$\psi(3770)$

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

$\psi(3770)$ 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±0.4 OUR FIT Error includes scale factor of 1.4.					
3778.1±0.7 OUR AVERAGE					
3778.1±0.7±0.6		[1] AAIJ	19M	LHCB	$pp \to D\overline{D}$ + anything
$3779.2^{+1.8}_{-1.7}{}^{+0.6}_{-0.8}$		[2] ANASHIN	12A	KEDR	$e^+e^- \to D\overline{D}$
3775.5±2.4±0.5	57	AUBERT	08B	BABR	$B \to D\overline{D}K$
3776 ±5 ±4	68	BRODZICKA	08	BELL	$B^+ \to D^0\overline{D}^0K^+$
3778.8±1.9±0.9		AUBERT	07BE	BABR	$e^+e^- \to D\overline{D}\gamma$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
3779.8±0.6		[3] SHAMOV	17	RVUE	$e^+e^- \to D\overline{D}$, hadrons
3772.0±1.9		[4,5] ABLIKIM	08D	BES2	$e^+e^- \to$ hadrons
3778.4±3.0±1.3	34	CHISTOV	04	BELL	Sup. by BRODZICKA 08

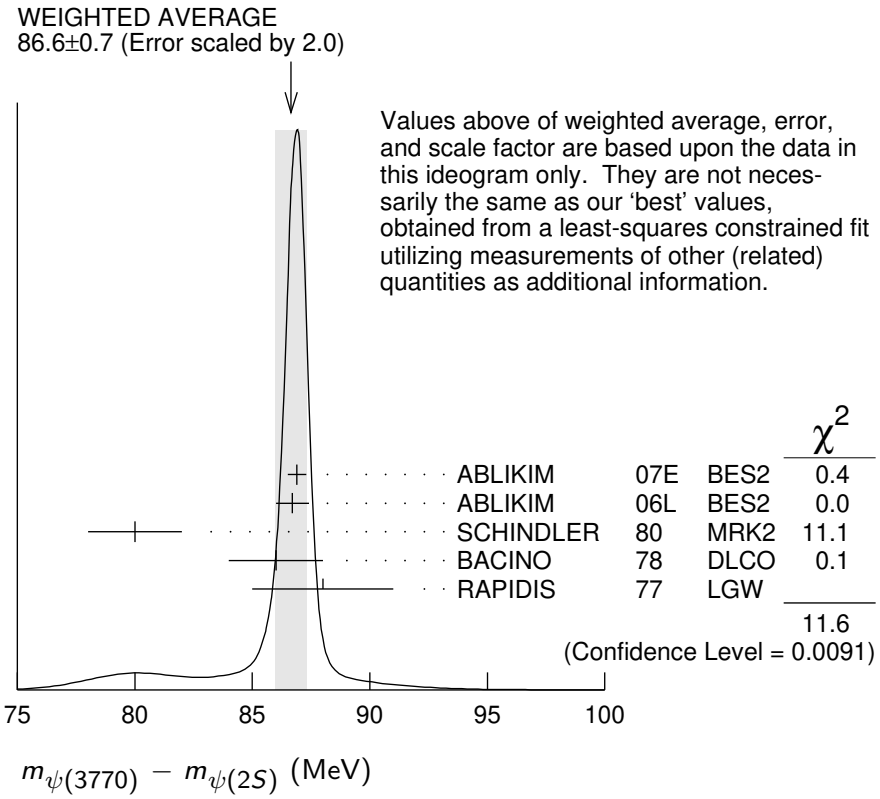
[1] Measured in prompt hadroproduction.
[2] Taking into account interference between the resonant and non-resonant $D\overline{D}$ production.
[3] From the joint analysis of the data on the $D\overline{D}$ and inclusive hadronic cross sections in the $\psi(3770)$ region from BaBar, Belle, BES-II, CLEO and KEDR.
[4] 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 $\delta = 0^\circ$.
[5] Interference between the resonant and non-resonant $D\overline{D}$ 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±0.4 OUR FIT Error includes scale factor of 1.4.				
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	$e^+e^- \to$ hadrons
86.7±0.7	ABLIKIM	06L	BES2	$e^+e^- \to$ 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).



ψ(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	$e^+e^- \to D\overline{D}$
30.4± 8.5		[2,3] ABLIKIM	08D	BES2	$e^+e^- \to$ hadrons
27 ±10 ±5	68	BRODZICKA	08	BELL	$B^+ \to D^0\overline{D}^0K^+$
28.5± 1.2±0.2		[3] ABLIKIM	07E	BES2	$e^+e^- \to$ hadrons
23.5± 3.7±0.9		AUBERT	07BE	BABR	$e^+e^- \to D\overline{D}\gamma$
26.9± 2.4±0.3		[3] ABLIKIM	06L	BES2	$e^+e^- \to$ 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. • • •					
25.8± 1.3		[4] SHAMOV	17	RVUE	$e^+e^- \to D\overline{D}$, hadrons

[1] Taking into account interference between the resonant and non-resonant $D\overline{D}$ 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 ψ(3770), ψ(4040), ψ(4160), and ψ(4415) resonances. Phase angle fixed in the fit to $\delta = 0^\circ$.
[3] Interference between the resonant and non-resonant $D\overline{D}$ production not taken into account.
[4] From the joint analysis of the data on the $D\overline{D}$ and inclusive hadronic cross sections in the ψ(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	$D\overline{D}$	$(93\ ^{+8}_{-9})\ \%$	S=2.0
Γ_2	$D^0\overline{D}^0$	$(52\ ^{+4}_{-5})\ \%$	S=2.0
Γ_3	D^+D^-	$(41\ \pm4)\ \%$	S=2.0
Γ_4	$J/\psi X$	$(\ 5.0\ \pm2.2\ )\times10^{-3}$	
Γ_5	$J/\psi\pi^+\pi^-$	$(\ 1.93\pm0.28)\times10^{-3}$	
Γ_6	$J/\psi\pi^0\pi^0$	$(\ 8.0\ \pm3.0\ )\times10^{-4}$	
Γ_7	$J/\psi\eta$	$(\ 9\ \pm4\ )\times10^{-4}$	
Γ_8	$J/\psi\pi^0$	$<\ 2.8\ \times10^{-4}$	CL=90%
Γ_9	e^+e^-	$(\ 9.6\ \pm0.7\ )\times10^{-6}$	S=1.3
	Decays to light hadrons		
Γ_{10}	$b_1(1235)\pi$	$<\ 1.4\ \times10^{-5}$	CL=90%
Γ_{11}	$\phi\eta'$	$<\ 7\ \times10^{-4}$	CL=90%
Γ_{12}	$\omega\eta'$	$<\ 4\ \times10^{-4}$	CL=90%
Γ_{13}	$\rho^0\eta'$	$<\ 6\ \times10^{-4}$	CL=90%
Γ_{14}	$\phi\eta$	$(\ 3.1\ \pm0.7\ )\times10^{-4}$	
Γ_{15}	$\omega\eta$	$<\ 1.4\ \times10^{-5}$	CL=90%
Γ_{16}	$\rho^0\eta$	$<\ 5\ \times10^{-4}$	CL=90%
Γ_{17}	$\phi\pi^0$	$<\ 3\ \times10^{-5}$	CL=90%
Γ_{18}	$\omega\pi^0$	$<\ 6\ \times10^{-4}$	CL=90%
Γ_{19}	$\pi^+\pi^-\pi^0$	$<\ 5\ \times10^{-6}$	CL=90%
Γ_{20}	$\rho\pi$	$<\ 5\ \times10^{-6}$	CL=90%
Γ_{21}	K^+K^-		
Γ_{22}	$K^*(892)^+K^-$ + c.c.	$<\ 1.4\ \times10^{-5}$	CL=90%
Γ_{23}	$K^*(892)^0\overline{K}^0$ + c.c.	$<\ 1.2\ \times10^{-3}$	CL=90%
Γ_{24}	$K^0_SK^0_L$	$<\ 1.2\ \times10^{-5}$	CL=90%
Γ_{25}	$2(\pi^+\pi^-)$	$<\ 1.12\ \times10^{-3}$	CL=90%
Γ_{26}	$2(\pi^+\pi^-)\pi^0$	$<\ 1.06\ \times10^{-3}$	CL=90%
Γ_{27}	$2(\pi^+\pi^-\pi^0)$	$<\ 5.85\ \%$	CL=90%
Γ_{28}	$\omega\pi^+\pi^-$	$<\ 6.0\ \times10^{-4}$	CL=90%
Γ_{29}	$3(\pi^+\pi^-)$	$<\ 9.1\ \times10^{-3}$	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}	$\eta\pi^+\pi^-$	$<\ 1.24\ \times10^{-3}$	CL=90%
Γ_{33}	$\pi^+\pi^-2\pi^0$	$<\ 8.9\ \times10^{-3}$	CL=90%
Γ_{34}	$\rho^0\pi^+\pi^-$	$<\ 6.9\ \times10^{-3}$	CL=90%
Γ_{35}	$\eta3\pi$	$<\ 1.34\ \times10^{-3}$	CL=90%
Γ_{36}	$\eta2(\pi^+\pi^-)$	$<\ 2.43\ \%$	CL=90%
Γ_{37}	$\eta\rho^0\pi^+\pi^-$	$<\ 1.45\ \%$	CL=90%
Γ_{38}	$\eta'3\pi$	$<\ 2.44\ \times10^{-3}$	CL=90%
Γ_{39}	$K^+K^-\pi^+\pi^-$	$<\ 9.0\ \times10^{-4}$	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}	ωK^+K^-	$<$	3.4	$\times 10^{-4}$	CL=90%
Γ_{49}	$\phi\pi^+\pi^-\pi^0$	$<$	3.8	$\times 10^{-3}$	CL=90%
Γ_{50}	$K^{*0}K^-\pi^+\pi^0+$ c.c.	$<$	1.62	%	CL=90%
Γ_{51}	$K^{*+}K^-\pi^+\pi^-+$ 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}	ηK^+K^-	$<$	4.1	$\times 10^{-4}$	CL=90%
Γ_{56}	$\eta K^+K^-\pi^+\pi^-$	$<$	1.24	%	CL=90%
Γ_{57}	$\rho^0K^+K^-$	$<$	5.0	$\times 10^{-3}$	CL=90%
Γ_{58}	$2(K^+K^-)$	$<$	6.0	$\times 10^{-4}$	CL=90%
Γ_{59}	ϕK^+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}	$K^0_SK^-\pi^+$	$<$	3.2	$\times 10^{-3}$	CL=90%
Γ_{63}	$K^0_SK^-\pi^+\pi^0$	$<$	1.33	%	CL=90%
Γ_{64}	$K^0_SK^-\rho^+$	$<$	6.6	$\times 10^{-3}$	CL=90%
Γ_{65}	$K^0_SK^-2\pi^+\pi^-$	$<$	8.7	$\times 10^{-3}$	CL=90%
Γ_{66}	$K^0_SK^-\pi^+\rho^0$	$<$	1.6	%	CL=90%
Γ_{67}	$K^0_SK^-\pi^+\eta$	$<$	1.3	%	CL=90%
Γ_{68}	$K^0_SK^-2\pi^+\pi^-\pi^0$	$<$	4.18	%	CL=90%
Γ_{69}	$K^0_SK^-2\pi^+\pi^-\eta$	$<$	4.8	%	CL=90%
Γ_{70}	$K^0_SK^-\pi^+2(\pi^+\pi^-)$	$<$	1.22	%	CL=90%
Γ_{71}	$K^0_SK^-\pi^+2\pi^0$	$<$	2.65	%	CL=90%
Γ_{72}	$K^0_SK^-K^+K^-\pi^+$	$<$	4.9	$\times 10^{-3}$	CL=90%
Γ_{73}	$K^0_SK^-K^+K^-\pi^+\pi^0$	$<$	3.0	%	CL=90%
Γ_{74}	$K^0_SK^-K^+K^-\pi^+\eta$	$<$	2.2	%	CL=90%
Γ_{75}	$K^{*0}K^-\pi^++$ c.c.	$<$	9.7	$\times 10^{-3}$	CL=90%
Γ_{76}	$p\overline{p}$				
Γ_{77}	$p\overline{p}\pi^0$	$<$	4	$\times 10^{-5}$	CL=90%
Γ_{78}	$p\overline{p}\pi^+\pi^-$	$<$	5.8	$\times 10^{-4}$	CL=90%
Γ_{79}	$\Lambda\overline{\Lambda}$	$<$	1.2	$\times 10^{-4}$	CL=90%
Γ_{80}	$p\overline{p}\pi^+\pi^-\pi^0$	$<$	1.85	$\times 10^{-3}$	CL=90%
Γ_{81}	$\omega p\overline{p}$	$<$	2.9	$\times 10^{-4}$	CL=90%
Γ_{82}	$\Lambda\overline{\Lambda}\pi^0$	$<$	7	$\times 10^{-5}$	CL=90%

Γ_{83}	$p\overline{p}2(\pi^+\pi^-)$	$<$	2.6	$\times 10^{-3}$	CL=90%
Γ_{84}	$\eta p\overline{p}$	$<$	5.4	$\times 10^{-4}$	CL=90%
Γ_{85}	$\eta p\overline{p}\pi^+\pi^-$	$<$	3.3	$\times 10^{-3}$	CL=90%
Γ_{86}	$\rho^0 p\overline{p}$	$<$	1.7	$\times 10^{-3}$	CL=90%
Γ_{87}	$p\overline{p}K^+K^-$	$<$	3.2	$\times 10^{-4}$	CL=90%
Γ_{88}	$\eta p\overline{p}K^+K^-$	$<$	6.9	$\times 10^{-3}$	CL=90%
Γ_{89}	$\pi^0 p\overline{p}K^+K^-$	$<$	1.2	$\times 10^{-3}$	CL=90%
Γ_{90}	$\phi p\overline{p}$	$<$	1.3	$\times 10^{-4}$	CL=90%
Γ_{91}	$\Lambda\overline{\Lambda}\pi^+\pi^-$	$<$	2.5	$\times 10^{-4}$	CL=90%
Γ_{92}	$\Lambda\overline{p}K^+$	$<$	2.8	$\times 10^{-4}$	CL=90%
Γ_{93}	$\Lambda\overline{p}K^+\pi^+\pi^-$	$<$	6.3	$\times 10^{-4}$	CL=90%
Γ_{94}	$\Lambda\overline{\Lambda}\eta$	$<$	1.9	$\times 10^{-4}$	CL=90%
Γ_{95}	$\Sigma^+\overline{\Sigma}^-$	$<$	1.0	$\times 10^{-4}$	CL=90%
Γ_{96}	$\Sigma^0\overline{\Sigma}^0$	$<$	4	$\times 10^{-5}$	CL=90%
Γ_{97}	$\Xi^+\overline{\Xi}^-$	$<$	1.5	$\times 10^{-4}$	CL=90%
Γ_{98}	$\Xi^0\overline{\Xi}^0$	$<$	1.4	$\times 10^{-4}$	CL=90%

Radiative decays

Γ_{99}	$\gamma\chi_{c2}$	$<$	6.4	$\times 10^{-4}$	CL=90%
Γ_{100}	$\gamma\chi_{c1}$	(	2.49±0.23)	$\times 10^{-3}$	
Γ_{101}	$\gamma\chi_{c0}$	(	6.9 ±0.6)	$\times 10^{-3}$	
Γ_{102}	$\gamma\eta_c$	$<$	7	$\times 10^{-4}$	CL=90%
Γ_{103}	$\gamma\eta_c(2S)$	$<$	9	$\times 10^{-4}$	CL=90%
Γ_{104}	$\gamma\eta'$	$<$	1.8	$\times 10^{-4}$	CL=90%
Γ_{105}	$\gamma\eta$	$<$	1.5	$\times 10^{-4}$	CL=90%
Γ_{106}	$\gamma\pi^0$	$<$	2	$\times 10^{-4}$	CL=90%

CONSTRAINED FIT INFORMATION

An overall fit to the total width, a partial width, and 3 branching ratios uses 23 measurements and one constraint to determine 5 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 $\left\langle \delta p_i \delta p_j \right\rangle / (\delta p_i \cdot \delta p_j)$, in percent, from the fit to parameters p_i, including the branching fractions, $x_i \equiv \Gamma_i/\Gamma_{\text{total}}$. The fit constrains the x_i whose labels appear in this array to sum to one.

x_3	99		
x_9	0	0	
Γ	0	0	−44
	x_2	x_3	x_9

	Mode	Rate (MeV)	Scale factor
Γ_2	$D^0\overline{D}^0$	14.0 ±1.4	1.8

Γ_3	D^+D^-	11.2 ±1.1	1.7
Γ_9	e^+e^-	(2.62±0.18) × 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.				
$0.154^{+0.079}_{-0.058}{}^{+0.021}_{-0.027}$		[1,2] ANASHIN	12A	KEDR	$e^+e^- \to D\overline{D}$
0.22 ±0.05		[3,4] ABLIKIM	08D	BES2	$e^+e^- \to$ hadrons
0.277±0.011±0.013		[4] ABLIKIM	07E	BES2	$e^+e^- \to$ hadrons
$0.203\pm0.003^{+0.041}_{-0.027}$	1.4M	[4,5] BESSON	06	CLEO	$e^+e^- \to$ 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	$e^+e^- \to D\overline{D}$, hadrons
$0.414^{+0.072}_{-0.080}{}^{+0.093}_{-0.028}$		[2,7] ANASHIN	12A	KEDR	$e^+e^- \to D\overline{D}$
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 $D\overline{D}$ 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 $D\overline{D}$ production not taken into account.
[5] BESSON 06 (as corrected in BESSON 10) measure $\sigma(e^+e^- \to \psi(3770) \to$ 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 $D\overline{D}$ 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.

$\psi(3770)$ BRANCHING RATIOS

$\Gamma(D\overline{D})/\Gamma_{\text{total}}$ $\Gamma_1/\Gamma = (\Gamma_2+\Gamma_3)/\Gamma$

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	$e^+e^- \to$ non-$D\overline{D}$
$1.033\pm0.014^{+0.048}_{-0.066}$	1.427M	[2] BESSON	06	CLEO	$e^+e^- \to$ hadrons

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

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

[1] Neglecting interference.

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

[3] From the joint analysis of the data on the $D\overline{D}$ 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 $\sigma(e^+e^- \to D\overline{D})$ at $\sqrt{s} = 3773$ MeV, using the $\psi(3770)$ resonance parameters measured by ABLIKIM 06L.

$\Gamma(D^0\overline{D}^0)/\Gamma_{total}$ 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	$e^+e^- \to D^0\overline{D}^0$	
0.499±0.013±0.038	[1] ABLIKIM	06N	BES2	$e^+e^- \to D^0\overline{D}^0$	

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

$\Gamma(D^+D^-)/\Gamma_{total}$ 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	$e^+e^- \to D^+D^-$	
0.357±0.011±0.034	[1] ABLIKIM	06N	BES2	$e^+e^- \to D^+D^-$	

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

$\Gamma(D^0\overline{D}^0)/\Gamma(D^+D^-)$ 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 $e^+e^- \to D\overline{D}$
1.39 ±0.31 ±0.12		PAKHLOVA	08	BELL 10.6 $e^+e^- \to D\overline{D}\gamma$
1.78 ±0.33 ±0.24		AUBERT	07BE	BABR $e^+e^- \to D\overline{D}\gamma$
1.27 ±0.12 ±0.08		ABLIKIM	06L	BES2 $e^+e^- \to D\overline{D}$
2.43 ±1.50 ±0.43	34	[1] CHISTOV	04	BELL $B^+ \to \psi(3770)K^+$

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

1.258±0.016±0.014	[2] DOBBS	07	CLEO	$e^+e^- \to D\overline{D}$	

[1] See ADLER 88C for older measurements of this quantity.

[2] Superseded by BONVICINI 14.

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

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

[1] From a fit to the $e^+e^- \to J/\psi X$ 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 5.3 σ, uses an additional resonance with a mass of 3766.2 ± 3.8 ± 0.4 MeV/c^2, a total width of 22.2 ± 5.9 ± 1.4 MeV, and Γ(e e)·B($J/\psi X$) = 79.4 ± 85.5 ± 11.7 eV, possibly compatible with the results of ABLIKIM 08H.

$\Gamma(J/\psi\pi^+\pi^-)/\Gamma_{total}$ 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	$e^+e^- \to \psi(3770)$
3.4 ±1.4 ±0.9	17.8 ± 4.8	BAI	05	BES2	$e^+e^- \to \psi(3770)$

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

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

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

VALUE (units 10^{-5})	EVTS	DOCUMENT ID		TECN	COMMENT
87±33±22	22 ± 10	ADAM	06	CLEO	$e^+e^- \to \psi(3770)$

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

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

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

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

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

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

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

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<7	90	[1] ADAMS	06	CLEO	$e^+e^- \to \psi(3770)$

[1] Comparing cross sections at $\sqrt{s} = 3.773$ GeV and $\sqrt{s} = 3.671$ GeV, neglecting interference, and using $\sigma(\psi(3770) \to D\overline{D}) = 6.39 \pm 0.20$ 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	$e^+e^- \to \psi(3770)$

[1] Comparing cross sections at $\sqrt{s} = 3.773$ GeV and $\sqrt{s} = 3.671$ GeV, neglecting interference, and using $\sigma(\psi(3770) \to D\overline{D}) = 6.39 \pm 0.20$ 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	$e^+e^- \to \psi(3770)$

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

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

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
3.1±0.6±0.3		[1] ADAMS	06	CLEO	3.773 $e^+e^- \to \phi\eta$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<19	90	[2] ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

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

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

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

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

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

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

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

VALUE (units 10^{-5})	CL%	DOCUMENT ID		TECN	COMMENT
< 3	90	[1] ADAMS	06	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<50	90	[2] ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

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

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

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

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

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

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

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

[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 $\sigma(\psi(3770) \to D\overline{D}) = 6.39 \pm 0.20$ nb.

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

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

[1] Comparing cross sections at $\sqrt{s} = 3.773$ GeV and $\sqrt{s} = 3.671$ GeV, neglecting interference, and using $\sigma(\psi(3770) \to D\overline{D}) = 6.39 \pm 0.20$ nb.
[2] Data suggest possible destructive interference with continuum.

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

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
$\sim 10^{-5}$	[1] DRUZHININ	15	RVUE	$e^+e^- \to \psi(3770)$

[1] DRUZHININ 15 uses BABAR and CLEO data takitaking into account interference of the processes $e^+e^- \to K^+K^-$ and $e^+e^- \to K^0_S K^0_L$.

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

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

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

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

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

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

$\Gamma(K^0_S K^0_L)/\Gamma_{\text{total}}$ Γ_{24}/Γ

VALUE (units 10^{-5})	CL%	DOCUMENT ID		TECN	COMMENT
< 1.2	90	[1] CRONIN-HEN..	06	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<21	90	[2] ABLIKIM	04F	BES	$e^+e^- \to \psi(3770)$

[1] Using $\sigma(e^+e^- \to \psi(3770) \to \text{hadrons}) = (6.38 \pm 0.08^{+0.41}_{-0.30})$ nb from BESSON 06 and $B(K^0_S \to \pi^+\pi^-) = 0.6895 \pm 0.0014$.
[2] Using $B(K^0_S \to \pi^+\pi^-) = 0.6860 \pm 0.0027$.

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

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<11.2	90	[1] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<48	90	[2] ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

[1] Using $\sigma_{tot}(e^+e^- \to \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.
[2] Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \to \psi(3770)) = 7.15 \pm 0.38$ nb.

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

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<10.6	90	[1] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<62	90	[2] ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

[1] Using $\sigma_{tot}(e^+e^- \to \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.
[2] Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \to \psi(3770)) = 7.15 \pm 0.38$ nb.

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

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

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

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
< 6.0	90	[1] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<55	90	[2] ABLIKIM	07I	BES2	3.77 e^+e^-

[1] Using $\sigma_{tot}(e^+e^- \to \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.
[2] Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \to \psi(3770)) = 7.15 \pm 0.38$ nb.

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

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

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

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

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

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

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

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

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

VALUE (units 10^{-3})	CL%	DOCUMENT ID		TECN	COMMENT
<1.24	90	[1] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<2.3	90	[2] ABLIKIM	10D	BES2	$e^+e^- \to \psi(3770)$

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

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

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

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

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

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

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

$\Gamma(\eta 3\pi)/\Gamma_{total}$ Γ_{35}/Γ

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

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

$\Gamma(\eta 2(\pi^+\pi^-))/\Gamma_{total}$ Γ_{36}/Γ

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

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

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

[1] Using $\sigma_{tot}(e^+e^- \to \psi(3770)) = 7.9 \pm 0.6$ 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	$e^+e^- \to \psi(3770)$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

<111	90	[2]	ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

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

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

$\Gamma(K^+K^-\rho^0\pi^0)/\Gamma_{total}$ 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 $\sigma^{obs}(e^+e^- \to \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(K^+K^-\rho^+\pi^-)/\Gamma_{total}$ 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 $\sigma^{obs}(e^+e^- \to \psi(3770)) = 7.15 \pm 0.38$ nb.

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

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
< 3.4	90	[1] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<66	90	[2] ABLIKIM	07I	BES2	3.77 e^+e^-

[1] Using $\sigma_{tot}(e^+e^- \to \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.
[2] Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \to \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(\phi\pi^+\pi^-\pi^0)/\Gamma_{total}$ 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 $\sigma^{obs}(e^+e^- \to \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(K^{*0}K^-\pi^+\pi^0 + \text{c.c.})/\Gamma_{total}$ 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 $\sigma^{obs}(e^+e^- \to \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(K^{*+}K^-\pi^+\pi^- + \text{c.c.})/\Gamma_{total}$ 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 $\sigma^{obs}(e^+e^- \to \psi(3770)) = 7.15 \pm 0.38$ nb.

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

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

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

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

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

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

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

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

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

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
< 4.1	90	[1] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<31	90	[2] ABLIKIM	10D	BES2	$e^+e^- \to \psi(3770)$

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

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

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

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

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

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

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

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

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

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
< 6.0	90	[1] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<17	90	[2] ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

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

[2] Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \to \psi(3770)) = 7.15 \pm 0.38$ 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	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<24	90	[2] ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

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

[2] Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \to \psi(3770)) = 7.15 \pm 0.38$ 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	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<46	90	[2] ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

VALUE (units 10^{-6})	EVTS	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
not seen		[1] AAIJ	17AD	LHCB	$pp \to B^+X \to p\overline{p}K^+X$
$7.1^{+\ 8.6}_{-\ 2.9}$	684	[2] ABLIKIM	14L	BES3	$e^+e^- \to \psi(3770)$
310 ± 30	684	[3] ABLIKIM	14L	BES3	$e^+e^- \to \psi(3770)$

[1] AAIJ 17AD reports $B(B^+ \to \psi(3770)K^+ \to p\overline{p}K^+)/B(B^+ \to J/\psi K^+ \to p\overline{p}K^+) < 0.09\ (0.10)$ 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.

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

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
< 0.4	90	[1,2] ABLIKIM	14O	BES3	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$59\ ^{+3}_{-2} \pm 5$		[1,3] ABLIKIM	14O	BES3	$e^+e^- \to \psi(3770)$
<12	90	[4] ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

[1] Calculated by the authors using $\sigma(e^+e^- \to \psi(3770) \to \text{hadrons}) = 6.36 \pm 0.08^{+0.41}_{-0.30}$ 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 $\sigma^{obs}(e^+e^- \to \psi(3770)) = 7.15 \pm 0.38$ nb.

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

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
< 5.8	90	[1] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<16	90	[2] ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

[1] Using $\sigma_{tot}(e^+e^- \to \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.
[2] Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \to \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(\Lambda\overline{\Lambda})/\Gamma_{total}$ Γ_{79}/Γ

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
$<1.2 \times 10^{-4}$	90	[1] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$<1.8 \times 10^{-4}$	90	[2] ABLIKIM	21AS	BES3	$e^+e^- \to \psi(3770)$
$<4 \times 10^{-4}$	90	[3] ABLIKIM	07F	BES2	$e^+e^- \to \psi(3770)$

[1] Using $\sigma_{tot}(e^+e^- \to \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.
[2] From a measurement of the $e^+e^- \to \Lambda\overline{\Lambda}$ 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 $\sigma^{obs}(e^+e^- \to \psi(3770)) = 7.15 \pm 0.38$ nb.

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

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<18.5	90	[1] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<73	90	[2] ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

[1] Using $\sigma_{tot}(e^+e^- \to \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.
[2] Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \to \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(\omega p\bar{p})/\Gamma_{total}$ Γ_{81}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
< 2.9	90	[1] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<30	90	[2] ABLIKIM	07I	BES2	3.77 e^+e^-

[1] Using $\sigma_{tot}(e^+e^- \to \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.
[2] Using $\sigma^{\text{obs}} = 7.15 \pm 0.27 \pm 0.27$ nb and neglecting interference.

$\Gamma(\Lambda\overline{\Lambda}\pi^0)/\Gamma_{total}$ Γ_{82}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
< 0.7	90	[1] ABLIKIM	13Q	BES3	$e^+e^- \to \psi(3770)$
• • • 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 $\sigma^{obs}(e^+e^- \to \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(p\overline{p}2(\pi^+\pi^-))/\Gamma_{total}$ Γ_{83}/Γ

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

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

$\Gamma(\eta p\overline{p})/\Gamma_{total}$ Γ_{84}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
< 5.4	90	[1] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<11	90	[2] ABLIKIM	10D	BES2	$e^+e^- \to \psi(3770)$

[1] Using $\sigma_{tot}(e^+e^- \to \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.
[2] Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \to \psi(3770)) = 7.15 \pm 0.38$ nb.

$\Gamma(\eta p\overline{p}\pi^+\pi^-)/\Gamma_{total}$ Γ_{85}/Γ

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

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

$\Gamma(\rho^0 p\overline{p})/\Gamma_{total}$ Γ_{86}/Γ

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

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

$\Gamma(p\overline{p}K^+K^-)/\Gamma_{total}$ Γ_{87}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
< 3.2	90	[1] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<11	90	[2] ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

[1] Using $\sigma_{tot}(e^+e^- \to \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.
[2] Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \to \psi(3770)) = 7.15 \pm 0.38$ nb.

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

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

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

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

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

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

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

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<1.3	90	[1] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<9	90	[2] ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

[1] Using $\sigma_{tot}(e^+e^- \to \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.
[2] Assuming that interference effects between resonance and continuum can be neglected and using $\sigma^{obs}(e^+e^- \to \psi(3770)) = 7.15 \pm 0.38$ nb.

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

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
< 2.5	90	[1] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
< 4.7	90	[2] ABLIKIM	13Q	BES3	$e^+e^- \to \psi(3770)$
<39	90	[3] ABLIKIM	07F	BES2	$e^+e^- \to \psi(3770)$

[1] Using $\sigma_{tot}(e^+e^- \to \psi(3770)) = 7.9 \pm 0.6$ 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 $\sigma^{obs}(e^+e^- \to \psi(3770)) = 7.15 \pm 0.38$ nb.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$\Gamma(\Xi^+\overline{\Xi}^-)/\Gamma_{total}$ Γ_{97}/Γ

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

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

$\Gamma(\Xi^0\overline{\Xi}^0)/\Gamma_{total}$ Γ_{98}/Γ

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

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

RADIATIVE DECAYS

$\Gamma(\gamma\chi_{c2})/\Gamma_{total}$ Γ_{99}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID		TECN	COMMENT
<0.64	90	[1] ABLIKIM	15J	BES3	$e^+e^- \to \psi(3770) \to \gamma\gamma J/\psi$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<2.0	90	[2] BRIERE	06	CLEO	$e^+e^- \to \psi(3770) \to \gamma +$ hadrons
<0.9	90	[3] COAN	06A	CLEO	$e^+e^- \to \psi(3770) \to \gamma\gamma J/\psi$

[1] This limit is equivalent to $(0.25 \pm 0.21 \pm 0.18) \times 10^{-3}$ branching fraction value.
[2] Uses $B(\psi(2S) \to \gamma\chi_{c2}) = 9.22 \pm 0.11 \pm 0.46$ % 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 $\sigma(e^+e^- \to D\overline{D})$ from HE 05 for $\sigma(e^+e^- \to \psi(3770))$.

$\Gamma(\gamma\chi_{c1})/\Gamma_{total}$ Γ_{100}/Γ

VALUE (units 10^{-3})	EVTS	DOCUMENT ID		TECN	COMMENT
2.49±0.23 OUR AVERAGE					
1.98±0.78±0.05	202	[1] ABLIKIM	16B	BES3	$e^+e^- \to \psi(3770) \to \gamma +$ hadrons
2.48±0.15±0.23	0.6k	ABLIKIM	15J	BES3	$e^+e^- \to \psi(3770) \to \gamma\gamma J/\psi$
2.4 ±0.8 ±0.2		[2] ABLIKIM	14H	BES3	$e^+e^- \to \psi(3770) \to K^0_S K^\pm \pi^\mp$
2.9 ±0.5 ±0.4		[3] BRIERE	06	CLEO	$e^+e^- \to \psi(3770) \to \gamma +$ 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	$e^+e^- \to \psi(3770) \to \gamma +$ hadrons
2.8 ±0.5 ±0.4	53	[5] COAN	06A	CLEO	$e^+e^- \to \psi(3770) \to \gamma\gamma J/\psi$

[1] ABLIKIM 16B reports $(1.94 \pm 0.42 \pm 0.64) \times 10^{-3}$ from a measurement of $[\Gamma(\psi(3770) \to \gamma\chi_{c1})/\Gamma_{\text{total}}]$ / $[B(\psi(2S) \to \gamma\chi_{c1}(1P))]$ assuming $B(\psi(2S) \to \gamma\chi_{c1}(1P)) = (9.55 \pm 0.31) \times 10^{-2}$, which we rescale to our best value $B(\psi(2S) \to \gamma\chi_{c1}(1P)) = (9.75 \pm 0.24) \times 10^{-2}$. Our first error is their experiment's error and our second error is the systematic error from using our best value.

[2] ABLIKIM 14H reports $[\Gamma(\psi(3770) \to \gamma\chi_{c1})/\Gamma_{\text{total}}] \times [B(\chi_{c1}(1P) \to K^0_S K^\pm \pi^\mp)] = (8.51 \pm 2.39 \pm 1.42) \times 10^{-6}$ which we divide by our best value $B(\chi_{c1}(1P) \to K^0_S K^\pm \pi^\mp) = 0.00349 \pm 0.00029$. Our first error is their experiment's error and our second error is the systematic error from using our best value. We have calculated the best value of $B(\chi_{c1}(1P) \to K^0_S K^\pm \pi^\mp)$ as 1/2 of $B(\chi_{c1}(1P) \to \overline{K}^0 K^+ \pi^- +$ c.c.) $= (7.0 \pm 0.6) \times 10^{-3}$.

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

[4] Uses $B(\psi(2S) \to \gamma\chi_{c1}) = 9.07 \pm 0.11 \pm 0.54$ % 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 $\sigma(e^+e^- \to D\overline{D})$ from HE 05 for $\sigma(e^+e^- \to \psi(3770))$.

$\Gamma(\gamma\chi_{c1})/\Gamma(J/\psi\pi^+\pi^-)$ Γ_{100}/Γ_5

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
1.49±0.31±0.26	53 ± 10	[1] COAN	06A	CLEO	$e^+e^- \to \psi(3770) \to \gamma\gamma J/\psi$

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

$\Gamma(\gamma\chi_{c0})/\Gamma_{\text{total}}$ Γ_{101}/Γ

VALUE (units 10^{-3})	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
6.9±0.6 OUR AVERAGE						
6.7±0.7±0.1		2.2k	[1] ABLIKIM	16B	BES3	$e^+e^- \to \psi(3770) \to \gamma +$ hadrons
7.3±0.7±0.6		274	BRIERE	06	CLEO	$e^+e^- \to \psi(3770) \to \gamma +$ hadrons

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

< 44	90	[2] COAN	06A	CLEO	$e^+e^- \to \psi(3770) \to \gamma\gamma J/\psi$

[1] ABLIKIM 16B reports $(6.88 \pm 0.28 \pm 0.67) \times 10^{-3}$ from a measurement of $[\Gamma(\psi(3770) \to \gamma\chi_{c0})/\Gamma_{\text{total}}]$ / $[B(\psi(2S) \to \gamma\chi_{c0}(1P))]$ assuming $B(\psi(2S) \to \gamma\chi_{c0}(1P)) = (9.99 \pm 0.27) \times 10^{-2}$, which we rescale to our best value $B(\psi(2S) \to \gamma\chi_{c0}(1P)) = (9.79 \pm 0.20) \times 10^{-2}$. Our first error is their experiment's error and our second error is the systematic error from using our best value.

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

$\Gamma(\gamma\chi_{c0})/\Gamma(\gamma\chi_{c2})$ Γ_{101}/Γ_{99}

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
>8	90	[1] BRIERE	06	CLEO	$e^+e^- \to \psi(3770)$

[1] Not independent of other results in BRIERE 06.

$\Gamma(\gamma\chi_{c0})/\Gamma(\gamma\chi_{c1})$ $\Gamma_{101}/\Gamma_{100}$

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
2.5±0.6	[1] BRIERE	06	CLEO	$e^+e^- \to \psi(3770)$

[1] Not independent of other results in BRIERE 06.

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

VALUE	CL%	DOCUMENT ID		TECN
<7 × 10^{-4}	90	[1] ABLIKIM	14H	BES3

[1] ABLIKIM 14H reports $[\Gamma(\psi(3770) \to \gamma\eta_c)/\Gamma_{\text{total}}] \times [B(\eta_c(1S) \to K^0_S K^\pm\pi^\mp)] < 16\times10^{-6}$ which we divide by our best value $B(\eta_c(1S) \to K^0_S K^\pm\pi^\mp) = 2.34\times10^{-2}$. We have calculated the best value of $B(\eta_c(1S) \to K^0_S K^\pm\pi^\mp)$ as 1/3 of $B(\eta_c(1S) \to K\overline{K}\pi) = 7.0\times10^{-2}$.

$\Gamma(\gamma\eta_c(2S))/\Gamma_{\text{total}}$ Γ_{103}/Γ

VALUE	CL%	DOCUMENT ID		TECN
<9 × 10^{-4}	90	[1] ABLIKIM	14H	BES3

[1] ABLIKIM 14H reports $[\Gamma(\psi(3770) \to \gamma\eta_c(2S))/\Gamma_{\text{total}}] \times [B(\eta_c(2S) \to K^0_S K^\pm\pi^\mp)] < 5.6\times10^{-6}$ which we divide by our best value $B(\eta_c(2S) \to K^0_S K^\pm\pi^\mp) = 6\times10^{-3}$. We have calculated the best value of $B(\eta_c(2S) \to K^0_S K^\pm\pi^\mp)$ as 1/3 of $B(\eta_c(2S) \to K\overline{K}\pi) = 1.9\times10^{-2}$.

$\Gamma(\gamma\eta')/\Gamma_{\text{total}}$ Γ_{104}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<1.8	90	[1] PEDLAR	09	CLE3	$\psi(2S) \to \gamma X$

[1] Assuming maximal destructive interference between $\psi(3770)$ and continuum sources.

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

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<1.5	90	[1] PEDLAR	09	CLE3	$\psi(2S) \to \gamma X$

[1] Assuming maximal destructive interference between $\psi(3770)$ and continuum sources.

$\Gamma(\gamma\pi^0)/\Gamma_{\text{total}}$ Γ_{106}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<2	90	PEDLAR	09	CLE3	$\psi(2S) \to \gamma X$

ψ(3770) REFERENCES

ABLIKIM	21AS	PR D104 L091104	M. Ablikim *et al.*	(BESIII Collab.)
ABLIKIM	21Z	PRL 127 082002	M. Ablikim *et al.*	(BESIII Collab.)
PDG	20	PTEP 2020 083C01	P.A. Zyla *et al.*	(PDG Collab.)
AAIJ	19M	JHEP 1907 035	R. Aaij *et al.*	(LHCb Collab.)
AAIJ	17AD	PL B769 305	R. Aaij *et al.*	(LHCb Collab.)
SHAMOV	17	PL B769 187	A.G. Shamov, K.Yu. Todyshev	
ABLIKIM	16B	PL B753 103	M. Ablikim *et al.*	(BESIII Collab.)
ABLIKIM	15J	PR D91 092009	M. Ablikim *et al.*	(BESIII Collab.)
DRUZHININ	15	PR D92 054024	V.P. Druzhinin	(NOVO)
ABLIKIM	14H	PR D89 112005	M. Ablikim *et al.*	(BESIII Collab.)
ABLIKIM	14L	PL B735 101	M. Ablikim *et al.*	(BESIII Collab.)
ABLIKIM	14O	PR D90 032007	M. Ablikim *et al.*	(BESIII Collab.)
BONVICINI	14	PR D89 072002	G. Bonvicini *et al.*	(CLEO Collab.)
ABLIKIM	13Q	PR D87 112011	M. Ablikim *et al.*	(BESIII Collab.)
ANASHIN	12A	PL B711 292	V.V. Anashin *et al.*	(KEDR Collab.)
ABLIKIM	10D	EPJ C66 11	M. Ablikim *et al.*	(BES II Collab.)
BESSON	10	PRL 104 159901 (errat.)	D. Besson *et al.*	(CLEO Collab.)
ABLIKIM	09C	EPJ C64 243	M. Ablikim *et al.*	(BES Collab.)
PEDLAR	09	PR D79 111101	T.K. Pedlar *et al.*	(CLEO Collab.)
ABLIKIM	08B	PL B659 74	M. Ablikim *et al.*	(BES Collab.)
ABLIKIM	08D	PL B660 315	M. Ablikim *et al.*	(BES Collab.)
ABLIKIM	08H	PRL 101 102004	M. Ablikim *et al.*	(BES Collab.)
ABLIKIM	08M	PL B670 179	M. Ablikim *et al.*	(BES Collab.)
ABLIKIM	08N	PL B670 184	M. Ablikim *et al.*	(BES Collab.)
AUBERT	08B	PR D77 011102	B. Aubert *et al.*	(BABAR Collab.)
BRODZICKA	08	PRL 100 092001	J. Brodzicka *et al.*	(BELLE Collab.)
PAKHLOVA	08	PR D77 011103	G. Pakhlova *et al.*	(BELLE Collab.)
ABLIKIM	07B	PL B650 111	M. Ablikim *et al.*	(BES Collab.)
ABLIKIM	07E	PL B652 238	M. Ablikim *et al.*	(BES Collab.)
ABLIKIM	07F	PL B656 30	M. Ablikim *et al.*	(BES Collab.)
ABLIKIM	07I	EPJ C52 805	M. Ablikim *et al.*	(BES Collab.)
ABLIKIM	07K	PR D76 122002	M. Ablikim *et al.*	(BES Collab.)
AUBERT	07BE	PR D76 111105	B. Aubert *et al.*	(BABAR Collab.)
DOBBS	07	PR D76 112001	S. Dobbs *et al.*	(CLEO Collab.)
ABLIKIM	06L	PRL 97 121801	M. Ablikim *et al.*	(BES Collab.)
ABLIKIM	06N	PL B641 145	M. Ablikim *et al.*	(BES Collab.)
ADAM	06	PRL 96 082004	N.E. Adam *et al.*	(CLEO Collab.)
ADAMS	06	PR D73 012002	G.S. Adams *et al.*	(CLEO Collab.)
BESSON	06	PRL 96 092002	D. Besson *et al.*	(CLEO Collab.)
Also		PRL 104 159901 (errat.)	D. Besson *et al.*	(CLEO Collab.)
BRIERE	06	PR D74 031106	R.A. Briere *et al.*	(CLEO Collab.)
COAN	06A	PRL 96 182002	T.E. Coan *et al.*	(CLEO Collab.)
CRONIN-HEN...	06	PR D74 012005	D. Cronin-Hennessy *et al.*	(CLEO Collab.)
HUANG	06A	PRL 96 032003	G.S. Huang *et al.*	(CLEO Collab.)
BAI	05	PL B605 63	J.Z. Bai *et al.*	(BES Collab.)
HE	05	PRL 95 121801	Q. He *et al.*	(CLEO Collab.)
Also		PRL 96 199903 (errat.)	Q. He *et al.*	(CLEO Collab.)
ABLIKIM	04F	PR D70 077101	M. Ablikim *et al.*	(BES Collab.)
ATHAR	04	PR D70 112002	S.B. Athar *et al.*	(CLEO Collab.)
CHISTOV	04	PRL 93 051803	R. Chistov *et al.*	(BELLE Collab.)
PDG	04	PL B592 1	S. Eidelman *et al.*	(PDG Collab.)
BAI	02C	PRL 88 101802	J.Z. Bai *et al.*	(BES Collab.)
ADLER	88C	PRL 60 89	J. Adler *et al.*	(Mark III Collab.)
SCHINDLER	80	PR D21 2716	R.H. Schindler *et al.*	(Mark II Collab.)
BACINO	78	PRL 40 671	W.J. Bacino *et al.*	(SLAC, UCLA, UCI)
RAPIDIS	77	PRL 39 526	P.A. Rapidis *et al.*	(LGW Collab.)