et al.       (BEShi Collab.)         ZHANG       17       PR D95 02007       X.Y. Gao, C.P. Shen, C.Z. Yuan         ZHANG       17       EPJ C77 727       J. Zhang, J. Zhang         ZHANG       17       EPJ C77 727       J. Zhang, L. Yuan         PDG       16       CP C40 100001       C. Patrignani et al.       (PDG Collab.)         ABLIKIM       15C       PR L 114 092003       M. Ablikim et al.       (BESIII Collab.)         ABLIKIM       15Q       PR D92 012018       M. Ablikim et al.       (BESIII Collab.)         ABLIKIM       14       PR D92 02017       C. Patrignani et al.       (BESIII Collab.)         ABLIKIM       14       PR D92 012011       M. Ablikim et al.       (BESIII Collab.)         ABLIKIM       14       PR D93 072015       C.P. Shen et al.       (BELE Collab.)         ABLIKIM       13T       PR L110 252001       M. Ablikim et al.       (BELE Collab.)         WANG       13B       PR D87 051101       X.L. Wang et al.       (BELE Collab.)         VAKHLOVA       11       PR D83 051101       X.L. Wang et al.       (CLEO Collab.)         PAKHLOVA       11       PR D82 052004       P. del Amo Sanchez et al.       (		17\//	PR D99 019903 (errat.)	IVI. ADIIKIM et al.	(BESIII Collab.)
CHANG       17       FR D96 092007       X. F. Gao, C.F. Shen, C.Z. Tuan         ZHANG       17C       EPD C77 727       J. Zhang, J. Zhang         PDG       16       CP C40 100001       C. Patrignani et al.       (PDG Collab.)         ABLIKIM       15C       PR D92 012008       M. Ablikim et al.       (BESIII Collab.)         ABLIKIM       15Q       PR D92 012011       Y.L. Han et al.       (BESIII Collab.)         ABLIKIM       14PR L 112 092001       M. Ablikim et al.       (BESIII Collab.)         ABLIKIM       14       PR D90 072015       C.P. Shen et al.       (BELLE Collab.)         ABLIKIM       14       PR D90 072015       C.P. Shen et al.       (BELLE Collab.)         ABLIKIM       13T       PRL 110 252002       Z.Q. Liu et al.       (BELLE Collab.)         VANG       13B       PR D87 051101       X.L. Wang et al.       (BELLE Collab.)         VANG       13B       PR D80 051102       J.P. Lees et al.       (BABAR Collab.)         PAKHLOVA       11       PR D80 052004       P. del Amo Sanchez et al.       (BABAR Collab.)         PAKHLOVA       19       PR D70 041803       T. Pedlar et al.       (BABAR Collab.)         CRONIN-HEN09       PR D80 091010       G. Pakhlova et al.       <		17 17	PR D90 051101	WI. ADIIKIM et al. $X \times C_{22} \subset C_{22} \otimes C_{22$	(BESIII Collab.)
ZHANG       ITG       FR 090 034000       J. Zhang, L. Yuan         PDG       16       CP C40 100001       C. Patrignani et al.       (PDG Collab.)         ABLIKIM       15C       PR L 114 092003       M. Ablikim et al.       (BESIII Collab.)         ABLIKIM       15C       PR D92 012011       Y.L. Han et al.       (BESIII Collab.)         HAN       15       PR D92 012011       Y.L. Han et al.       (BESIII Collab.)         ABLIKIM       14       PR L 112 092001       M. Ablikim et al.       (BESIII Collab.)         ABLIKIM       14       PR L 112 092001       M. Ablikim et al.       (BESIII Collab.)         ABLIKIM       13T       PRL 110 252001       M. Ablikim et al.       (BELLE Collab.)         ABLIKIM       13T       PRL 110 252002       Z.Q. Liu et al.       (BELLE Collab.)         VANG       13B       PR D87 051101       J.P. Lees et al.       (BABAR Collab.)         VEELS       14       PR D83 011101       G. Pakhlova et al.       (BELLE Collab.)         DEL-AMO-SA 10N       PR D80 072010       D. Cronin-Hennessy et al.       (CLEO Collab.)         OBL-AMO-SA 10N       PR D70 092001       B. Aubert et al.       (BABAR Collab.)         AUBERT       09M       PR D70 09202 <td< td=""><td></td><td>17D</td><td>PR D95 092007</td><td>A.T. Gao, C.F. Sileii, C.Z. Tuali</td><td></td></td<>		17D	PR D95 092007	A.T. Gao, C.F. Sileii, C.Z. Tuali	
PDG       16       CP C40 100001       C. Patrignani et al.       (PDG Collab.)         ABLIKIM       15C       PRL 114 092003       M. Ablikim et al.       (BESIII Collab.)         ABLIKIM       15Q       PR D92 012011       Y.L. Han et al.       (BELLE Collab.)         ABLIKIM       15       PR D92 012011       Y.L. Han et al.       (BELLE Collab.)         ABLIKIM       14       PR D89 072015       C.P. Shen et al.       (BESIII Collab.)         ABLIKIM       13T       PRL 110 252001       M. Ablikim et al.       (BESIII Collab.)         ABLIKIM       13T       PRL 110 252002       Z.Q. Liu et al.       (BELLE Collab.)         VANG       13B       PR D87 051101       X.L. Wang et al.       (BELLE Collab.)         VANG       13B       PR D87 051101       X.L. Wang et al.       (BELLE Collab.)         VEES       12AC       PR D80 051102       J.P. Lees et al.       (BABAR Collab.)         PAKHLOVA       11       PR D82 052004       P. del Amo Sanchez et al.       (BABAR Collab.)         OEL-AMO-SA 10N       PR D82 052004       P. del Amo Sanchez et al.       (BABAR Collab.)         AUBERT       09M       PR D70 092001       D. Cronin-Hennessy et al.       (CLEO Collab.)         AUBERT		170	EDI C77 707	J. Zhang J. Zhang J. Zhang J. Yuan	
PDG       10       0F       0F <t< td=""><td></td><td>16</td><td>CP C 40 100001</td><td>C. Detrigneni et al</td><td>(PDC Callab)</td></t<>		16	CP C 40 100001	C. Detrigneni et al	(PDC Callab)
ABLIKIM       15C       PR D92 012003       M. Ablikim et al.       (BESIII Collab.)         HAN       15       PR D92 012011       Y.L. Han et al.       (BESIII Collab.)         ABLIKIM       14       PR L 112 092001       M. Ablikim et al.       (BESIII Collab.)         ABLIKIM       14       PR L 110 252001       M. Ablikim et al.       (BESIII Collab.)         ABLIKIM       13T       PRL 110 252001       M. Ablikim et al.       (BELLE Collab.)         ABLIKIM       13T       PRL 110 252002       Z.Q. Liu et al.       (BELLE Collab.)         VANG       13B       PR D87 051101       X.L. Wang et al.       (BELLE Collab.)         VANG       13B       PR D86 051102       J.P. Lees et al.       (BABAR Collab.)         PAKHLOVA       11       PR D83 011101       G. Pakhlova et al.       (CLEO Collab.)         PEL-AMO-SA 10N       PR D82 052004       P. del Amo Sanchez et al.       (BABAR Collab.)         CRONIN-HEN09       PR D80 072001       D. Cronin-Hennessy et al.       (CLEO Collab.)         AUBERT       08M       PR D77 092002       B. Aubert et al.       (BABAR Collab.)         AUBERT       08M       PR D77 011103       G. Pakhlova et al.       (BELLE Collab.)         AUBERT       07AK <td></td> <td>10 15C</td> <td>PRI 11/ 002003</td> <td>C. Fatrigran et al. M. Ablikim et al.</td> <td>(FDG Collab.)</td>		10 15C	PRI 11/ 002003	C. Fatrigran et al. M. Ablikim et al.	(FDG Collab.)
ADLINIM       13Q       PR       D22       012001       W. L. Han et al.       (BELLE Collab.)         ABLIKIM       14       PR D89       072015       C.P. Shen et al.       (BELLE Collab.)         ABLIKIM       13T       PRL 110       252001       M. Ablikim et al.       (BELLE Collab.)         ABLIKIM       13T       PRL 110       252002       Z.Q. Liu et al.       (BELLE Collab.)         WANG       13B       PRL 110       252002       Z.Q. Liu et al.       (BELLE Collab.)         WANG       13B       PR D87       051101       X.L. Wang et al.       (BELLE Collab.)         VANG       13B       PR D70       041033       T. Pedlar et al.       (CLEO Collab.)         PEDLAR       11       PR D83       011101       G. Pakhlova et al.       (BABAR Collab.)         PEL-AMO-SA       10N       PR D82       052004       P. del Amo Sanchez et al.       (BABAR Collab.)         QUBERT       09M       PR D79       092001       B. Aubert et al.       (CLEO Collab.)         AUBERT       09       PR D80       091101       G. Pakhlova et al.       (BELLE Collab.)         AUBERT       08A       PR D77       01202       B. Aubert et al.       (BELLE Collab.)		150	PR D02 012008	M. Ablikim et al. M. Ablikim et al.	(BESIII Collab.)
IAN       13       IP D92 0001       Intervention       Intervention       Intervention         ABLIKIM       14       PR D89 072015       C.P. Shen et al.       (BESIII Collab.)         SHEN       14       PR D89 072015       C.P. Shen et al.       (BESIII Collab.)         ABLIKIM       13T       PRL 110 252001       M. Ablikim et al.       (BESIII Collab.)         LIU       13B       PRL 110 252002       Z.Q. Liu et al.       (BELLE Collab.)         WANG       13B       PR D87 051101       X.L. Wang et al.       (BELLE Collab.)         LEES       12AC       PR D86 051102       J.P. Lees et al.       (BABAR Collab.)         PEDLAR       11       PRL 107 041803       T. Pedlar et al.       (CLEO Collab.)         DEL-AMO-SA       IN       PR D79 092001       B. Aubert et al.       (BABAR Collab.)         AUBERT       09M       PR D79 092001       B. Aubert et al.       (CLEO Collab.)         AVHLOVA       09       PR D80 072001       D. Cronin-Hennessy et al.       (CLEO Collab.)         AUBERT       09M       PR D78 014032       Z.Q. Liu, X.S. Qin, C.Z. Yuan       (BABAR Collab.)         LIU       08H       PR D78 014032       Z.Q. Liu, X.S. Qin, C.Z. Yuan       (BELLE Collab.)	HAN	150	PR D02 012000	VI Hon et al	(BELLE Collab.)
SHEN       14       PR D89 072015       C.P. Shen et al.       (BELLE Collab.)         ABLIKIM       13T       PRL 110 252002       Z.Q. Liu et al.       (BELLE Collab.)         UIU       13B       PRL 110 252002       Z.Q. Liu et al.       (BELLE Collab.)         WANG       13B       PR D87 051101       X.L. Wang et al.       (BELLE Collab.)         UEES       12AC       PR D86 051102       J.P. Lees et al.       (BABAR Collab.)         PAKHLOVA       11       PR D83 011101       G. Pakhlova et al.       (BELLE Collab.)         PEDLAR       11       PRL 107 041803       T. Pedlar et al.       (CLEO Collab.)         PEL-AMO-SA       10N       PR D82 052004       P. del Amo Sanchez et al.       (BABAR Collab.)         AUBERT       09M       PR D79 092001       B. Aubert et al.       (CLEO Collab.)         AUBERT       09M       PR D78 014032       Z.Q. Liu, X.S. Qin, C.Z. Yuan       (BELLE Collab.)         AUBERT       08B       PR D77 011103       G. Pakhlova et al.       (BELLE Collab.)         AUBERT       08B       PR D77 011103       G. Pakhlova et al.       (BELLE Collab.)         AUBERT       07S       PR D76 012008       B. Aubert et al.       (BABAR Collab.)         YUAN		14	PRI 112 092001	M Ablikim $et al$	(BESIII Collab.)
ABLIKIM       13T       PRL 110 252001       M. Ablikim et al.       (BESIII Collab.)         LIU       13B       PRL 110 252002       Z.Q. Liu et al.       (BELLE Collab.)         WANG       13B       PR D87 051101       X.L. Wang et al.       (BELLE Collab.)         LEES       12AC       PR D86 051102       J.P. Lees et al.       (BABAR Collab.)         PAKHLOVA       11       PR D83 011101       G. Pakhlova et al.       (BELLE Collab.)         PEDLAR       11       PRL 107 041803       T. Pedlar et al.       (CLEO Collab.)         DEL-AMO-SA 10N       PR D82 052004       P. del Amo Sanchez et al.       (BABAR Collab.)         AUBERT       09M       PR D79 092001       B. Aubert et al.       (CLEO Collab.)         AUBERT       09       PR D80 072001       D. Cronin-Hennessy et al.       (CLEO Collab.)         AUBERT       08S       PR D77 0192002       B. Aubert et al.       (BABAR Collab.)         AUBERT       08A       PR D70 01103       G. Pakhlova et al.       (BELLE Collab.)         AVBERT       08A       PR D77 011103       G. Pakhlova et al.       (BELLE Collab.)         AUBERT       07AK       PR D76 012008       B. Aubert et al.       (BABAR Collab.)         YUAN       08	SHEN	14	PR D89 072015	C P Shen et al	(BELLE Collab.)
LIU       13B       PRL 110 252002       Z.Q. Liu et al.       (BELLE Collab.)         WANG       13B       PR D87 051101       X.L. Wang et al.       (BELLE Collab.)         LEES       12AC       PR D86 051102       J.P. Lees et al.       (BABAR Collab.)         PAKHLOVA       11       PR D83 011101       G. Pakhlova et al.       (BELLE Collab.)         PEDLAR       11       PRL 107 041803       T. Pedlar et al.       (CLEO Collab.)         DEL-AMO-SA       10N       PR D82 052004       P. del Amo Sanchez et al.       (BABAR Collab.)         AUBERT       09M       PR D79 092001       B. Aubert et al.       (BABAR Collab.)         AUBERT       09M       PR D70 092002       B. Aubert et al.       (BABAR Collab.)         AUBERT       08S       PR D77 092002       B. Aubert et al.       (BABAR Collab.)         LIU       08H       PR D78 014032       Z.Q. Liu, X.S. Qin, C.Z. Yuan       (BELLE Collab.)         PAKHLOVA       08       PR D77 011103       G. Pakhlova et al.       (BELLE Collab.)         YUAN       08       PR D76 012008       B. Aubert et al.       (BABAR Collab.)         YUAN       08       PR D76 111105       C.Z. Yuan et al.       (BABAR Collab.)         AUBERT <t< td=""><td>ABLIKIM</td><td>13T</td><td>PRI 110 252001</td><td>M Ablikim <i>et al</i></td><td>(BESIII Collab.)</td></t<>	ABLIKIM	13T	PRI 110 252001	M Ablikim <i>et al</i>	(BESIII Collab.)
WANG13BPRDR<	LIU	13B	PRL 110 252002	Z.Q. Liu <i>et al.</i>	(BELLE Collab.)
LIES12ACPRD86051102J.P. Leeset al.(BABAR Collab.)PAKHLOVA11PRD83011101G. Pakhlova et al.(BELLE Collab.)PEDLAR11PR L107041803T. Pedlar et al.(CLEO Collab.)DEL-AMO-SA10NPRD82052004P. del Amo Sanchez et al.(BABAR Collab.)AUBERT09MPRD79092001B. Aubert et al.(BABAR Collab.)AUBERT09PRD80072001D. Cronin-Hennessy et al.(CLEO Collab.)PAKHLOVA09PRD80072001D. Cronin-Hennessy et al.(BELLE Collab.)AUBERT08PRD77092002B. Aubert et al.(BELLE Collab.)AUBERT08PRD7701103G. Pakhlova et al.(BELLE Collab.)PAKHLOVA08PRD77011103G. Pakhlova et al.(BELLE Collab.)PUNN08PRD77011105C.Z. Yuan et al.(BELLE Collab.)AUBERT07AKPRD76012008B. Aubert et al.(BABAR Collab.)AUBERT07BPRD76012008B. Aubert et al.(BABAR Collab.)AUBERT07BPRD76012008B. Aubert et al.(BABAR Collab.)AUBERT07BPRD76012008B. Aubert et al.(BABAR Collab.)AUBERT07BPRD76012008B. Aubert et al.(BELLE Collab.)AUBERT07D<	WANG	13B	PR D87 051101	XI Wang et al	(BELLE Collab.)
PAKHLOVA11PRD83011101G.Pakhlovaet al.(BELLE Collab.)PEDLAR11PRL107041803T.Pedlar et al.(CLEO Collab.)DEL-AMO-SA10NPRD82052004P.del Amo Sanchez et al.(BABAR Collab.)AUBERT09MPRD79092001B.Aubert et al.(BABAR Collab.)AUBERT09MPRD79092001D.Cronin-Hennessy et al.(CLEO Collab.)PAKHLOVA09PRD80091101G.Pakhlova et al.(BELLE Collab.)AUBERT08SPRD77092002B.Aubert et al.(BELLE Collab.)AUBERT08HPRD78014032Z.Q.Liu, X.S.Qin, C.Z.YuanPAKHLOVA08PRD77011103G.Pakhlova et al.(BELLE Collab.)YUAN08PRD77011105C.Z.Yuan et al.(BELLE Collab.)YUAN08PRD76012008B.Aubert et al.(BABAR Collab.)AUBERT07SPRL98212001B.Aubert et al.(BABAR Collab.)AUBERT07SPRL98212001B.Aubert et al.(BABAR Collab.)AUBERT07SPRL98212001B.Aubert et al.(BELLE Collab.)AUBERT07SPRL99142002X.L.Wang et al.(BELLE Collab.)AUBERT07D <td< td=""><td>LEES</td><td>12AC</td><td>PR D86 051102</td><td>J.P. Lees <i>et al.</i></td><td>(BABAR Collab.)</td></td<>	LEES	12AC	PR D86 051102	J.P. Lees <i>et al.</i>	(BABAR Collab.)
PEDLAR       11       PRL 107 041803       T. Pedlar et al.       (CLEO Collab.)         DEL-AMO-SA 10N       PR D82 052004       P. del Amo Sanchez et al.       (BABAR Collab.)         AUBERT       09M       PR D79 092001       B. Aubert et al.       (BABAR Collab.)         CRONIN-HEN 09       PR D80 072001       D. Cronin-Hennessy et al.       (CLEO Collab.)         PAKHLOVA       09       PR D80 091101       G. Pakhlova et al.       (BELLE Collab.)         AUBERT       08S       PR D77 092002       B. Aubert et al.       (BABAR Collab.)         AUBERT       08S       PR D77 092002       B. Aubert et al.       (BELLE Collab.)         AUBERT       08S       PR D77 01103       G. Pakhlova et al.       (BELLE Collab.)         PAKHLOVA       08       PR D77 011103       G. Pakhlova et al.       (BELLE Collab.)         YUAN       08       PR D77 011105       C.Z. Yuan et al.       (BELLE Collab.)         YUAN       08       PR D76 012008       B. Aubert et al.       (BABAR Collab.)         AUBERT       07AK       PR D76 012008       B. Aubert et al.       (BABAR Collab.)         AUBERT       07S       PR J8 212001       B. Aubert et al.       (BABAR Collab.)         AUBERT       07S <t< td=""><td>PAKHLOVA</td><td>11</td><td>PR D83 011101</td><td>G. Pakhlova <i>et al.</i></td><td>(BELLE Collab.)</td></t<>	PAKHLOVA	11	PR D83 011101	G. Pakhlova <i>et al.</i>	(BELLE Collab.)
DEL-AMO-SA 10NPRD82052004P. del Amo Sanchez et al.(BABAR Collab.)AUBERT09MPRD79092001B. Aubert et al.(BABAR Collab.)CRONIN-HEN 09PRD80072001D. Cronin-Hennessy et al.(CLEO Collab.)PAKHLOVA09PRD80091101G. Pakhlova et al.(BELLE Collab.)AUBERT08SPRD77092002B. Aubert et al.(BABAR Collab.)LIU08HPRD78014032Z.Q. Liu, X.S. Qin, C.Z. YuanPAKHLOVA08PRD77011103G. Pakhlova et al.(BELLE Collab.)PAKHLOVA08PRD77011105C.Z. Yuan et al.(BELLE Collab.)YUAN08PRD76012008B. Aubert et al.(BABAR Collab.)AUBERT07AKPRD76012008B. Aubert et al.(BABAR Collab.)AUBERT07AKPRD76012008B. Aubert et al.(BABAR Collab.)AUBERT07AKPR D76111105B. Aubert et al.(BABAR Collab.)AUBERT07SPRL 9802001G. Pakhlova et al.(BELLE Collab.)AUBERT07DPRL 98092001G. Pakhlova et al.(BELLE Collab.)AUBERT07DPRL 99142002X.L. Wang et al.(BELLE Collab.)AUBERT07DPRL 99142002X.L. Wang et al.(BELLE Collab.)AUBERT06BPR D73012005B. Aubert et al.(BABAR Col	PEDLAR	11	PRL 107 041803	T. Pedlar <i>et al.</i>	(CLEO Collab.)
AUBERT09MPRD79092001B. Aubert et al.(BABAR Collab.)CRONIN-HEN09PRD80072001D. Cronin-Hennessy et al.(CLEO Collab.)PAKHLOVA09PRD80091101G. Pakhlova et al.(BELLE Collab.)AUBERT08SPRD77092002B. Aubert et al.(BABAR Collab.)LIU08HPRD78014032Z.Q. Liu, X.S. Qin, C.Z. YuanPAKHLOVA08PRD77011103G. Pakhlova et al.(BELLE Collab.)PAKHLOVA08APRL100062001G. Pakhlova et al.(BELLE Collab.)YUAN08PRD77011105C.Z. Yuan et al.(BELLE Collab.)AUBERT07AKPRD76012008B. Aubert et al.(BABAR Collab.)AUBERT07BEPRD7611105B. Aubert et al.(BABAR Collab.)AUBERT07SPRL 98212001B. Aubert et al.(BABAR Collab.)AUBERT07DPRL 98092001G. Pakhlova et al.(BELLE Collab.)WANG07DPRL 98092001G. Pakhlova et al.(BELLE Collab.)YUAN07PRL 99142002X.L. Wang et al.(BELLE Collab.)YUAN07PRL 99182004C.Z. Yuan et al.(BELLE Collab.)YUAN07PRL 99182004C.Z. Yuan et al.(BABAR Collab.)AUBERT06BPR D73012005B. Aubert et al.(BABAR Collab.)<	DEL-AMO-SA	10N	PR D82 052004	P. del Amo Sanchez <i>et al.</i>	(BABAR Collab.)
CRONIN-HEN 09       PR D80 072001       D. Cronin-Hennessy et al.       (CLEO Collab.)         PAKHLOVA       09       PR D80 091101       G. Pakhlova et al.       (BELLE Collab.)         AUBERT       08S       PR D77 092002       B. Aubert et al.       (BABAR Collab.)         LIU       08H       PR D78 014032       Z.Q. Liu, X.S. Qin, C.Z. Yuan       (BELLE Collab.)         PAKHLOVA       08       PR D77 011103       G. Pakhlova et al.       (BELLE Collab.)         PAKHLOVA       08       PR D77 011105       C.Z. Yuan et al.       (BELLE Collab.)         YUAN       08       PR D76 012008       B. Aubert et al.       (BABAR Collab.)         AUBERT       07AK       PR D76 012008       B. Aubert et al.       (BABAR Collab.)         AUBERT       07F       PR D8 092001       G. Pakhlova et al.       (BABAR Collab.)         AUBERT       07F       PR D8 092001       G. Pakhlova et al.       (BABAR Collab.)         AUBERT       07D       PRL 98 092001       G. Pakhlova et al.       (BELLE Collab.)         VANG       07D       PRL 98 092001       G. Pakhlova et al.       (BELLE Collab.)         VANG       07D       PRL 99 142002       X.L. Wang et al.       (BELLE Collab.)         VUAN       07<	AUBERT	09M	PR D79 092001	B. Aubert <i>et al.</i>	(BABAR Collab.)
PAKHLOVA09PRD80091101G.Pakhlovaet al.(BELLE Collab.)AUBERT08SPRD77092002B.Aubert et al.(BABAR Collab.)LIU08HPRD78014032Z.Q.Liu, X.S.Qin, C.Z.YuanPAKHLOVA08PRD77011103G.Pakhlovaet al.(BELLE Collab.)PAKHLOVA08PRD77011103G.Pakhlovaet al.(BELLE Collab.)YUAN08PRD77011105C.Z.Yuanet al.(BELLE Collab.)AUBERT07AKPRD76012008B.Aubert et al.(BABAR Collab.)AUBERT07BEPRD7611105B.Aubert et al.(BABAR Collab.)AUBERT07SPRL 98212001B.Aubert et al.(BABAR Collab.)AUBERT07DPRL 98092001G.Pakhlova et al.(BELLE Collab.)VANG07DPRL 99142002X.L.Wang et al.(BELLE Collab.)YUAN07PRL 99182004C.Z.Yuan et al.(BELLE Collab.)YUAN07PRL 99182004C.Z.Yuan et al.(BABAR Collab.)AUBERT06BPRD73012005B.Aubert et al.(BABAR Collab.)AUBERT,BE06DPRD74091103B.Aubert et al.(CLEO Collab.)AUBERT,B05IPRL 95142001B. <t< td=""><td>CRONIN-HEN</td><td>. 09</td><td>PR D80 072001</td><td>D. Cronin-Hennessy et al.</td><td>(CLEO Collab.)</td></t<>	CRONIN-HEN	. 09	PR D80 072001	D. Cronin-Hennessy et al.	(CLEO Collab.)
AUBERT       08S       PR D77 092002       B. Aubert et al.       (BABAR Collab.)         LIU       08H       PR D78 014032       Z.Q. Liu, X.S. Qin, C.Z. Yuan       (BELLE Collab.)         PAKHLOVA       08       PR D77 011103       G. Pakhlova et al.       (BELLE Collab.)         PAKHLOVA       08       PR D77 011105       C.Z. Yuan et al.       (BELLE Collab.)         YUAN       08       PR D76 012008       B. Aubert et al.       (BABAR Collab.)         AUBERT       07AK       PR D76 012008       B. Aubert et al.       (BABAR Collab.)         AUBERT       07AK       PR D76 11105       B. Aubert et al.       (BABAR Collab.)         AUBERT       07F       PRL 98 212001       B. Aubert et al.       (BABAR Collab.)         AUBERT       07       PRL 98 092001       G. Pakhlova et al.       (BELLE Collab.)         VANG       07       PRL 98 092001       G. Pakhlova et al.       (BELLE Collab.)         VANG       07D       PRL 99 142002       X.L. Wang et al.       (BELLE Collab.)         YUAN       07       PRL 99 182004       C.Z. Yuan et al.       (BABAR Collab.)         AUBERT       06B       PR D73 012005       B. Aubert et al.       (BABAR Collab.)         AUBERT,BE       06D <td>PAKHLOVA</td> <td>09</td> <td>PR D80 091101</td> <td>G. Pakhlova <i>et al.</i></td> <td>(ÈELLE Collab.)</td>	PAKHLOVA	09	PR D80 091101	G. Pakhlova <i>et al.</i>	(ÈELLE Collab.)
LIU       08H       PR D78 014032       Z.Q. Liu, X.S. Qin, C.Z. Yuan         PAKHLOVA       08       PR D77 011103       G. Pakhlova et al.       (BELLE Collab.)         PAKHLOVA       08       PR D77 011105       C.Z. Yuan et al.       (BELLE Collab.)         YUAN       08       PR D77 011105       C.Z. Yuan et al.       (BELLE Collab.)         AUBERT       07AK       PR D76 012008       B. Aubert et al.       (BABAR Collab.)         AUBERT       07AK       PR D76 111105       B. Aubert et al.       (BABAR Collab.)         AUBERT       075       PRL 98 212001       B. Aubert et al.       (BABAR Collab.)         AVBERT       075       PRL 98 092001       G. Pakhlova et al.       (BELLE Collab.)         PAKHLOVA       07       PRL 98 092001       G. Pakhlova et al.       (BELLE Collab.)         VANG       07D       PRL 99 142002       X.L. Wang et al.       (BELLE Collab.)         YUAN       07       PRL 99 182004       C.Z. Yuan et al.       (BELLE Collab.)         YUAN       07       PRL 99 182004       C.Z. Yuan et al.       (BELLE Collab.)         YUAN       07       PRL 99 182004       C.Z. Yuan et al.       (BABAR Collab.)         AUBERT, BE       06D       PR D73 012005	AUBERT	08S	PR D77 092002	B. Aubert <i>et al.</i>	(BABAR Collab.)
PAKHLOVA       08       PR D77 011103       G. Pakhlova et al.       (BELLE Collab.)         PAKHLOVA       08A       PRL 100 062001       G. Pakhlova et al.       (BELLE Collab.)         YUAN       08       PR D77 011105       C.Z. Yuan et al.       (BELLE Collab.)         AUBERT       07AK       PR D76 012008       B. Aubert et al.       (BABAR Collab.)         AUBERT       07AK       PR D76 111105       B. Aubert et al.       (BABAR Collab.)         AUBERT       07BE       PR D76 111105       B. Aubert et al.       (BABAR Collab.)         AUBERT       07F       PRL 98 212001       B. Aubert et al.       (BABAR Collab.)         PAKHLOVA       07       PRL 98 092001       G. Pakhlova et al.       (BELLE Collab.)         VANG       07D       PRL 99 142002       X.L. Wang et al.       (BELLE Collab.)         YUAN       07       PRL 99 182004       C.Z. Yuan et al.       (BELLE Collab.)         YUAN       07       PRL 99 182004       C.Z. Yuan et al.       (BELLE Collab.)         YUAN       07       PRL 99 182004       C.Z. Yuan et al.       (BABAR Collab.)         AUBERT       06B       PR D73 012005       B. Aubert et al.       (BABAR Collab.)         AUBERT,BE       06D	LIU	08H	PR D78 014032	Z.Q. Liu, X.S. Qin, C.Z. Yuan	
PAKHLOVA       08A       PRL 100 062001       G. Pakhlova et al.       (BELLE Collab.)         YUAN       08       PR D77 011105       C.Z. Yuan et al.       (BELLE Collab.)         AUBERT       07AK       PR D76 012008       B. Aubert et al.       (BABAR Collab.)         AUBERT       07BE       PR D76 111105       B. Aubert et al.       (BABAR Collab.)         AUBERT       07BE       PR D76 111105       B. Aubert et al.       (BABAR Collab.)         AUBERT       07S       PRL 98 212001       B. Aubert et al.       (BABAR Collab.)         PAKHLOVA       07       PRL 98 092001       G. Pakhlova et al.       (BELLE Collab.)         VANG       07D       PRL 99 142002       X.L. Wang et al.       (BELLE Collab.)         YUAN       07       PRL 99 182004       C.Z. Yuan et al.       (BELLE Collab.)         YUAN       07       PRL 99 182004       C.Z. Yuan et al.       (BELLE Collab.)         YUAN       07       PRL 99 182004       C.Z. Yuan et al.       (BELLE Collab.)         AUBERT       06B       PR D73 012005       B. Aubert et al.       (BABAR Collab.)         AUBERT,BE       06D       PR D74 091103       B. Aubert et al.       (BABAR Collab.)         HE       06B       PR	PAKHLOVA	08	PR D77 011103	G. Pakhlova <i>et al.</i>	(BELLE Collab.)
YUAN       08       PR D77 011105       C.Z. Yuan et al.       (BELLE Collab.)         AUBERT       07AK       PR D76 012008       B. Aubert et al.       (BABAR Collab.)         AUBERT       07BE       PR D76 111105       B. Aubert et al.       (BABAR Collab.)         AUBERT       07BE       PR D76 111105       B. Aubert et al.       (BABAR Collab.)         AUBERT       07S       PRL 98 212001       B. Aubert et al.       (BABAR Collab.)         PAKHLOVA       07       PRL 98 092001       G. Pakhlova et al.       (BELLE Collab.)         WANG       07D       PRL 99 142002       X.L. Wang et al.       (BELLE Collab.)         YUAN       07       PRL 99 182004       C.Z. Yuan et al.       (BELLE Collab.)         YUAN       07       PRL 99 182004       C.Z. Yuan et al.       (BELLE Collab.)         AUBERT       06B       PR D73 012005       B. Aubert et al.       (BABAR Collab.)         AUBERT,BE       06D       PR D74 091103       B. Aubert et al.       (BABAR Collab.)         HE       06B       PR D74 091104       Q. He et al.       (CLEO Collab.)         AUBERT,B       051       PRL 95 142001       B. Aubert et al.       (BABAR Collab.)	PAKHLOVA	08A	PRL 100 062001	G. Pakhlova <i>et al.</i>	(BELLE Collab.)
AUBERT       07AK       PR       D76       012008       B. Aubert et al.       (BABAR Collab.)         AUBERT       07BE       PR       D76       111105       B. Aubert et al.       (BABAR Collab.)         AUBERT       07S       PRL 98       212001       B. Aubert et al.       (BABAR Collab.)         AUBERT       07S       PRL 98       92001       G. Pakhlova et al.       (BABAR Collab.)         PAKHLOVA       07       PRL 99       942002       X.L. Wang et al.       (BELLE Collab.)         WANG       07D       PRL 99       182004       C.Z. Yuan et al.       (BELLE Collab.)         YUAN       07       PRL 99       182004       C.Z. Yuan et al.       (BABAR Collab.)         AUBERT       06B       PR D73       012005       B. Aubert et al.       (BABAR Collab.)         AUBERT,BE       06D       PR D74       091103       B. Aubert et al.       (BABAR Collab.)         HE       06B       PR D74       091104       Q. He et al.       (CLEO Collab.)         AUBERT,B       051       PRL 95       142001       B. Aubert et al.       (BABAR Collab.)	YUAN	08	PR D77 011105	C.Z. Yuan <i>et al.</i>	(BELLE Collab.)
AUBERT       07BE       PR D76 111105       B. Aubert et al.       (BABAR Collab.)         AUBERT       07S       PRL 98 212001       B. Aubert et al.       (BABAR Collab.)         PAKHLOVA       07       PRL 98 092001       G. Pakhlova et al.       (BELLE Collab.)         WANG       07D       PRL 99 142002       X.L. Wang et al.       (BELLE Collab.)         YUAN       07       PRL 99 182004       C.Z. Yuan et al.       (BELLE Collab.)         AUBERT       06B       PR D73 012005       B. Aubert et al.       (BABAR Collab.)         AUBERT,BE       06D       PR D74 091103       B. Aubert et al.       (BABAR Collab.)         HE       06B       PR D74 091104       Q. He et al.       (CLEO Collab.)         AUBERT,B       051       PRL 95 142001       B. Aubert et al.       (BABAR Collab.)	AUBERT	07AK	PR D76 012008	B. Aubert <i>et al.</i>	(BABAR Collab.)
AUBERT       07S       PRL 98 212001       B. Aubert et al.       (BABAR Collab.)         PAKHLOVA       07       PRL 98 092001       G. Pakhlova et al.       (BELLE Collab.)         WANG       07D       PRL 99 142002       X.L. Wang et al.       (BELLE Collab.)         YUAN       07       PRL 99 182004       C.Z. Yuan et al.       (BELLE Collab.)         AUBERT       06B       PR D73 012005       B. Aubert et al.       (BABAR Collab.)         AUBERT,BE       06D       PR D74 091103       B. Aubert et al.       (BABAR Collab.)         HE       06B       PR D74 091104       Q. He et al.       (CLEO Collab.)         AUBERT,BE       051       PRL 95 142001       B. Aubert et al.       (BABAR Collab.)	AUBERT	07BE	PR D76 111105	B. Aubert <i>et al.</i>	(BABAR Collab.)
PAKHLOVA       07       PRL 98 092001       G. Pakhlova et al.       (BELLE Collab.)         WANG       07D       PRL 99 142002       X.L. Wang et al.       (BELLE Collab.)         YUAN       07       PRL 99 182004       C.Z. Yuan et al.       (BELLE Collab.)         AUBERT       06B       PR D73 012005       B. Aubert et al.       (BABAR Collab.)         AUBERT,BE       06D       PR D74 091103       B. Aubert et al.       (BABAR Collab.)         HE       06B       PR D74 091104       Q. He et al.       (CLEO Collab.)         AUBERT,B       05I       PRL 95 142001       B. Aubert et al.       (BABAR Collab.)	AUBERT	07S	PRL 98 212001	B. Aubert <i>et al.</i>	(BABAR Collab.)
WANG         07D         PRL         99         142002         X.L.         Wang et al.         (BELLE Collab.)           YUAN         07         PRL         99         182004         C.Z.         Yuan et al.         (BELLE Collab.)           AUBERT         06B         PR         D73         012005         B.         Aubert et al.         (BABAR Collab.)           AUBERT,BE         06D         PR         D74         091103         B.         Aubert et al.         (BABAR Collab.)           HE         06B         PR         D74         091104         Q.         He et al.         (CLEO Collab.)           AUBERT,B         05I         PRL         95         142001         B.         Aubert et al.         (BABAR Collab.)	PAKHLOVA	07	PRL 98 092001	G. Pakhlova <i>et al.</i>	(BELLE Collab.)
YUAN         U7         PRL 99         182004         C.Z. Yuan et al.         (BELLE Collab.)           AUBERT         06B         PR D73         012005         B. Aubert et al.         (BABAR Collab.)           AUBERT,BE         06D         PR D74         091103         B. Aubert et al.         (BABAR Collab.)           HE         06B         PR D74         091104         Q. He et al.         (CLEO Collab.)           AUBERT,B         05I         PRL 95         142001         B. Aubert et al.         (BABAR Collab.)	WANG	07D	PRL 99 142002	X.L. Wang <i>et al.</i>	(BELLE Collab.)
AUBERT         Ubb         PR         D/3         012005         B. Aubert et al.         (BABAR Collab.)           AUBERT,BE         06D         PR         D74         091103         B. Aubert et al.         (BABAR Collab.)           HE         06B         PR         D74         091104         Q. He et al.         (CLEO Collab.)           AUBERT,B         05I         PRL         95         142001         B. Aubert et al.         (BABAR Collab.)	YUAN	07	PRL 99 182004	C.Z. Yuan <i>et al.</i>	(BELLE Collab.)
AUBERT, BE         00D         PR         D/4         091103         B. Aubert et al.         (BABAR Collab.)           HE         06B         PR         D74         091104         Q. He et al.         (CLEO Collab.)           AUBERT, B         05I         PRL         95         142001         B. Aubert et al.         (BABAR Collab.)		U6B	PK D/3 012005	B. Aubert <i>et al.</i>	(BABAR Collab.)
HEUOBPR D/4 U91104Q. He et al.(CLEO Collab.)AUBERT,B05IPRL 95 142001B. Aubert et al.(BABAR Collab.)	AUBERT,BE	UbD	PK D/4 091103	B. Aubert <i>et al.</i>	(BABAK Collab.)
AUDERT, D USI FRE 95 142001 D. AUDERT <i>et al.</i> (BABAR Collab.)		051	PK D/4 U91104	$Q$ . $\Pi e \ et \ al$ . P Aubort at $al$	(CLEU Collab.)
	AUDENI,D	0.01	INL 90 142001	D. Aubert et al.	(DADAN COIDD.)

https://pdg.lbl.gov

Created: 8/11/2022 09:37