

$\psi(3770)$

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

$\psi(3770)$ MASS (MeV)

OUR FIT includes measurements of $m_{\psi(2S)}$, $m_{\psi(3770)}$, and $m_{\psi(3770)} - m_{\psi(2S)}$.

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
3773.7±0.7 OUR FIT Error includes scale factor of 2.3.				
3778.1±0.7 OUR AVERAGE				
3778.1±0.7±0.6		¹ AAIJ	19M LHCb	$pp \rightarrow D\bar{D} + \text{anything}$
3779.2 ^{+1.8+0.6} _{-1.7-0.8}		² ANASHIN	12A KEDR	$e^+e^- \rightarrow D\bar{D}$
3775.5±2.4±0.5	57	AUBERT	08B BABR	$B \rightarrow D\bar{D}K$
3776 ±5 ±4	68	BRODZICKA	08 BELL	$B^+ \rightarrow D^0\bar{D}^0K^+$
3778.8±1.9±0.9		AUBERT	07BE BABR	$e^+e^- \rightarrow D\bar{D}\gamma$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
3778.8±0.3		³ HANHART	24 RVUE	K-matrix formalism
3779.8±0.6		⁴ SHAMOV	17 RVUE	$e^+e^- \rightarrow D\bar{D}$, hadrons
3772.0±1.9		^{5,6} ABLIKIM	08D BES2	$e^+e^- \rightarrow \text{hadrons}$
3778.4±3.0±1.3	34	CHISTOV	04 BELL	Sup. by BRODZICKA 08

¹ Measured in prompt hadroproduction.

² Taking into account interference between the resonant and non-resonant $D\bar{D}$ production.

³ Real part of pole location extracted using K-matrix formalism that includes two resonance poles, $\psi(2S)$ and $\psi(3770)$.

⁴ From the joint analysis of the data on the $D\bar{D}$ and inclusive hadronic cross sections in the $\psi(3770)$ region from BaBar, Belle, BES-II, CLEO and KEDR.

⁵ Reanalysis of data presented in BAI 02C. From a global fit over the center-of-mass energy region 3.7–5.0 GeV covering the $\psi(3770)$, $\psi(4040)$, $\psi(4160)$, and $\psi(4415)$ resonances. Phase angle fixed in the fit to $\delta = 0^\circ$.

⁶ Interference between the resonant and non-resonant $D\bar{D}$ production not taken into account.

$m_{\psi(3770)} - m_{\psi(2S)}$

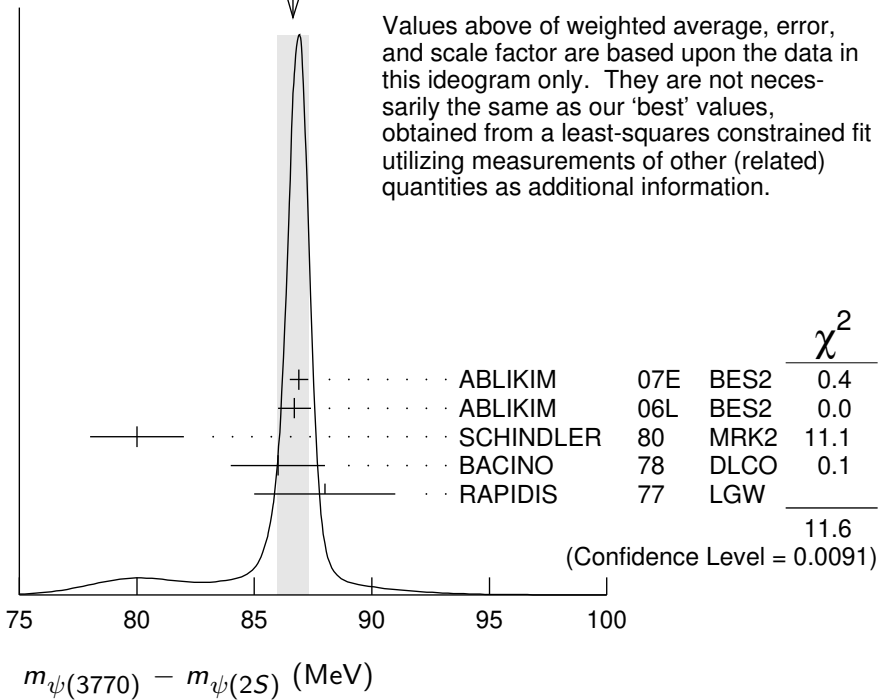
OUR FIT includes measurements of $m_{\psi(2S)}$, $m_{\psi(3770)}$, and $m_{\psi(3770)} - m_{\psi(2S)}$.

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
87.6±0.7 OUR FIT Error includes scale factor of 2.3.			
86.6±0.7 OUR AVERAGE Error includes scale factor of 2.0. See the ideogram below.			
86.9±0.4	¹ ABLIKIM	07E BES2	$e^+e^- \rightarrow \text{hadrons}$
86.7±0.7	ABLIKIM	06L BES2	$e^+e^- \rightarrow \text{hadrons}$
80 ±2	SCHINDLER	80 MRK2	e^+e^-
86 ±2	² BACINO	78 DLCO	e^+e^-
88 ±3	RAPIDIS	77 LGW	e^+e^-

¹ BES-II $\psi(2S)$ mass subtracted (see ABLIKIM 06L).

² SPEAR $\psi(2S)$ mass subtracted (see SCHINDLER 80).

WEIGHTED AVERAGE
 86.6 ± 0.7 (Error scaled by 2.0)



$\psi(3770)$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
27.2 ± 1.0				OUR FIT
27.5 ± 0.9				OUR AVERAGE
$24.9^{+4.6+0.5}_{-4.0-1.1}$		¹ ANASHIN	12A KEDR	$e^+ e^- \rightarrow D\bar{D}$
30.4 ± 8.5		^{2,3} ABLIKIM	08D BES2	$e^+ e^- \rightarrow \text{hadrons}$
$27 \pm 10 \pm 5$	68	BRODZICKA	08 BELL	$B^+ \rightarrow D^0 \bar{D}^0 K^+$
$28.5 \pm 1.2 \pm 0.2$		³ ABLIKIM	07E BES2	$e^+ e^- \rightarrow \text{hadrons}$
$23.5 \pm 3.7 \pm 0.9$		AUBERT	07BE BABR	$e^+ e^- \rightarrow D\bar{D}\gamma$
$26.9 \pm 2.4 \pm 0.3$		³ ABLIKIM	06L BES2	$e^+ e^- \rightarrow \text{hadrons}$
24 ± 5		³ SCHINDLER	80 MRK2	$e^+ e^-$
24 ± 5		³ BACINO	78 DLCO	$e^+ e^-$
28 ± 5		³ RAPIDIS	77 LGW	$e^+ e^-$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
25.0 ± 0.5		⁴ HANHART	24 RVUE	K-matrix formalism
25.8 ± 1.3		⁵ SHAMOV	17 RVUE	$e^+ e^- \rightarrow D\bar{D}, \text{hadrons}$

¹ Taking into account interference between the resonant and non-resonant $D\bar{D}$ production.
² Reanalysis of data presented in BAI 02C. From a global fit over the center-of-mass energy region 3.7–5.0 GeV covering the $\psi(3770)$, $\psi(4040)$, $\psi(4160)$, and $\psi(4415)$ resonances. Phase angle fixed in the fit to $\delta = 0^\circ$.
³ Interference between the resonant and non-resonant $D\bar{D}$ production not taken into account.
⁴ $-2 \times$ imaginary part of pole location extracted using K-matrix formalism that includes two resonance poles, $\psi(2S)$ and $\psi(3770)$.

⁵From the joint analysis of the data on the $D\bar{D}$ and inclusive hadronic cross sections in the $\psi(3770)$ region from BaBar, Belle, BES-II, CLEO and KEDR.

$\psi(3770)$ DECAY MODES

Mode	Fraction (Γ_i/Γ)	Scale factor/ Confidence level
Γ_1 $D\bar{D}$	(93 $^{+8}_{-9}$) %	S=2.0
Γ_2 $D^0\bar{D}^0$	(52 $^{+4}_{-5}$) %	S=2.0
Γ_3 D^+D^-	(41 ± 4) %	S=2.0
Γ_4 $J/\psi X$	(5.0 ± 2.2) $\times 10^{-3}$	
Γ_5 $J/\psi\pi^+\pi^-$	(1.93 ± 0.28) $\times 10^{-3}$	
Γ_6 $J/\psi\pi^0\pi^0$	(8.0 ± 3.0) $\times 10^{-4}$	
Γ_7 $J/\psi\eta$	(8.7 ± 1.2) $\times 10^{-4}$	
Γ_8 $J/\psi\pi^0$	< 2.8 $\times 10^{-4}$	CL=90%
Γ_9 e^+e^-	(9.6 ± 0.7) $\times 10^{-6}$	S=1.3

Decays to light hadrons

Γ_{10} $b_1(1235)\pi$	< 1.4 $\times 10^{-5}$	CL=90%
Γ_{11} $\phi\eta'$	< 2.3 $\times 10^{-5}$	CL=90%
Γ_{12} $\omega\eta'$	< 4 $\times 10^{-4}$	CL=90%
Γ_{13} $\rho^0\eta'$	< 6 $\times 10^{-4}$	CL=90%
Γ_{14} $\phi\eta$	(3.1 ± 0.7) $\times 10^{-4}$	
Γ_{15} $\omega\eta$	< 1.4 $\times 10^{-5}$	CL=90%
Γ_{16} $\rho^0\eta$	< 5 $\times 10^{-4}$	CL=90%
Γ_{17} $\phi\pi^0$	< 3 $\times 10^{-5}$	CL=90%
Γ_{18} $\omega\pi^0$	< 6 $\times 10^{-4}$	CL=90%
Γ_{19} $\pi^+\pi^-\pi^0$	< 5 $\times 10^{-6}$	CL=90%
Γ_{20} $\rho\pi$	< 5 $\times 10^{-6}$	CL=90%
Γ_{21} K^+K^-	not seen	
Γ_{22} $K^*(892)^+K^- + \text{c.c.}$	< 1.4 $\times 10^{-5}$	CL=90%
Γ_{23} $K^*(892)^0\bar{K}^0 + \text{c.c.}$	< 1.2 $\times 10^{-3}$	CL=90%
Γ_{24} $K_S^0K_L^0$	(2.6 $^{+1.4}_{-1.6}$) $\times 10^{-5}$	
Γ_{25} $2(\pi^+\pi^-)$	< 1.12 $\times 10^{-3}$	CL=90%
Γ_{26} $2(\pi^+\pi^-)\pi^0$	< 1.06 $\times 10^{-3}$	CL=90%
Γ_{27} $2(\pi^+\pi^-\pi^0)$	< 5.85 %	CL=90%
Γ_{28} $\omega\pi^+\pi^-$	< 6.0 $\times 10^{-4}$	CL=90%
Γ_{29} $3(\pi^+\pi^-)$	< 9.1 $\times 10^{-3}$	CL=90%
Γ_{30} $3(\pi^+\pi^-)\pi^0$	< 1.37 %	CL=90%
Γ_{31} $3(\pi^+\pi^-)2\pi^0$	< 11.74 %	CL=90%
Γ_{32} $\eta\pi^+\pi^-$	< 1.24 $\times 10^{-3}$	CL=90%
Γ_{33} $\pi^+\pi^-2\pi^0$	< 8.9 $\times 10^{-3}$	CL=90%
Γ_{34} $\rho^0\pi^+\pi^-$	< 6.9 $\times 10^{-3}$	CL=90%
Γ_{35} $\eta3\pi$	< 1.34 $\times 10^{-3}$	CL=90%

Γ_{36}	$\eta 2(\pi^+ \pi^-)$	< 2.43	%	CL=90%
Γ_{37}	$\eta \rho^0 \pi^+ \pi^-$	< 1.45	%	CL=90%
Γ_{38}	$\eta' 3\pi$	< 2.44	$\times 10^{-3}$	CL=90%
Γ_{39}	$K^+ K^- \pi^+ \pi^-$	< 9.0	$\times 10^{-4}$	CL=90%
Γ_{40}	$\phi \pi^+ \pi^-$	< 4.1	$\times 10^{-4}$	CL=90%
Γ_{41}	$K^+ K^- 2\pi^0$	< 4.2	$\times 10^{-3}$	CL=90%
Γ_{42}	$4(\pi^+ \pi^-)$	< 1.67	%	CL=90%
Γ_{43}	$4(\pi^+ \pi^-) \pi^0$	< 3.06	%	CL=90%
Γ_{44}	$\phi f_0(980)$	< 4.5	$\times 10^{-4}$	CL=90%
Γ_{45}	$K^+ K^- \pi^+ \pi^- \pi^0$	< 2.36	$\times 10^{-3}$	CL=90%
Γ_{46}	$K^+ K^- \rho^0 \pi^0$	< 8	$\times 10^{-4}$	CL=90%
Γ_{47}	$K^+ K^- \rho^+ \pi^-$	< 1.46	%	CL=90%
Γ_{48}	$\omega K^+ K^-$	< 3.4	$\times 10^{-4}$	CL=90%
Γ_{49}	$\phi \pi^+ \pi^- \pi^0$	< 3.8	$\times 10^{-3}$	CL=90%
Γ_{50}	$K^{*0} K^- \pi^+ \pi^0 + \text{c.c.}$	< 1.62	%	CL=90%
Γ_{51}	$K^{*+} K^- \pi^+ \pi^- + \text{c.c.}$	< 3.23	%	CL=90%
Γ_{52}	$K^+ K^- \pi^+ \pi^- 2\pi^0$	< 2.67	%	CL=90%
Γ_{53}	$K^+ K^- 2(\pi^+ \pi^-)$	< 1.03	%	CL=90%
Γ_{54}	$K^+ K^- 2(\pi^+ \pi^-) \pi^0$	< 3.60	%	CL=90%
Γ_{55}	$\eta K^+ K^-$	< 4.1	$\times 10^{-4}$	CL=90%
Γ_{56}	$\eta K^+ K^- \pi^+ \pi^-$	< 1.24	%	CL=90%
Γ_{57}	$\rho^0 K^+ K^-$	< 5.0	$\times 10^{-3}$	CL=90%
Γ_{58}	$2(K^+ K^-)$	< 6.0	$\times 10^{-4}$	CL=90%
Γ_{59}	$\phi K^+ K^-$	< 7.5	$\times 10^{-4}$	CL=90%
Γ_{60}	$2(K^+ K^-) \pi^0$	< 2.9	$\times 10^{-4}$	CL=90%
Γ_{61}	$2(K^+ K^-) \pi^+ \pi^-$	< 3.2	$\times 10^{-3}$	CL=90%
Γ_{62}	$K_S^0 K^- \pi^+$	< 3.2	$\times 10^{-3}$	CL=90%
Γ_{63}	$K_S^0 K^- \pi^+ \pi^0$	< 1.33	%	CL=90%
Γ_{64}	$K_S^0 K^- \rho^+$	< 6.6	$\times 10^{-3}$	CL=90%
Γ_{65}	$K_S^0 K^- 2\pi^+ \pi^-$	< 8.7	$\times 10^{-3}$	CL=90%
Γ_{66}	$K_S^0 K^- \pi^+ \rho^0$	< 1.6	%	CL=90%
Γ_{67}	$K_S^0 K^- \pi^+ \eta$	< 1.3	%	CL=90%
Γ_{68}	$K_S^0 K^- 2\pi^+ \pi^- \pi^0$	< 4.18	%	CL=90%
Γ_{69}	$K_S^0 K^- 2\pi^+ \pi^- \eta$	< 4.8	%	CL=90%
Γ_{70}	$K_S^0 K^- \pi^+ 2(\pi^+ \pi^-)$	< 1.22	%	CL=90%
Γ_{71}	$K_S^0 K^- \pi^+ 2\pi^0$	< 2.65	%	CL=90%
Γ_{72}	$K_S^0 K^- K^+ K^- \pi^+$	< 4.9	$\times 10^{-3}$	CL=90%
Γ_{73}	$K_S^0 K^- K^+ K^- \pi^+ \pi^0$	< 3.0	%	CL=90%
Γ_{74}	$K_S^0 K^- K^+ K^- \pi^+ \eta$	< 2.2	%	CL=90%
Γ_{75}	$K^{*0} K^- \pi^+ + \text{c.c.}$	< 9.7	$\times 10^{-3}$	CL=90%
Γ_{76}	$\rho \bar{p}$	not seen		
Γ_{77}	$\rho \bar{p} \pi^0$	< 4	$\times 10^{-5}$	CL=90%
Γ_{78}	$\rho \bar{p} \pi^+ \pi^-$	< 5.8	$\times 10^{-4}$	CL=90%

Γ_{79}	$\Lambda\bar{\Lambda}$	< 1.2	$\times 10^{-4}$	CL=90%
Γ_{80}	$\rho\bar{\rho}\pi^+\pi^-\pi^0$	< 1.85	$\times 10^{-3}$	CL=90%
Γ_{81}	$\omega\rho\bar{\rho}$	< 2.9	$\times 10^{-4}$	CL=90%
Γ_{82}	$\Lambda\bar{\Lambda}\pi^0$	< 7	$\times 10^{-5}$	CL=90%
Γ_{83}	$\rho\bar{\rho}2(\pi^+\pi^-)$	< 2.6	$\times 10^{-3}$	CL=90%
Γ_{84}	$\eta\rho\bar{\rho}$	< 5.4	$\times 10^{-4}$	CL=90%
Γ_{85}	$\eta\rho\bar{\rho}\pi^+\pi^-$	< 3.3	$\times 10^{-3}$	CL=90%
Γ_{86}	$\rho^0\rho\bar{\rho}$	< 1.7	$\times 10^{-3}$	CL=90%
Γ_{87}	$\rho\bar{\rho}K^+K^-$	< 3.2	$\times 10^{-4}$	CL=90%
Γ_{88}	$\eta\rho\bar{\rho}K^+K^-$	< 6.9	$\times 10^{-3}$	CL=90%
Γ_{89}	$\pi^0\rho\bar{\rho}K^+K^-$	< 1.2	$\times 10^{-3}$	CL=90%
Γ_{90}	$\phi\rho\bar{\rho}$	< 1.3	$\times 10^{-4}$	CL=90%
Γ_{91}	$\Lambda\bar{\Lambda}\pi^+\pi^-$	< 2.5	$\times 10^{-4}$	CL=90%
Γ_{92}	$\Lambda\bar{\rho}K^+$	< 2.8	$\times 10^{-4}$	CL=90%
Γ_{93}	$\Lambda\bar{\rho}K^+\pi^+\pi^-$	< 6.3	$\times 10^{-4}$	CL=90%
Γ_{94}	$\Lambda\bar{\Lambda}\eta$	< 1.9	$\times 10^{-4}$	CL=90%
Γ_{95}	$\Sigma^+\bar{\Sigma}^-$	< 1.0	$\times 10^{-4}$	CL=90%
Γ_{96}	$\Sigma^0\bar{\Sigma}^0$	< 4	$\times 10^{-5}$	CL=90%
Γ_{97}	$\Xi^0\bar{\Xi}^0$	< 3.4	$\times 10^{-4}$	CL=90%
Γ_{98}	$\Xi^-\bar{\Xi}^+$	(1.4 ± 0.4)	$\times 10^{-4}$	
Γ_{99}	$\Lambda\bar{\Xi}^+K^- + \text{c.c.}$	< 1.0	$\times 10^{-4}$	CL=90%
Γ_{100}	$\Sigma^0\bar{\Xi}^+K^- + \text{c.c.}$	< 3.4	$\times 10^{-4}$	CL=90%
Γ_{101}	$\rho K^-K^-\bar{\Xi}^+ + \text{c.c.}$	< 7	$\times 10^{-5}$	CL=90%

Radiative decays

Γ_{102}	$\gamma\chi_{c2}$	< 6.4	$\times 10^{-4}$	CL=90%
Γ_{103}	$\gamma\chi_{c1}$	(2.49 ± 0.23)	$\times 10^{-3}$	
Γ_{104}	$\gamma\chi_{c0}$	(7.1 ± 0.6)	$\times 10^{-3}$	
Γ_{105}	$\gamma\eta_c$	< 8	$\times 10^{-4}$	CL=90%
Γ_{106}	$\gamma\eta_c(2S)$	< 9	$\times 10^{-4}$	CL=90%
Γ_{107}	$\gamma\eta'$	< 1.8	$\times 10^{-4}$	CL=90%
Γ_{108}	$\gamma\eta$	< 1.5	$\times 10^{-4}$	CL=90%
Γ_{109}	$\gamma\pi^0$	< 2	$\times 10^{-4}$	CL=90%

FIT INFORMATION

An overall fit to the total width, a partial width, and 3 branching ratios uses 23 measurements to determine 4 parameters. The overall fit has a $\chi^2 = 20.1$ for 19 degrees of freedom.

The following *off-diagonal* array elements are the correlation coefficients $\langle \delta p_i \delta p_j \rangle / (\delta p_i \cdot \delta p_j)$, in percent, from the fit to parameters p_i , including the branching fractions, $x_i \equiv \Gamma_i / \Gamma_{\text{total}}$.

x_3	99		
x_9	0	0	
Γ	0	0	-44
	x_2	x_3	x_9

	Mode	Rate (MeV)	Scale factor
Γ_2	$D^0 \bar{D}^0$	14.0 ± 1.4	1.8
Γ_3	$D^+ D^-$	11.2 ± 1.1	1.7
Γ_9	$e^+ e^-$	$(2.62 \pm 0.18) \times 10^{-4}$	1.4

$\psi(3770)$ PARTIAL WIDTHS

$\Gamma(e^+ e^-)$						Γ_9
VALUE (keV)	EVTS	DOCUMENT ID	TECN	COMMENT		

0.262 ± 0.018 OUR FIT Error includes scale factor of 1.4.

0.256 ± 0.016 OUR AVERAGE Error includes scale factor of 1.2.

$0.154^{+0.079+0.021}_{-0.058-0.027}$		1,2 ANASHIN	12A KEDR	$e^+ e^- \rightarrow D \bar{D}$		
0.22 ± 0.05		3,4 ABLIKIM	08D BES2	$e^+ e^- \rightarrow$ hadrons		
$0.277 \pm 0.011 \pm 0.013$		4 ABLIKIM	07E BES2	$e^+ e^- \rightarrow$ hadrons		
$0.203 \pm 0.003^{+0.041}_{-0.027}$	1.4M	4,5 BESSON	06 CLEO	$e^+ e^- \rightarrow$ hadrons		
0.276 ± 0.050		4 SCHINDLER	80 MRK2	$e^+ e^-$		
0.18 ± 0.06		4 BACINO	78 DLCO	$e^+ e^-$		
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●						
0.196 ± 0.018		⁶ SHAMOV	17 RVUE	$e^+ e^- \rightarrow D \bar{D}$, hadrons		
$0.414^{+0.072+0.093}_{-0.080-0.028}$		2,7 ANASHIN	12A KEDR	$e^+ e^- \rightarrow D \bar{D}$		
0.37 ± 0.09		⁸ RAPIDIS	77 LGW	$e^+ e^-$		

¹ Solution I of the two solutions.

² Taking into account interference between the resonant and non-resonant $D \bar{D}$ production.

³ Reanalysis of data presented in BAI 02C. From a global fit over the center-of-mass energy region 3.7–5.0 GeV covering the $\psi(3770)$, $\psi(4040)$, $\psi(4160)$, and $\psi(4415)$ resonances. Phase angle fixed in the fit to $\delta = 0^\circ$.

⁴ Interference between the resonant and non-resonant $D \bar{D}$ production not taken into account.

⁵ BESSON 06 (as corrected in BESSON 10) measure $\sigma(e^+ e^- \rightarrow \psi(3770) \rightarrow \text{hadrons}) = 6.36 \pm 0.08^{+0.41}_{-0.30}$ nb at $\sqrt{s} = 3773 \pm 1$ MeV, and obtain Γ_{ee} from the Born-level cross section calculated using $\psi(3770)$ mass and width from our 2004 edition, PDG 04.

⁶ From the joint analysis of the data on the $D \bar{D}$ and inclusive hadronic cross sections in the $\psi(3770)$ region from BaBar, Belle, BES-II, CLEO and KEDR.

⁷ Solution II of the two solutions.

⁸ See also $\Gamma(e^+ e^-)/\Gamma_{\text{total}}$ below.

$\psi(3770) \Gamma(i) \times \Gamma(e^+ e^-) / \Gamma(\text{total})$

$$\Gamma(\Sigma^+ \bar{\Sigma}^-) \times \Gamma(e^+ e^-) / \Gamma_{\text{total}} \quad \Gamma_{95} \Gamma_9 / \Gamma$$

VALUE (eV)	CL%	DOCUMENT ID	TECN	COMMENT
$<101.5 \times 10^{-3}$	90	¹ ABLIKIM	24AH BES3	$e^+ e^- \rightarrow \Sigma^+ \bar{\Sigma}^-$

¹ Interference effect between resonance and continuum amplitudes is considered. Two solutions from the fit.

$$\Gamma(\Sigma^0 \bar{\Sigma}^0) \times \Gamma(e^+ e^-) / \Gamma_{\text{total}} \quad \Gamma_{96} \Gamma_9 / \Gamma$$

VALUE (eV)	CL%	DOCUMENT ID	TECN	COMMENT
$<29.2 \times 10^{-3}$	90	¹ ABLIKIM	25U BES3	$e^+ e^- \rightarrow \Sigma^0 \bar{\Sigma}^0$

¹ Interference effect between resonance and continuum amplitudes is considered. Upper limit is for the larger of the two solutions from the fit.

$$\Gamma(\Xi^0 \bar{\Xi}^0) \times \Gamma(e^+ e^-) / \Gamma_{\text{total}} \quad \Gamma_{97} \Gamma_9 / \Gamma$$

VALUE (eV)	CL%	DOCUMENT ID	TECN	COMMENT
$<89.0 \times 10^{-3}$	90	¹ ABLIKIM	24CD BES3	$e^+ e^- \rightarrow \psi(3770)$

¹ From a fit to $e^+ e^- \rightarrow \Xi^0 \bar{\Xi}^0$ cross sections.

$$\Gamma(\Xi^- \bar{\Xi}^+) \times \Gamma(e^+ e^-) / \Gamma_{\text{total}} \quad \Gamma_{98} \Gamma_9 / \Gamma$$

VALUE (eV)	DOCUMENT ID	TECN	COMMENT
$(3.55 \pm 0.92) \times 10^{-2}$	¹ ABLIKIM	23BK BES3	$e^+ e^- \rightarrow \psi(3770)$

¹ From a fit to $e^+ e^- \rightarrow \Xi^- \bar{\Xi}^+$ cross sections. Signal significance is 4.5σ .

$$\Gamma(\Lambda \bar{\Xi}^+ K^- + \text{c.c.}) \times \Gamma(e^+ e^-) / \Gamma_{\text{total}} \quad \Gamma_{99} \Gamma_9 / \Gamma$$

VALUE (eV)	CL%	DOCUMENT ID	TECN	COMMENT
$<25.0 \times 10^{-3}$	90	¹ ABLIKIM	24AL BES3	$e^+ e^- \rightarrow \Lambda \bar{\Xi}^+ K^- + \text{c.c.}$

¹ A fit to the Born cross section of $e^+ e^- \rightarrow \Lambda \bar{\Xi}^+ K^- + \text{c.c.}$ including interference with the continuum. Two solutions from the fit.

$$\Gamma(\Sigma^0 \bar{\Xi}^+ K^- + \text{c.c.}) \times \Gamma(e^+ e^-) / \Gamma_{\text{total}} \quad \Gamma_{100} \Gamma_9 / \Gamma$$

VALUE (eV)	CL%	DOCUMENT ID	TECN	COMMENT
$<89.5 \times 10^{-3}$	90	¹ ABLIKIM	24AL BES3	$e^+ e^- \rightarrow \Sigma^0 \bar{\Xi}^+ K^- + \text{c.c.}$

¹ A fit to the Born cross section of $e^+ e^- \rightarrow \Sigma^0 \bar{\Xi}^+ K^- + \text{c.c.}$ including interference with the continuum. Two solutions from the fit.

$$\Gamma(e^+ e^-) \times \Gamma(p K^- K^- \bar{\Xi}^+ + \text{c.c.}) / \Gamma_{\text{total}} \quad \Gamma_9 \Gamma_{101} / \Gamma$$

VALUE (eV)	CL%	DOCUMENT ID	TECN	COMMENT
$<19.2 \times 10^{-3}$	90	ABLIKIM	25CF BES3	$e^+ e^- \rightarrow p K^- K^- \bar{\Xi}^+ + \text{c.c.}$

$\psi(3770)$ BRANCHING RATIOS

$\Gamma(D\bar{D})/\Gamma_{\text{total}}$ $\Gamma_1/\Gamma = (\Gamma_2 + \Gamma_3)/\Gamma$
VALUE EVTS DOCUMENT ID TECN COMMENT

0.93 $^{+0.08}_{-0.09}$ **OUR FIT** Error includes scale factor of 2.0.

0.93 $^{+0.08}_{-0.09}$ **OUR AVERAGE** Error includes scale factor of 2.1.

0.849 ± 0.056 ± 0.018 ¹ ABLIKIM 08B BES2 $e^+e^- \rightarrow \text{non-}D\bar{D}$
 1.033 ± 0.014 $^{+0.048}_{-0.066}$ 1.427M ² BESSON 06 CLEO $e^+e^- \rightarrow \text{hadrons}$

• • • We do not use the following data for averages, fits, limits, etc. • • •

0.836 ± 0.049 ³ SHAMOV 17 RVUE $e^+e^- \rightarrow D\bar{D}$, hadrons
 0.866 ± 0.050 ± 0.036 ^{4,5} ABLIKIM 07K BES2 $e^+e^- \rightarrow \text{non-}D\bar{D}$
 0.836 ± 0.073 ± 0.042 ⁵ ABLIKIM 06L BES2 $e^+e^- \rightarrow D\bar{D}$
 0.855 ± 0.017 ± 0.058 ^{5,6} ABLIKIM 06N BES2 $e^+e^- \rightarrow D\bar{D}$

¹ Neglecting interference.

² Obtained by comparing a measurement of the total cross section (corrected in BESSON 10) with that of $D\bar{D}$ reported by CLEO in DOBBS 07.

³ From the joint analysis of the data on the $D\bar{D}$ and inclusive hadronic cross sections in the $\psi(3770)$ region from BaBar, Belle, BES-II, CLEO and KEDR.

⁴ Using $\sigma^{obs} = 7.07 \pm 0.58$ nb and neglecting interference.

⁵ Not independent of ABLIKIM 08B.

⁶ From a measurement of $\sigma(e^+e^- \rightarrow D\bar{D})$ at $\sqrt{s} = 3773$ MeV, using the $\psi(3770)$ resonance parameters measured by ABLIKIM 06L.

$\Gamma(D^0\bar{D}^0)/\Gamma_{\text{total}}$ Γ_2/Γ
VALUE DOCUMENT ID TECN COMMENT

0.52 $^{+0.04}_{-0.05}$ **OUR FIT** Error includes scale factor of 2.0.

• • • We do not use the following data for averages, fits, limits, etc. • • •

0.467 ± 0.047 ± 0.023 ABLIKIM 06L BES2 $e^+e^- \rightarrow D^0\bar{D}^0$
 0.499 ± 0.013 ± 0.038 ¹ ABLIKIM 06N BES2 $e^+e^- \rightarrow D^0\bar{D}^0$

¹ From a measurement of $\sigma(e^+e^- \rightarrow D\bar{D})$ at $\sqrt{s} = 3773$ MeV, using the $\psi(3770)$ resonance parameters measured by ABLIKIM 06L.

$\Gamma(D^+D^-)/\Gamma_{\text{total}}$ Γ_3/Γ
VALUE DOCUMENT ID TECN COMMENT

0.41 ± 0.04 **OUR FIT** Error includes scale factor of 2.0.

• • • We do not use the following data for averages, fits, limits, etc. • • •

0.369 ± 0.037 ± 0.028 ABLIKIM 06L BES2 $e^+e^- \rightarrow D^+D^-$
 0.357 ± 0.011 ± 0.034 ¹ ABLIKIM 06N BES2 $e^+e^- \rightarrow D^+D^-$

¹ From a measurement of $\sigma(e^+e^- \rightarrow D\bar{D})$ at $\sqrt{s} = 3773$ MeV, using the $\psi(3770)$ resonance parameters measured by ABLIKIM 06L.

$\Gamma(D^0\bar{D}^0)/\Gamma(D^+D^-)$ Γ_2/Γ_3
VALUE EVTS DOCUMENT ID TECN COMMENT

1.253 ± 0.016 **OUR FIT**

1.253 ± 0.016 **OUR AVERAGE**

1.252 ± 0.009 ± 0.013 5.3M BONVICINI 14 CLEO $e^+e^- \rightarrow D\bar{D}$

1.39 ± 0.31 ± 0.12		PAKHLOVA	08	BELL	10.6	$e^+e^- \rightarrow D\bar{D}\gamma$
1.78 ± 0.33 ± 0.24		AUBERT	07BE	BABR		$e^+e^- \rightarrow D\bar{D}\gamma$
1.27 ± 0.12 ± 0.08		ABLIKIM	06L	BES2		$e^+e^- \rightarrow D\bar{D}$
2.43 ± 1.50 ± 0.43	34	¹ CHISTOV	04	BELL		$B^+ \rightarrow \psi(3770)K^+$

• • • We do not use the following data for averages, fits, limits, etc. • • •

1.258 ± 0.016 ± 0.014		² DOBBS	07	CLEO		$e^+e^- \rightarrow D\bar{D}$
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¹See ADLER 88C for older measurements of this quantity.

²Superseded by BONVICINI 14.

$\Gamma(J/\psi X)/\Gamma_{\text{total}}$ Γ_4/Γ

VALUE (%)		DOCUMENT ID	TECN	COMMENT
0.5 ± 0.2 ± 0.1		¹ ABLIKIM	21Z	BES3 $e^+e^- \rightarrow \ell^+\ell^-X$

¹From a fit to the $e^+e^- \rightarrow J/\psi X$ cross section between 3.645 and 3.891 GeV, with $\psi(2S)$ and $\psi(3770)$ masses, total widths and leptonic widths fixed to the values from the PDG 20. An alternative fit with an improved χ^2 , corresponding to a significance of 5.3σ , uses an additional resonance with a mass of $3766.2 \pm 3.8 \pm 0.4$ MeV/ c^2 , a total width of $22.2 \pm 5.9 \pm 1.4$ MeV, and $\Gamma(e e) \cdot B(J/\psi X) = 79.4 \pm 85.5 \pm 11.7$ eV, possibly compatible with the results of ABLIKIM 08H.

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

VALUE (units 10^{-3})	EVTS	DOCUMENT ID	TECN	COMMENT
1.93 ± 0.28 OUR AVERAGE				
1.89 ± 0.20 ± 0.20	231 ± 33	ADAM	06	CLEO $e^+e^- \rightarrow \psi(3770)$
3.4 ± 1.4 ± 0.9	17.8 ± 4.8	BAI	05	BES2 $e^+e^- \rightarrow \psi(3770)$

$\Gamma(J/\psi \pi^0 \pi^0)/\Gamma_{\text{total}}$ Γ_6/Γ

VALUE (units 10^{-2})	EVTS	DOCUMENT ID	TECN	COMMENT
0.080 ± 0.025 ± 0.016	39 ± 14	ADAM	06	CLEO $e^+e^- \rightarrow \psi(3770)$

$\Gamma(J/\psi \eta)/\Gamma_{\text{total}}$ Γ_7/Γ

VALUE (units 10^{-4})	EVTS	DOCUMENT ID	TECN	COMMENT
8.7 ± 1.2 OUR AVERAGE				
8.7 ± 1.0 ± 0.8	232 ± 23	¹ ABLIKIM	23V	BES3 $e^+e^- \rightarrow \psi(3770)$
8.7 ± 3.3 ± 2.2	22 ± 10	ADAM	06	CLEO $e^+e^- \rightarrow \psi(3770)$

¹Incoherent fit. Alternate fits that include interference with background yield results between $(11.2 \pm 5.8 \pm 1.1) \times 10^{-4}$ and $(11.6 \pm 6.0 \pm 1.1) \times 10^{-4}$.

$\Gamma(J/\psi \pi^0)/\Gamma_{\text{total}}$ Γ_8/Γ

VALUE (units 10^{-5})	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
<28	90	<10	ADAM	06	CLEO $e^+e^- \rightarrow \psi(3770)$

$\Gamma(e^+ e^-)/\Gamma_{\text{total}}$ Γ_9/Γ

VALUE (units 10^{-5})		DOCUMENT ID	TECN	COMMENT
0.96 ± 0.07 OUR FIT	Error includes scale factor of 1.3.			
1.3 ± 0.2		RAPIDIS	77	LGW e^+e^-

————— DECAYS TO LIGHT HADRONS —————

 $\Gamma(b_1(1235)\pi)/\Gamma_{\text{total}}$ Γ_{10}/Γ

VALUE (units 10^{-5})	CL%	DOCUMENT ID	TECN	COMMENT
<1.4	90	¹ ADAMS	06	CLEO $e^+e^- \rightarrow \psi(3770)$

¹ Comparing cross sections at $\sqrt{s} = 3.773$ GeV and $\sqrt{s} = 3.671$ GeV, neglecting interference, and using $\sigma(\psi(3770) \rightarrow D\bar{D}) = 6.39 \pm 0.20$ nb.

 $\Gamma(\phi\eta')/\Gamma_{\text{total}}$ Γ_{11}/Γ

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<2.3 $\times 10^{-5}$	90	¹ ABLIKIM	23BC	BES3 $e^+e^- \rightarrow \psi(3770)$

• • • We do not use the following data for averages, fits, limits, etc. • • •

<7 $\times 10^{-4}$	90	² ADAMS	06	CLEO $e^+e^- \rightarrow \psi(3770)$
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¹ ABLIKIM 23BC fit to $e^+e^- \rightarrow \phi\eta'$ cross sections between 3.508 and 4.951 GeV considering interference between continuum and $\psi(3770)$ amplitudes.

² ADAMS 06 compare cross sections at $\sqrt{s} = 3.773$ GeV and $\sqrt{s} = 3.671$ GeV, neglecting interference, and using $\sigma(\psi(3770) \rightarrow D\bar{D}) = 6.39 \pm 0.20$ nb.

 $\Gamma(\omega\eta')/\Gamma_{\text{total}}$ Γ_{12}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
<4	90	¹ ADAMS	06	CLEO $e^+e^- \rightarrow \psi(3770)$

¹ Comparing cross sections at $\sqrt{s} = 3.773$ GeV and $\sqrt{s} = 3.671$ GeV, neglecting interference, and using $\sigma(\psi(3770) \rightarrow D\bar{D}) = 6.39 \pm 0.20$ nb.

 $\Gamma(\rho^0\eta')/\Gamma_{\text{total}}$ Γ_{13}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
<6	90	¹ ADAMS	06	CLEO $e^+e^- \rightarrow \psi(3770)$

¹ Comparing cross sections at $\sqrt{s} = 3.773$ GeV and $\sqrt{s} = 3.671$ GeV, neglecting interference, and using $\sigma(\psi(3770) \rightarrow D\bar{D}) = 6.39 \pm 0.20$ nb.

 $\Gamma(\phi\eta)/\Gamma_{\text{total}}$ Γ_{14}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
3.1\pm0.6\pm0.3		¹ ADAMS	06	CLEO $3.773 e^+e^- \rightarrow \phi\eta$

• • • We do not use the following data for averages, fits, limits, etc. • • •

<19	90	² ABLIKIM	07B	BES2 $e^+e^- \rightarrow \psi(3770)$
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¹ Comparing cross sections at $\sqrt{s} = 3.773$ GeV and $\sqrt{s} = 3.671$ GeV, neglecting interference, and using $\sigma(\psi(3770) \rightarrow D\bar{D}) = 6.39 \pm 0.20$ nb.

² Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

 $\Gamma(\omega\eta)/\Gamma_{\text{total}}$ Γ_{15}/Γ

VALUE (units 10^{-5})	CL%	DOCUMENT ID	TECN	COMMENT
<1.4	90	¹ ADAMS	06	CLEO $e^+e^- \rightarrow \psi(3770)$

¹ Comparing cross sections at $\sqrt{s} = 3.773$ GeV and $\sqrt{s} = 3.671$ GeV, neglecting interference, and using $\sigma(\psi(3770) \rightarrow D\bar{D}) = 6.39 \pm 0.20$ nb.

$\Gamma(\rho^0\eta)/\Gamma_{\text{total}}$ **Γ_{16}/Γ**

<u>VALUE (units 10^{-4})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<5	90	¹ ADAMS	06	CLEO $e^+e^- \rightarrow \psi(3770)$

¹ Comparing cross sections at $\sqrt{s} = 3.773$ GeV and $\sqrt{s} = 3.671$ GeV, neglecting interference, and using $\sigma(\psi(3770) \rightarrow D\bar{D}) = 6.39 \pm 0.20$ nb.

$\Gamma(\phi\pi^0)/\Gamma_{\text{total}}$ **Γ_{17}/Γ**

<u>VALUE (units 10^{-5})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
< 3	90	¹ ADAMS	06	CLEO $e^+e^- \rightarrow \psi(3770)$

• • • We do not use the following data for averages, fits, limits, etc. • • •

<50	90	² ABLIKIM	07B	BES2 $e^+e^- \rightarrow \psi(3770)$
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¹ Comparing cross sections at $\sqrt{s} = 3.773$ GeV and $\sqrt{s} = 3.671$ GeV, neglecting interference, and using $\sigma(\psi(3770) \rightarrow D\bar{D}) = 6.39 \pm 0.20$ nb.

² Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

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

<u>VALUE (units 10^{-4})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<6	90	¹ ADAMS	06	CLEO $e^+e^- \rightarrow \psi(3770)$

¹ Comparing cross sections at $\sqrt{s} = 3.773$ GeV and $\sqrt{s} = 3.671$ GeV, neglecting interference, and using $\sigma(\psi(3770) \rightarrow D\bar{D}) = 6.39 \pm 0.20$ nb.

$\Gamma(\pi^+\pi^-\pi^0)/\Gamma_{\text{total}}$ **Γ_{19}/Γ**

<u>VALUE (units 10^{-6})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<5	90	^{1,2} ADAMS	06	CLEO $e^+e^- \rightarrow \psi(3770)$

¹ Data suggest possible destructive interference with continuum.

² Comparing cross sections at $\sqrt{s} = 3.773$ GeV and $\sqrt{s} = 3.671$ GeV, neglecting interference, and using $\sigma(\psi(3770) \rightarrow D\bar{D}) = 6.39 \pm 0.20$ nb.

$\Gamma(\rho\pi)/\Gamma_{\text{total}}$ **Γ_{20}/Γ**

<u>VALUE (units 10^{-6})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<5	90	^{1,2} ADAMS	06	CLEO $e^+e^- \rightarrow \psi(3770)$

¹ Comparing cross sections at $\sqrt{s} = 3.773$ GeV and $\sqrt{s} = 3.671$ GeV, neglecting interference, and using $\sigma(\psi(3770) \rightarrow D\bar{D}) = 6.39 \pm 0.20$ nb.

² Data suggest possible destructive interference with continuum.

$\Gamma(K^+K^-)/\Gamma_{\text{total}}$ **Γ_{21}/Γ**

<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
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• • • We do not use the following data for averages, fits, limits, etc. • • •

$\sim 10^{-5}$	¹ DRUZHININ	15	RVUE $e^+e^- \rightarrow \psi(3770)$
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¹ DRUZHININ 15 uses BABAR and CLEO data taking into account interference of the processes $e^+e^- \rightarrow K^+K^-$ and $e^+e^- \rightarrow K_S^0 K_L^0$.

$\Gamma(K^*(892)^+K^- + \text{c.c.})/\Gamma_{\text{total}}$ **Γ_{22}/Γ**

<u>VALUE (units 10^{-5})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<1.4	90	¹ ADAMS	06	CLEO $e^+e^- \rightarrow \psi(3770)$

¹ Comparing cross sections at $\sqrt{s} = 3.773$ GeV and $\sqrt{s} = 3.671$ GeV, neglecting interference, and using $\sigma(\psi(3770) \rightarrow D\bar{D}) = 6.39 \pm 0.20$ nb.

$\Gamma(K^*(892)^0 \bar{K}^0 + \text{c.c.})/\Gamma_{\text{total}}$ Γ_{23}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID	TECN	COMMENT
<1.2	90	¹ ADAMS 06	CLEO	$e^+ e^- \rightarrow \psi(3770)$

¹ Comparing cross sections at $\sqrt{s} = 3.773$ GeV and $\sqrt{s} = 3.671$ GeV, neglecting interference, and using $\sigma(\psi(3770) \rightarrow D\bar{D}) = 6.39 \pm 0.20$ nb.

 $\Gamma(K_S^0 K_L^0)/\Gamma_{\text{total}}$ Γ_{24}/Γ

VALUE (units 10^{-5})	CL%	DOCUMENT ID	TECN	COMMENT
$2.63^{+1.40}_{-1.59}$		¹ ABLIKIM 24A	BES3	$e^+ e^- \rightarrow K_S^0 K_L^0 (K_S^0 \rightarrow \pi^+ \pi^-)$

• • • We do not use the following data for averages, fits, limits, etc. • • •

< 1.2 90 ² CRONIN-HEN..06 CLEO $e^+ e^- \rightarrow \psi(3770)$

<21 90 ³ ABLIKIM 04F BES $e^+ e^- \rightarrow \psi(3770)$

¹ From the 1σ contour in the B.R. versus ϕ (relative phase between the continuum and $\psi(3770)$ amplitudes) likelihood scan. Mass, total width and electronic width of $\psi(3770)$ fixed at PDG 22 values.

² Using $\sigma(e^+ e^- \rightarrow \psi(3770) \rightarrow \text{hadrons}) = (6.38 \pm 0.08^{+0.41}_{-0.30})$ nb from BESSON 06 and $B(K_S^0 \rightarrow \pi^+ \pi^-) = 0.6895 \pm 0.0014$.

³ Using $B(K_S^0 \rightarrow \pi^+ \pi^-) = 0.6860 \pm 0.0027$.

 $\Gamma(2(\pi^+ \pi^-))/\Gamma_{\text{total}}$ Γ_{25}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
<11.2	90	¹ HUANG 06A	CLEO	$e^+ e^- \rightarrow \psi(3770)$

• • • We do not use the following data for averages, fits, limits, etc. • • •

<48 90 ² ABLIKIM 07B BES2 $e^+ e^- \rightarrow \psi(3770)$

¹ Using $\sigma_{\text{tot}}(e^+ e^- \rightarrow \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.

² Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{\text{obs}}(e^+ e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

 $\Gamma(2(\pi^+ \pi^- \pi^0))/\Gamma_{\text{total}}$ Γ_{26}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
<10.6	90	¹ HUANG 06A	CLEO	$e^+ e^- \rightarrow \psi(3770)$

• • • We do not use the following data for averages, fits, limits, etc. • • •

<62 90 ² ABLIKIM 07B BES2 $e^+ e^- \rightarrow \psi(3770)$

¹ Using $\sigma_{\text{tot}}(e^+ e^- \rightarrow \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.

² Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{\text{obs}}(e^+ e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

 $\Gamma(2(\pi^+ \pi^- \pi^0))/\Gamma_{\text{total}}$ Γ_{27}/Γ

VALUE (units 10^{-3})	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
<58.5	90	305	ABLIKIM 08N	BES2	$e^+ e^- \rightarrow \psi(3770)$

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

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
< 6.0	90	¹ HUANG 06A	CLEO	$e^+ e^- \rightarrow \psi(3770)$

• • • We do not use the following data for averages, fits, limits, etc. • • •

<55 90 ² ABLIKIM 07I BES2 $3.77 e^+ e^-$

¹ Using $\sigma_{tot}(e^+e^- \rightarrow \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.

² Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(3(\pi^+\pi^-))/\Gamma_{total}$ Γ_{29}/Γ

<u>VALUE (units 10^{-4})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<91	90	¹ ABLIKIM	07B	BES2 $e^+e^- \rightarrow \psi(3770)$

¹ Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(3(\pi^+\pi^-)\pi^0)/\Gamma_{total}$ Γ_{30}/Γ

<u>VALUE (units 10^{-4})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<137	90	¹ ABLIKIM	07B	BES2 $e^+e^- \rightarrow \psi(3770)$

¹ Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(3(\pi^+\pi^-)2\pi^0)/\Gamma_{total}$ Γ_{31}/Γ

<u>VALUE (units 10^{-3})</u>	<u>CL%</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<117.4	90	59	ABLIKIM	08N	BES2 $e^+e^- \rightarrow \psi(3770)$

$\Gamma(\eta\pi^+\pi^-)/\Gamma_{total}$ Γ_{32}/Γ

<u>VALUE (units 10^{-3})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<1.24	90	¹ HUANG	06A	CLEO $e^+e^- \rightarrow \psi(3770)$

• • • We do not use the following data for averages, fits, limits, etc. • • •

<2.3	90	² ABLIKIM	10D	BES2 $e^+e^- \rightarrow \psi(3770)$
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¹ Using $\sigma_{tot}(e^+e^- \rightarrow \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.

² Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(\pi^+\pi^-2\pi^0)/\Gamma_{total}$ Γ_{33}/Γ

<u>VALUE (units 10^{-3})</u>	<u>CL%</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<8.9	90	218	ABLIKIM	08N	BES2 $e^+e^- \rightarrow \psi(3770)$

$\Gamma(\rho^0\pi^+\pi^-)/\Gamma_{total}$ Γ_{34}/Γ

<u>VALUE (units 10^{-3})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<6.9	90	¹ ABLIKIM	07F	BES2 $e^+e^- \rightarrow \psi(3770)$

¹ Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(\eta3\pi)/\Gamma_{total}$ Γ_{35}/Γ

<u>VALUE (units 10^{-4})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<13.4	90	¹ HUANG	06A	CLEO $e^+e^- \rightarrow \psi(3770)$

¹ Using $\sigma_{tot}(e^+e^- \rightarrow \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.

$\Gamma(\eta2(\pi^+\pi^-))/\Gamma_{total}$ Γ_{36}/Γ

<u>VALUE (units 10^{-4})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<243	90	¹ ABLIKIM	07B	BES2 $e^+e^- \rightarrow \psi(3770)$

¹ Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(\eta\rho^0\pi^+\pi^-)/\Gamma_{total}$ Γ_{37}/Γ

VALUE (units 10^{-2})	CL%	DOCUMENT ID	TECN	COMMENT
<1.45	90	¹ ABLIKIM 10D	BES2	$e^+e^- \rightarrow \psi(3770)$

¹ Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(\eta'3\pi)/\Gamma_{total}$ Γ_{38}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
<24.4	90	¹ HUANG 06A	CLEO	$e^+e^- \rightarrow \psi(3770)$

¹ Using $\sigma_{tot}(e^+e^- \rightarrow \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.

$\Gamma(K^+K^-\pi^+\pi^-)/\Gamma_{total}$ Γ_{39}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
< 9.0	90	¹ HUANG 06A	CLEO	$e^+e^- \rightarrow \psi(3770)$
• • •		We do not use the following data for averages, fits, limits, etc. • • •		
<48	90	² ABLIKIM 07B	BES2	$e^+e^- \rightarrow \psi(3770)$

¹ Using $\sigma_{tot}(e^+e^- \rightarrow \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.

² Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(\phi\pi^+\pi^-)/\Gamma_{total}$ Γ_{40}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
< 4.1	90	¹ HUANG 06A	CLEO	$e^+e^- \rightarrow \psi(3770)$
• • •		We do not use the following data for averages, fits, limits, etc. • • •		
<16	90	² ABLIKIM 07B	BES2	$e^+e^- \rightarrow \psi(3770)$

¹ Using $\sigma_{tot}(e^+e^- \rightarrow \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.

² Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(K^+K^-2\pi^0)/\Gamma_{total}$ Γ_{41}/Γ

VALUE (units 10^{-3})	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
<4.2	90	14	ABLIKIM 08N	BES2	$e^+e^- \rightarrow \psi(3770)$

$\Gamma(4(\pi^+\pi^-))/\Gamma_{total}$ Γ_{42}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID	TECN	COMMENT
<16.7	90	¹ ABLIKIM 07F	BES2	$e^+e^- \rightarrow \psi(3770)$

¹ Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(4(\pi^+\pi^-)\pi^0)/\Gamma_{total}$ Γ_{43}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID	TECN	COMMENT
<30.6	90	¹ ABLIKIM 07F	BES2	$e^+e^- \rightarrow \psi(3770)$

¹ Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(\phi f_0(980))/\Gamma_{\text{total}}$ Γ_{44}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
<4.5	90	¹ HUANG	06A	CLEO $e^+e^- \rightarrow \psi(3770)$

¹ Using $\sigma_{\text{tot}}(e^+e^- \rightarrow \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.

 $\Gamma(K^+K^-\pi^+\pi^-\pi^0)/\Gamma_{\text{total}}$ Γ_{45}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
< 23.6	90	¹ HUANG	06A	CLEO $e^+e^- \rightarrow \psi(3770)$

• • • We do not use the following data for averages, fits, limits, etc. • • •

<111	90	² ABLIKIM	07B	BES2 $e^+e^- \rightarrow \psi(3770)$
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¹ Using $\sigma_{\text{tot}}(e^+e^- \rightarrow \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.

² Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{\text{obs}}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

 $\Gamma(K^+K^-\rho^0\pi^0)/\Gamma_{\text{total}}$ Γ_{46}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
<8	90	¹ ABLIKIM	07I	BES2 $3.77 e^+e^-$

¹ Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{\text{obs}}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

 $\Gamma(K^+K^-\rho^+\pi^-)/\Gamma_{\text{total}}$ Γ_{47}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
<146	90	¹ ABLIKIM	07I	BES2 $3.77 e^+e^-$

¹ Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{\text{obs}}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

 $\Gamma(\omega K^+K^-)/\Gamma_{\text{total}}$ Γ_{48}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
< 3.4	90	¹ HUANG	06A	CLEO $e^+e^- \rightarrow \psi(3770)$

• • • We do not use the following data for averages, fits, limits, etc. • • •

<66	90	² ABLIKIM	07I	BES2 $3.77 e^+e^-$
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¹ Using $\sigma_{\text{tot}}(e^+e^- \rightarrow \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.

² Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{\text{obs}}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

 $\Gamma(\phi\pi^+\pi^-\pi^0)/\Gamma_{\text{total}}$ Γ_{49}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
<38	90	¹ ABLIKIM	07I	BES2 $3.77 e^+e^-$

¹ Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{\text{obs}}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

 $\Gamma(K^{*0}K^-\pi^+\pi^0 + \text{c.c.})/\Gamma_{\text{total}}$ Γ_{50}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
<162	90	¹ ABLIKIM	07I	BES2 $3.77 e^+e^-$

¹ Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{\text{obs}}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(K^{*+}K^{-}\pi^{+}\pi^{-} + \text{c.c.})/\Gamma_{\text{total}}$ Γ_{51}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
<323	90	¹ ABLIKIM 07I	BES2	$3.77 e^{+}e^{-}$

¹ Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^{+}e^{-} \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(K^{+}K^{-}\pi^{+}\pi^{-}2\pi^{0})/\Gamma_{\text{total}}$ Γ_{52}/Γ

VALUE (units 10^{-3})	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
<26.7	90	24	ABLIKIM 08N	BES2	$e^{+}e^{-} \rightarrow \psi(3770)$

$\Gamma(K^{+}K^{-}2(\pi^{+}\pi^{-}))/\Gamma_{\text{total}}$ Γ_{53}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID	TECN	COMMENT
<10.3	90	¹ ABLIKIM 07F	BES2	$e^{+}e^{-} \rightarrow \psi(3770)$

¹ Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^{+}e^{-} \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(K^{+}K^{-}2(\pi^{+}\pi^{-})\pi^{0})/\Gamma_{\text{total}}$ Γ_{54}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID	TECN	COMMENT
<36.0	90	¹ ABLIKIM 07F	BES2	$e^{+}e^{-} \rightarrow \psi(3770)$

¹ Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^{+}e^{-} \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(\eta K^{+}K^{-})/\Gamma_{\text{total}}$ Γ_{55}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
< 4.1	90	¹ HUANG 06A	CLEO	$e^{+}e^{-} \rightarrow \psi(3770)$

• • • We do not use the following data for averages, fits, limits, etc. • • •

<31	90	² ABLIKIM 10D	BES2	$e^{+}e^{-} \rightarrow \psi(3770)$
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¹ Using $\sigma_{tot}(e^{+}e^{-} \rightarrow \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.

² Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^{+}e^{-} \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(\eta K^{+}K^{-}\pi^{+}\pi^{-})/\Gamma_{\text{total}}$ Γ_{56}/Γ

VALUE (units 10^{-2})	CL%	DOCUMENT ID	TECN	COMMENT
<1.24	90	¹ ABLIKIM 10D	BES2	$e^{+}e^{-} \rightarrow \psi(3770)$

¹ Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^{+}e^{-} \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(\rho^{0}K^{+}K^{-})/\Gamma_{\text{total}}$ Γ_{57}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID	TECN	COMMENT
<5.0	90	¹ ABLIKIM 07F	BES2	$e^{+}e^{-} \rightarrow \psi(3770)$

¹ Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^{+}e^{-} \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(2(K^{+}K^{-}))/\Gamma_{\text{total}}$ Γ_{58}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
< 6.0	90	¹ HUANG 06A	CLEO	$e^{+}e^{-} \rightarrow \psi(3770)$

• • • We do not use the following data for averages, fits, limits, etc. • • •

<17 90 ² ABLIKIM 07B BES2 $e^+e^- \rightarrow \psi(3770)$

¹ Using $\sigma_{tot}(e^+e^- \rightarrow \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.

² Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(\phi K^+ K^-)/\Gamma_{total}$ Γ_{59}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
< 7.5	90	¹ HUANG 06A	CLEO	$e^+e^- \rightarrow \psi(3770)$

• • • We do not use the following data for averages, fits, limits, etc. • • •

<24 90 ² ABLIKIM 07B BES2 $e^+e^- \rightarrow \psi(3770)$

¹ Using $\sigma_{tot}(e^+e^- \rightarrow \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.

² Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(2(K^+ K^-)\pi^0)/\Gamma_{total}$ Γ_{60}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
< 2.9	90	¹ HUANG 06A	CLEO	$e^+e^- \rightarrow \psi(3770)$

• • • We do not use the following data for averages, fits, limits, etc. • • •

<46 90 ² ABLIKIM 07B BES2 $e^+e^- \rightarrow \psi(3770)$

¹ Using $\sigma_{tot}(e^+e^- \rightarrow \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.

² Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(2(K^+ K^-)\pi^+\pi^-)/\Gamma_{total}$ Γ_{61}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID	TECN	COMMENT
<3.2	90	¹ ABLIKIM 07F	BES2	$e^+e^- \rightarrow \psi(3770)$

¹ Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(K_S^0 K^- \pi^+)/\Gamma_{total}$ Γ_{62}/Γ

VALUE (units 10^{-3})	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
<3.2	90	18	ABLIKIM 08M	BES2	$e^+e^- \rightarrow \psi(3770)$

$\Gamma(K_S^0 K^- \pi^+\pi^0)/\Gamma_{total}$ Γ_{63}/Γ

VALUE (units 10^{-3})	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
<13.3	90	40	ABLIKIM 08M	BES2	$e^+e^- \rightarrow \psi(3770)$

$\Gamma(K_S^0 K^- \rho^+)/\Gamma_{total}$ Γ_{64}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID	TECN	COMMENT
<6.6	90	ABLIKIM 09C	BES2	$e^+e^- \rightarrow \psi(3770)$

$\Gamma(K_S^0 K^- 2\pi^+\pi^-)/\Gamma_{total}$ Γ_{65}/Γ

VALUE (units 10^{-3})	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
<8.7	90	39	ABLIKIM 08M	BES2	$e^+e^- \rightarrow \psi(3770)$

$\Gamma(K_S^0 K^- \pi^+ \rho^0)/\Gamma_{\text{total}}$ Γ_{66}/Γ

VALUE (units 10^{-2})	CL%	DOCUMENT ID	TECN	COMMENT
<1.6	90	ABLIKIM	09C	BES2 $e^+ e^- \rightarrow \psi(3770)$

 $\Gamma(K_S^0 K^- \pi^+ \eta)/\Gamma_{\text{total}}$ Γ_{67}/Γ

VALUE (units 10^{-2})	CL%	DOCUMENT ID	TECN	COMMENT
<1.3	90	ABLIKIM	09C	BES2 $e^+ e^- \rightarrow \psi(3770)$

 $\Gamma(K_S^0 K^- 2\pi^+ \pi^- \pi^0)/\Gamma_{\text{total}}$ Γ_{68}/Γ

VALUE (units 10^{-3})	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
<41.8	90	23	ABLIKIM	08M	BES2 $e^+ e^- \rightarrow \psi(3770)$

 $\Gamma(K_S^0 K^- 2\pi^+ \pi^- \eta)/\Gamma_{\text{total}}$ Γ_{69}/Γ

VALUE (units 10^{-2})	CL%	DOCUMENT ID	TECN	COMMENT
<4.8	90	ABLIKIM	09C	BES2 $e^+ e^- \rightarrow \psi(3770)$

 $\Gamma(K_S^0 K^- \pi^+ 2(\pi^+ \pi^-))/\Gamma_{\text{total}}$ Γ_{70}/Γ

VALUE (units 10^{-3})	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
<12.2	90	4	ABLIKIM	08M	BES2 $e^+ e^- \rightarrow \psi(3770)$

 $\Gamma(K_S^0 K^- \pi^+ 2\pi^0)/\Gamma_{\text{total}}$ Γ_{71}/Γ

VALUE (units 10^{-3})	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
<26.5	90	17	ABLIKIM	08M	BES2 $e^+ e^- \rightarrow \psi(3770)$

 $\Gamma(K_S^0 K^- K^+ K^- \pi^+)/\Gamma_{\text{total}}$ Γ_{72}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID	TECN	COMMENT
<4.9	90	ABLIKIM	09C	BES2 $e^+ e^- \rightarrow \psi(3770)$

 $\Gamma(K_S^0 K^- K^+ K^- \pi^+ \pi^0)/\Gamma_{\text{total}}$ Γ_{73}/Γ

VALUE (units 10^{-2})	CL%	DOCUMENT ID	TECN	COMMENT
<3.0	90	ABLIKIM	09C	BES2 $e^+ e^- \rightarrow \psi(3770)$

 $\Gamma(K_S^0 K^- K^+ K^- \pi^+ \eta)/\Gamma_{\text{total}}$ Γ_{74}/Γ

VALUE (units 10^{-2})	CL%	DOCUMENT ID	TECN	COMMENT
<2.2	90	ABLIKIM	09C	BES2 $e^+ e^- \rightarrow \psi(3770)$

 $\Gamma(K^{*0} K^- \pi^+ + \text{c.c.})/\Gamma_{\text{total}}$ Γ_{75}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID	TECN	COMMENT
<9.7	90	¹ ABLIKIM	07F	BES2 $e^+ e^- \rightarrow \psi(3770)$

¹ Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+ e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

 $\Gamma(p\bar{p})/\Gamma_{\text{total}}$ Γ_{76}/Γ

VALUE (units 10^{-6})	EVTS	DOCUMENT ID	TECN	COMMENT
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• • • We do not use the following data for averages, fits, limits, etc. • • •

not seen ¹ AAIJ 17AD LHCB $p\bar{p} \rightarrow B^+ X \rightarrow p\bar{p}K^+ X$

$7.1^{+8.6}_{-2.9}$	684	² ABLIKIM	14L	BES3	$e^+e^- \rightarrow \psi(3770)$
310 ± 30	684	³ ABLIKIM	14L	BES3	$e^+e^- \rightarrow \psi(3770)$

¹ AAIJ 17AD reports $B(B^+ \rightarrow \psi(3770)K^+ \rightarrow p\bar{p}K^+)/B(B^+ \rightarrow J/\psi K^+ \rightarrow p\bar{p}K^+) < 0.09$ (0.10) at 90% (95%) CL.

² Solution I of two equivalent solutions in a fit with a resonance interfering with continuum.

³ Solution II of two equivalent solutions in a fit with a resonance interfering with continuum.

$\Gamma(p\bar{p}\pi^0)/\Gamma_{\text{total}}$ **Γ_{77}/Γ**

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
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< 0.4 90 ^{1,2} ABLIKIM 14O BES3 $e^+e^- \rightarrow \psi(3770)$

• • • We do not use the following data for averages, fits, limits, etc. • • •

59 $^{+3}_{-2} \pm 5$ ^{1,3} ABLIKIM 14O BES3 $e^+e^- \rightarrow \psi(3770)$

<12 90 ⁴ ABLIKIM 07B BES2 $e^+e^- \rightarrow \psi(3770)$

¹ Calculated by the authors using $\sigma(e^+e^- \rightarrow \psi(3770) \rightarrow \text{hadrons}) = 6.36 \pm 0.08^{+0.41}_{-0.30}$ nb from BESSON 10.

² Solution I of two equivalent solutions in a fit with a resonance interfering with continuum.

³ Solution II of two equivalent solutions in a fit with a resonance interfering with continuum.

⁴ Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(p\bar{p}\pi^+\pi^-)/\Gamma_{\text{total}}$ **Γ_{78}/Γ**

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
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< 5.8 90 ¹ HUANG 06A CLEO $e^+e^- \rightarrow \psi(3770)$

• • • We do not use the following data for averages, fits, limits, etc. • • •

<16 90 ² ABLIKIM 07B BES2 $e^+e^- \rightarrow \psi(3770)$

¹ Using $\sigma_{tot}(e^+e^- \rightarrow \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.

² Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(\Lambda\bar{\Lambda})/\Gamma_{\text{total}}$ **Γ_{79}/Γ**

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
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<1.2 × 10⁻⁴ 90 ¹ HUANG 06A CLEO $e^+e^- \rightarrow \psi(3770)$

• • • We do not use the following data for averages, fits, limits, etc. • • •

<1.8 × 10⁻⁴ 90 ² ABLIKIM 21AS BES3 $e^+e^- \rightarrow \psi(3770)$

<4 × 10⁻⁴ 90 ³ ABLIKIM 07F BES2 $e^+e^- \rightarrow \psi(3770)$

¹ Using $\sigma_{tot}(e^+e^- \rightarrow \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.

² From a measurement of the $e^+e^- \rightarrow \Lambda\bar{\Lambda}$ cross section between 3.5 and 4.6 GeV. At a 90% CL the lower bound is $> 2.4 \times 10^{-6}$.

³ Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(p\bar{p}\pi^+\pi^-\pi^0)/\Gamma_{\text{total}}$ **Γ_{80}/Γ**

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
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<18.5 90 ¹ HUANG 06A CLEO $e^+e^- \rightarrow \psi(3770)$

• • • We do not use the following data for averages, fits, limits, etc. • • •

<73 90 ² ABLIKIM 07B BES2 $e^+e^- \rightarrow \psi(3770)$

¹ Using $\sigma_{tot}(e^+e^- \rightarrow \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.

² Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(\omega\rho\bar{p})/\Gamma_{total}$

Γ_{81}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
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< 2.9 90 ¹ HUANG 06A CLEO $e^+e^- \rightarrow \psi(3770)$

• • • We do not use the following data for averages, fits, limits, etc. • • •

<30 90 ² ABLIKIM 07I BES2 $3.77 e^+e^-$

¹ Using $\sigma_{tot}(e^+e^- \rightarrow \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.

² Using $\sigma^{obs} = 7.15 \pm 0.27 \pm 0.27$ nb and neglecting interference.

$\Gamma(\Lambda\bar{\Lambda}\pi^0)/\Gamma_{total}$

Γ_{82}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
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< 0.7 90 ¹ ABLIKIM 13Q BES3 $e^+e^- \rightarrow \psi(3770)$

• • • We do not use the following data for averages, fits, limits, etc. • • •

<12 90 ² ABLIKIM 07I BES2 $3.77 e^+e^-$

¹ Assuming that interference effects between resonance and continuum can be neglected.

² Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(\rho\bar{\rho}2(\pi^+\pi^-))/\Gamma_{total}$

Γ_{83}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID	TECN	COMMENT
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<2.6 90 ¹ ABLIKIM 07F BES2 $e^+e^- \rightarrow \psi(3770)$

¹ Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(\eta\rho\bar{p})/\Gamma_{total}$

Γ_{84}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
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< 5.4 90 ¹ HUANG 06A CLEO $e^+e^- \rightarrow \psi(3770)$

• • • We do not use the following data for averages, fits, limits, etc. • • •

<11 90 ² ABLIKIM 10D BES2 $e^+e^- \rightarrow \psi(3770)$

¹ Using $\sigma_{tot}(e^+e^- \rightarrow \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.

² Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(\eta\rho\bar{p}\pi^+\pi^-)/\Gamma_{total}$

Γ_{85}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID	TECN	COMMENT
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<3.3 90 ¹ ABLIKIM 10D BES2 $e^+e^- \rightarrow \psi(3770)$

¹ Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(\rho^0\rho\bar{p})/\Gamma_{total}$

Γ_{86}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID	TECN	COMMENT
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<1.7 90 ¹ ABLIKIM 07F BES2 $e^+e^- \rightarrow \psi(3770)$

¹ Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(\rho\bar{\rho}K^+K^-)/\Gamma_{\text{total}}$ Γ_{87}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
< 3.2	90	¹ HUANG	06A	CLEO $e^+e^- \rightarrow \psi(3770)$

• • • We do not use the following data for averages, fits, limits, etc. • • •

<11	90	² ABLIKIM	07B	BES2 $e^+e^- \rightarrow \psi(3770)$
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¹ Using $\sigma_{\text{tot}}(e^+e^- \rightarrow \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.

² Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{\text{obs}}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

 $\Gamma(\eta\rho\bar{\rho}K^+K^-)/\Gamma_{\text{total}}$ Γ_{88}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID	TECN	COMMENT
<6.9	90	¹ ABLIKIM	10D	BES2 $e^+e^- \rightarrow \psi(3770)$

¹ Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{\text{obs}}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

 $\Gamma(\pi^0\rho\bar{\rho}K^+K^-)/\Gamma_{\text{total}}$ Γ_{89}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID	TECN	COMMENT
<1.2	90	¹ ABLIKIM	10D	BES2 $e^+e^- \rightarrow \psi(3770)$

¹ Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{\text{obs}}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

 $\Gamma(\phi\rho\bar{\rho})/\Gamma_{\text{total}}$ Γ_{90}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
<1.3	90	¹ HUANG	06A	CLEO $e^+e^- \rightarrow \psi(3770)$

• • • We do not use the following data for averages, fits, limits, etc. • • •

<9	90	² ABLIKIM	07B	BES2 $e^+e^- \rightarrow \psi(3770)$
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¹ Using $\sigma_{\text{tot}}(e^+e^- \rightarrow \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.

² Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{\text{obs}}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

 $\Gamma(\Lambda\bar{\Lambda}\pi^+\pi^-)/\Gamma_{\text{total}}$ Γ_{91}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
< 2.5	90	¹ HUANG	06A	CLEO $e^+e^- \rightarrow \psi(3770)$

• • • We do not use the following data for averages, fits, limits, etc. • • •

< 4.7	90	² ABLIKIM	13Q	BES3 $e^+e^- \rightarrow \psi(3770)$
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<39	90	³ ABLIKIM	07F	BES2 $e^+e^- \rightarrow \psi(3770)$
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¹ Using $\sigma_{\text{tot}}(e^+e^- \rightarrow \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.

² Assuming that interference effects between resonance and continuum can be neglected.

³ Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{\text{obs}}(e^+e^- \rightarrow \psi(3770)) = 7.15 \pm 0.38$ nb.

 $\Gamma(\Lambda\bar{\rho}K^+)/\Gamma_{\text{total}}$ Γ_{92}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
<2.8	90	¹ HUANG	06A	CLEO $e^+e^- \rightarrow \psi(3770)$

¹ Using $\sigma_{\text{tot}}(e^+e^- \rightarrow \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.

$\Gamma(\Lambda\bar{p}K^+\pi^+\pi^-)/\Gamma_{\text{total}}$ Γ_{93}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
<6.3	90	¹ HUANG	06A	CLEO $e^+e^- \rightarrow \psi(3770)$

¹ Using $\sigma_{\text{tot}}(e^+e^- \rightarrow \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.

$\Gamma(\Lambda\bar{\Lambda}\eta)/\Gamma_{\text{total}}$ Γ_{94}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
<1.9	90	¹ ABLIKIM	13Q	BES3 $e^+e^- \rightarrow \psi(3770)$

¹ Assuming that interference effects between resonance and continuum can be neglected.

$\Gamma(\Sigma^+\bar{\Sigma}^-)/\Gamma_{\text{total}}$ Γ_{95}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
<1.0	90	¹ ABLIKIM	13Q	BES3 $e^+e^- \rightarrow \psi(3770)$

¹ Assuming that interference effects between resonance and continuum can be neglected.

$\Gamma(\Sigma^0\bar{\Sigma}^0)/\Gamma_{\text{total}}$ Γ_{96}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
<0.4	90	¹ ABLIKIM	13Q	BES3 $e^+e^- \rightarrow \psi(3770)$

¹ Assuming that interference effects between resonance and continuum can be neglected.

$\Gamma(\Xi^0\bar{\Xi}^0)/\Gamma_{\text{total}}$ Γ_{97}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
<1.4	90	¹ ABLIKIM	13Q	BES3 $e^+e^- \rightarrow \psi(3770)$

¹ Assuming that interference effects between resonance and continuum can be neglected.

$\Gamma(\Xi^-\bar{\Xi}^+)/\Gamma_{\text{total}}$ Γ_{98}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
<1.5	90	¹ ABLIKIM	13Q	BES3 $e^+e^- \rightarrow \psi(3770)$

¹ Assuming that interference effects between resonance and continuum can be neglected.

————— **RADIATIVE DECAYS** —————

$\Gamma(\gamma\chi_{c2})/\Gamma_{\text{total}}$ Γ_{102}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID	TECN	COMMENT
<0.64	90	¹ ABLIKIM	15J	BES3 $e^+e^- \rightarrow \psi(3770) \rightarrow \gamma\gamma J/\psi$

• • • We do not use the following data for averages, fits, limits, etc. • • •

<2.0	90	² BRIERE	06	CLEO $e^+e^- \rightarrow \psi(3770) \rightarrow \gamma + \text{hadrons}$
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<0.9	90	³ COAN	06A	CLEO $e^+e^- \rightarrow \psi(3770) \rightarrow \gamma\gamma J/\psi$
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¹ This limit is equivalent to $(0.25 \pm 0.21 \pm 0.18) \times 10^{-3}$ branching fraction value.

² Uses $B(\psi(2S) \rightarrow \gamma\chi_{c2}) = 9.22 \pm 0.11 \pm 0.46\%$ from ATHAR 04, $\psi(2S)$ mass and width from PDG 04, and $\Gamma_{ee}(\psi(2S)) = 2.54 \pm 0.03 \pm 0.11$ keV from ADAM 06.

³ Using $\Gamma_{ee}(\psi(2S)) = (2.54 \pm 0.03 \pm 0.11)$ keV from ADAM 06 and taking $\sigma(e^+e^- \rightarrow D\bar{D})$ from HE 05 for $\sigma(e^+e^- \rightarrow \psi(3770))$.

$\Gamma(\gamma\chi_{c1})/\Gamma_{\text{total}}$					Γ_{103}/Γ
<u>VALUE (units 10^{-3})</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
2.49±0.23 OUR AVERAGE					
2.0 ±0.8 ±0.1	202	¹ ABLIKIM	16B BES3	$e^+e^- \rightarrow \psi(3770) \rightarrow \gamma + \text{hadrons}$	
2.48±0.15±0.23	0.6k	ABLIKIM	15J BES3	$e^+e^- \rightarrow \psi(3770) \rightarrow \gamma\gamma J/\psi$	
2.5 ±0.8 ±0.2		² ABLIKIM	14H BES3	$e^+e^- \rightarrow \psi(3770) \rightarrow K_S^0 K^\pm \pi^\mp$	
2.9 ±0.5 ±0.4		³ BRIERE	06 CLEO	$e^+e^- \rightarrow \psi(3770) \rightarrow \gamma + \text{hadrons}, \gamma\gamma J/\psi$	
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●					
3.9 ±1.4 ±0.6	54	⁴ BRIERE	06 CLEO	$e^+e^- \rightarrow \psi(3770) \rightarrow \gamma + \text{hadrons}$	
2.8 ±0.5 ±0.4	53	⁵ COAN	06A CLEO	$e^+e^- \rightarrow \psi(3770) \rightarrow \gamma\gamma J/\psi$	

¹ ABLIKIM 16B reports $(1.94 \pm 0.42 \pm 0.64) \times 10^{-3}$ from a measurement of $[\Gamma(\psi(3770) \rightarrow \gamma\chi_{c1})/\Gamma_{\text{total}}] / [B(\psi(2S) \rightarrow \gamma\chi_{c1}(1P))]$ assuming $B(\psi(2S) \rightarrow \gamma\chi_{c1}(1P)) = (9.55 \pm 0.31) \times 10^{-2}$, which we rescale to our best (shown rounded) value $B(\psi(2S) \rightarrow \gamma\chi_{c1}(1P)) = (9.85 \pm 0.26) \times 10^{-2}$. Our first error is their experiment's error and our second error is the systematic error from using our best (shown rounded) value.

² ABLIKIM 14H reports $[\Gamma(\psi(3770) \rightarrow \gamma\chi_{c1})/\Gamma_{\text{total}}] \times [B(\chi_{c1}(1P) \rightarrow K_S^0 K^\pm \pi^\mp)] = (8.51 \pm 2.39 \pm 1.42) \times 10^{-6}$ which we divide by our best (shown rounded) value $B(\chi_{c1}(1P) \rightarrow K_S^0 K^\pm \pi^\mp) = 0.00346 \pm 0.00030$. Our first error is their experiment's error and our second error is the systematic error from using our best (shown rounded) value. We have calculated the best value of $B(\chi_{c1}(1P) \rightarrow K_S^0 K^\pm \pi^\mp)$ as 1/2 of $B(\chi_{c1}(1P) \rightarrow \bar{K}^0 K^+ \pi^- + \text{c.c.}) = (6.9 \pm 0.6) \times 10^{-3}$.

³ Averages the two measurements from COAN 06A and BRIERE 06.

⁴ Uses $B(\psi(2S) \rightarrow \gamma\chi_{c1}) = 9.07 \pm 0.11 \pm 0.54\%$ from ATHAR 04, $\psi(2S)$ mass and width from PDG 04, and $\Gamma_{ee}(\psi(2S)) = 2.54 \pm 0.03 \pm 0.11$ keV from ADAM 06.

⁵ Using $\Gamma_{ee}(\psi(2S)) = (2.54 \pm 0.03 \pm 0.11)$ keV from ADAM 06 and taking $\sigma(e^+e^- \rightarrow D\bar{D})$ from HE 05 for $\sigma(e^+e^- \rightarrow \psi(3770))$.

$\Gamma(\gamma\chi_{c1})/\Gamma(J/\psi\pi^+\pi^-)$					Γ_{103}/Γ_5
<u>VALUE</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
1.49±0.31±0.26	53 ± 10	¹ COAN	06A CLEO	$e^+e^- \rightarrow \psi(3770) \rightarrow \gamma\gamma J/\psi$	

¹ Using $B(\psi(3770) \rightarrow J/\psi\pi^+\pi^-) = (1.89 \pm 0.20 \pm 0.20) \times 10^{-3}$ from ADAM 06.

$\Gamma(\gamma\chi_{c0})/\Gamma_{\text{total}}$					Γ_{104}/Γ
<u>VALUE (units 10^{-3})</u>	<u>CL%</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
7.1±0.6 OUR AVERAGE					
6.9±0.7±0.2		2.2k	¹ ABLIKIM	16B BES3	$e^+e^- \rightarrow \psi(3770) \rightarrow \gamma + \text{hadrons}$
7.3±0.7±0.6		274	BRIERE	06 CLEO	$e^+e^- \rightarrow \psi(3770) \rightarrow \gamma + \text{hadrons}$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●					
< 44	90		² COAN	06A CLEO	$e^+e^- \rightarrow \psi(3770) \rightarrow \gamma\gamma J/\psi$

¹ ABLIKIM 16B reports $(6.88 \pm 0.28 \pm 0.67) \times 10^{-3}$ from a measurement of $[\Gamma(\psi(3770) \rightarrow \gamma\chi_{c0})/\Gamma_{\text{total}}] / [B(\psi(2S) \rightarrow \gamma\chi_{c0}(1P))]$ assuming $B(\psi(2S) \rightarrow \gamma\chi_{c0}(1P)) = (9.99 \pm 0.27) \times 10^{-2}$, which we rescale to our best (shown rounded) value $B(\psi(2S) \rightarrow \gamma\chi_{c0}(1P)) = (10.06 \pm 0.27) \times 10^{-2}$. Our first error is their experiment's error and our second error is the systematic error from using our best (shown rounded) value.

² Using $\Gamma_{ee}(\psi(2S)) = (2.54 \pm 0.03 \pm 0.11)$ keV from ADAM 06 and taking $\sigma(e^+e^- \rightarrow D\bar{D})$ from HE 05 for $\sigma(e^+e^- \rightarrow \psi(3770))$.

$\Gamma(\gamma\chi_{c0})/\Gamma(\gamma\chi_{c2})$ $\Gamma_{104}/\Gamma_{102}$

<u>VALUE</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
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• • • We do not use the following data for averages, fits, limits, etc. • • •

>8	90	¹ BRIERE	06	CLEO $e^+e^- \rightarrow \psi(3770)$
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¹ Not independent of other results in BRIERE 06.

$\Gamma(\gamma\chi_{c0})/\Gamma(\gamma\chi_{c1})$ $\Gamma_{104}/\Gamma_{103}$

<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
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• • • We do not use the following data for averages, fits, limits, etc. • • •

2.5±0.6	¹ BRIERE	06	CLEO $e^+e^- \rightarrow \psi(3770)$
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¹ Not independent of other results in BRIERE 06.

$\Gamma(\gamma\eta_c)/\Gamma_{\text{total}}$ Γ_{105}/Γ

<u>VALUE</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>
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<8 × 10⁻⁴	90	¹ ABLIKIM	14H BES3
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¹ ABLIKIM 14H reports $[\Gamma(\psi(3770) \rightarrow \gamma\eta_c)/\Gamma_{\text{total}}] \times [B(\eta_c(1S) \rightarrow K_S^0 K^\pm \pi^\mp)] < 16 \times 10^{-6}$ which we divide by our best (shown rounded) value $B(\eta_c(1S) \rightarrow K_S^0 K^\pm \pi^\mp) = 1.97 \times 10^{-2}$. We have calculated the best value of $B(\eta_c(1S) \rightarrow K_S^0 K^\pm \pi^\mp)$ as 1/3 of $B(\eta_c(1S) \rightarrow K\bar{K}\pi) = 5.9 \times 10^{-2}$.

$\Gamma(\gamma\eta_c(2S))/\Gamma_{\text{total}}$ Γ_{106}/Γ

<u>VALUE</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>
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<9 × 10⁻⁴	90	¹ ABLIKIM	14H BES3
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¹ ABLIKIM 14H reports $[\Gamma(\psi(3770) \rightarrow \gamma\eta_c(2S))/\Gamma_{\text{total}}] \times [B(\eta_c(2S) \rightarrow K_S^0 K^\pm \pi^\mp)] < 5.6 \times 10^{-6}$ which we divide by our best (shown rounded) value $B(\eta_c(2S) \rightarrow K_S^0 K^\pm \pi^\mp) = 6.3 \times 10^{-3}$. We have calculated the best value of $B(\eta_c(2S) \rightarrow K_S^0 K^\pm \pi^\mp)$ as 1/3 of $B(\eta_c(2S) \rightarrow K\bar{K}\pi) = 1.9 \times 10^{-2}$.

$\Gamma(\gamma\eta')/\Gamma_{\text{total}}$ Γ_{107}/Γ

<u>VALUE (units 10⁻⁴)</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
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<1.8	90	¹ PEDLAR	09	CLE3 $\psi(2S) \rightarrow \gamma X$
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¹ Assuming maximal destructive interference between $\psi(3770)$ and continuum sources.

$\Gamma(\gamma\eta)/\Gamma_{\text{total}}$ Γ_{108}/Γ

<u>VALUE (units 10⁻⁴)</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
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<1.5	90	¹ PEDLAR	09	CLE3 $\psi(2S) \rightarrow \gamma X$
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¹ Assuming maximal destructive interference between $\psi(3770)$ and continuum sources.

$\Gamma(\gamma\pi^0)/\Gamma_{\text{total}}$					Γ_{109}/Γ
VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT	
<2	90	PEDLAR	09	CLE3	$\psi(2S) \rightarrow \gamma X$

 $\psi(3770)$ REFERENCES

ABLIKIM	25CF	JHEP 2511 111	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM	25U	PR D111 L051502	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM	24A	PRL 132 131901	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM	24AH	JHEP 2405 022	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM	24AL	JHEP 2407 258	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM	24CD	JHEP 2411 062	M. Ablikim <i>et al.</i>	(BESIII Collab.)
HANHART	24	EPJ C84 483	C. Hanhart <i>et al.</i>	(JULI, BONN, SIEG+)
ABLIKIM	23BC	PR D108 052015	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM	23BK	JHEP 2311 228	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM	23V	PR D107 L091101	M. Ablikim <i>et al.</i>	(BESIII Collab.)
PDG	22	PTEP 2022 083C01	R.L. Workman <i>et al.</i>	(PDG Collab.)
ABLIKIM	21AS	PR D104 L091104	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM	21Z	PRL 127 082002	M. Ablikim <i>et al.</i>	(BESIII Collab.)
PDG	20	PTEP 2020 083C01	P.A. Zyla <i>et al.</i>	(PDG Collab.)
AAIJ	19M	JHEP 1907 035	R. Aaij <i>et al.</i>	(LHCb Collab.)
AAIJ	17AD	PL B769 305	R. Aaij <i>et al.</i>	(LHCb Collab.)
SHAMOV	17	PL B769 187	A.G. Shamov, K.Yu. Todyshev	
ABLIKIM	16B	PL B753 103	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM	15J	PR D91 092009	M. Ablikim <i>et al.</i>	(BESIII Collab.)
DRUZHININ	15	PR D92 054024	V.P. Druzhinin	(NOVO)
ABLIKIM	14H	PR D89 112005	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM	14L	PL B735 101	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM	14O	PR D90 032007	M. Ablikim <i>et al.</i>	(BESIII Collab.)
BONVICINI	14	PR D89 072002	G. Bonvicini <i>et al.</i>	(CLEO Collab.)
ABLIKIM	13Q	PR D87 112011	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ANASHIN	12A	PL B711 292	V.V. Anashin <i>et al.</i>	(KEDR Collab.)
ABLIKIM	10D	EPJ C66 11	M. Ablikim <i>et al.</i>	(BES II Collab.)
BESSION	10	PRL 104 159901 (errat.)	D. Besson <i>et al.</i>	(CLEO Collab.)
ABLIKIM	09C	EPJ C64 243	M. Ablikim <i>et al.</i>	(BES Collab.)
PEDLAR	09	PR D79 111101	T.K. Pedlar <i>et al.</i>	(CLEO Collab.)
ABLIKIM	08B	PL B659 74	M. Ablikim <i>et al.</i>	(BES Collab.)
ABLIKIM	08D	PL B660 315	M. Ablikim <i>et al.</i>	(BES Collab.)
ABLIKIM	08H	PRL 101 102004	M. Ablikim <i>et al.</i>	(BES Collab.)
ABLIKIM	08M	PL B670 179	M. Ablikim <i>et al.</i>	(BES Collab.)
ABLIKIM	08N	PL B670 184	M. Ablikim <i>et al.</i>	(BES Collab.)
AUBERT	08B	PR D77 011102	B. Aubert <i>et al.</i>	(BABAR Collab.)
BRODZICKA	08	PRL 100 092001	J. Brodzicka <i>et al.</i>	(BELLE Collab.)
PAKHLOVA	08	PR D77 011103	G. Pakhlova <i>et al.</i>	(BELLE Collab.)
ABLIKIM	07B	PL B650 111	M. Ablikim <i>et al.</i>	(BES Collab.)
ABLIKIM	07E	PL B652 238	M. Ablikim <i>et al.</i>	(BES Collab.)
ABLIKIM	07F	PL B656 30	M. Ablikim <i>et al.</i>	(BES Collab.)
ABLIKIM	07I	EPJ C52 805	M. Ablikim <i>et al.</i>	(BES Collab.)
ABLIKIM	07K	PR D76 122002	M. Ablikim <i>et al.</i>	(BES Collab.)
AUBERT	07BE	PR D76 111105	B. Aubert <i>et al.</i>	(BABAR Collab.)
DOBBS	07	PR D76 112001	S. Dobbs <i>et al.</i>	(CLEO Collab.)
ABLIKIM	06L	PRL 97 121801	M. Ablikim <i>et al.</i>	(BES Collab.)
ABLIKIM	06N	PL B641 145	M. Ablikim <i>et al.</i>	(BES Collab.)
ADAM	06	PRL 96 082004	N.E. Adam <i>et al.</i>	(CLEO Collab.)
ADAMS	06	PR D73 012002	G.S. Adams <i>et al.</i>	(CLEO Collab.)
BESSION	06	PRL 96 092002	D. Besson <i>et al.</i>	(CLEO Collab.)
Also		PRL 104 159901 (errat.)	D. Besson <i>et al.</i>	(CLEO Collab.)
BRIERE	06	PR D74 031106	R.A. Briere <i>et al.</i>	(CLEO Collab.)
COAN	06A	PRL 96 182002	T.E. Coan <i>et al.</i>	(CLEO Collab.)
CRONIN-HEN...	06	PR D74 012005	D. Cronin-Hennessy <i>et al.</i>	(CLEO Collab.)
HUANG	06A	PRL 96 032003	G.S. Huang <i>et al.</i>	(CLEO Collab.)
BAI	05	PL B605 63	J.Z. Bai <i>et al.</i>	(BES Collab.)
HE	05	PRL 95 121801	Q. He <i>et al.</i>	(CLEO Collab.)
Also		PRL 96 199903 (errat.)	Q. He <i>et al.</i>	(CLEO Collab.)
ABLIKIM	04F	PR D70 077101	M. Ablikim <i>et al.</i>	(BES Collab.)
ATHAR	04	PR D70 112002	S.B. Athar <i>et al.</i>	(CLEO Collab.)
CHISTOV	04	PRL 93 051803	R. Chistov <i>et al.</i>	(BELLE Collab.)

PDG	04	PL B592 1	S. Eidelman <i>et al.</i>	(PDG Collab.)
BAI	02C	PRL 88 101802	J.Z. Bai <i>et al.</i>	(BES Collab.)
ADLER	88C	PRL 60 89	J. Adler <i>et al.</i>	(Mark III Collab.)
SCHINDLER	80	PR D21 2716	R.H. Schindler <i>et al.</i>	(Mark II Collab.)
BACINO	78	PRL 40 671	W.J. Bacino <i>et al.</i>	(SLAC, UCLA, UCI)
RAPIDIS	77	PRL 39 526	P.A. Rapidis <i>et al.</i>	(LGW Collab.)
