$\psi(3770)$

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

$\psi(3770)$ 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*
3773.15±0.33 OUR FIT					
3778.1 ±1.2 OUR AVERAGE					
$3779.2\ ^{+1.8}_{-1.7}\ ^{+0.6}_{-0.8}$		[1] 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. • • •					
3772.0 ±1.9		[2,3] ABLIKIM	08D	BES2	e^+e^- → hadrons
3778.4 ±3.0 ±1.3	34	CHISTOV	04	BELL	Sup. by BRODZICKA 08

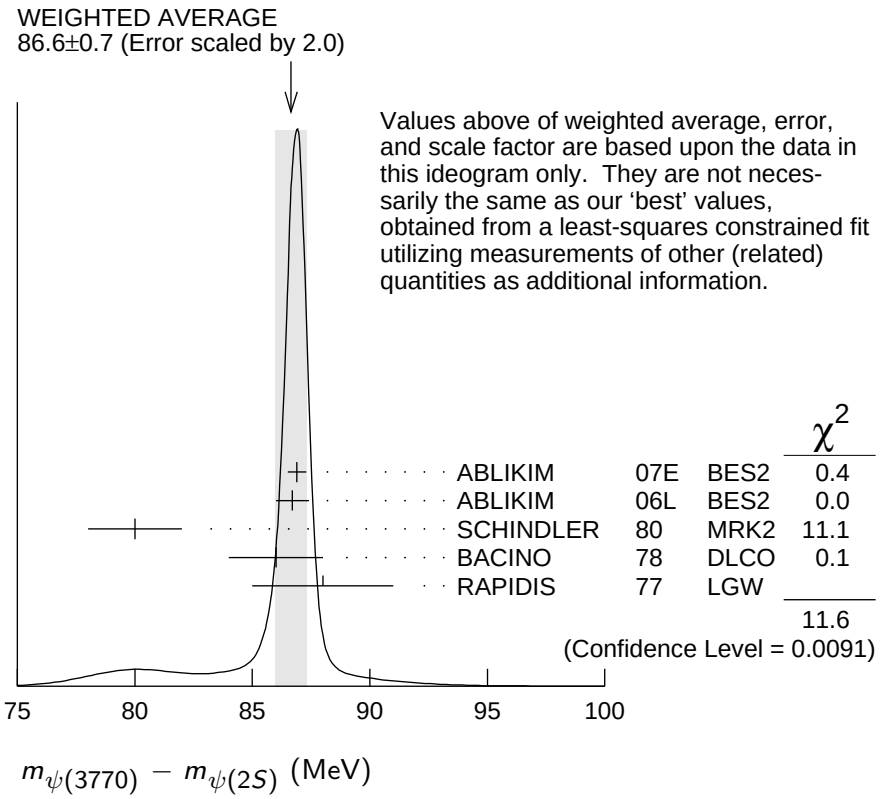
[1] Taking into account interference between the resonant and non-resonant $D\overline{D}$ production.
[2] Reanalysis of data presented in BAI 02C. From a global fit over the center-of-mass energy region 3.7–5.0 GeV covering the $\psi(3770)$, $\psi(4040)$, $\psi(4160)$, and $\psi(4415)$ resonances. Phase angle fixed in the fit to $\delta = 0^\circ$.
[3] Interference between the resonant and non-resonant $D\overline{D}$ 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*
87.04±0.33 OUR FIT				
86.6 ±0.7 OUR AVERAGE	Error includes scale factor of 2.0. See the ideogram below.			
86.9 ±0.4	[4] ABLIKIM	07E	BES2	e^+e^- → hadrons
86.7 ±0.7	ABLIKIM	06L	BES2	e^+e^- → hadrons
80 ±2	SCHINDLER	80	MRK2	e^+e^-
86 ±2	[5] BACINO	78	DLCO	e^+e^-
88 ±3	RAPIDIS	77	LGW	e^+e^-

[4] BES-II $\psi(2S)$ mass subtracted (see ABLIKIM 06L).
[5] 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					
$24.9^{+\ 4.6+0.5}_{-\ 4.0-1.1}$		[6] ANASHIN	12A	KEDR	$e^+e^- \to D\overline{D}$
30.4± 8.5		[7,8] ABLIKIM	08D	BES2	e^+e^- → hadrons
27 ±10 ±5	68	BRODZICKA	08	BELL	$B^+ \to D^0\overline{D}^0K^+$
28.5± 1.2±0.2		[8] ABLIKIM	07E	BES2	e^+e^- → hadrons
23.5± 3.7±0.9		AUBERT	07BE	BABR	$e^+e^- \to D\overline{D}\gamma$
26.9± 2.4±0.3		[8] ABLIKIM	06L	BES2	e^+e^- → hadrons
24 ± 5		[8] SCHINDLER	80	MRK2	e^+e^-
24 ± 5		[8] BACINO	78	DLCO	e^+e^-
28 ± 5		[8] RAPIDIS	77	LGW	e^+e^-

[6] Taking into account interference between the resonant and non-resonant $D\overline{D}$ production.

[7] 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 $\delta = 0^\circ$.

[8] Interference between the resonant and non-resonant $D\overline{D}$ production not taken into account.

ψ(3770) DECAY MODES

In addition to the dominant decay mode to $D\overline{D}$, $\psi(3770)$ was found to decay into the final states containing the J/ψ (BAI 05, ADAM 06). ADAMS 06 and HUANG 06A searched for various decay modes with light hadrons and found a statistically significant signal for the decay to $\phi\eta$ only (ADAMS 06).

	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 ±5) %	S=2.0
Γ_3	D^+D^-	(41 ±4) %	S=2.0
Γ_4	$J/\psi\pi^+\pi^-$	(1.93$\pm$0.28) $\times 10^{-3}$	
Γ_5	$J/\psi\pi^0\pi^0$	(8.0 $\pm$3.0) $\times 10^{-4}$	
Γ_6	$J/\psi\eta$	(9 ±4) $\times 10^{-4}$	
Γ_7	$J/\psi\pi^0$	$<$ 2.8 $\times 10^{-4}$	CL=90%
Γ_8	e^+e^-	(9.6 $\pm$0.7) $\times 10^{-6}$	S=1.3
	Decays to light hadrons		
Γ_9	$b_1(1235)\pi$	$<$ 1.4 $\times 10^{-5}$	CL=90%
Γ_{10}	$\phi\eta'$	$<$ 7 $\times 10^{-4}$	CL=90%
Γ_{11}	$\omega\eta'$	$<$ 4 $\times 10^{-4}$	CL=90%
Γ_{12}	$\rho^0\eta'$	$<$ 6 $\times 10^{-4}$	CL=90%
Γ_{13}	$\phi\eta$	(3.1 $\pm$0.7) $\times 10^{-4}$	
Γ_{14}	$\omega\eta$	$<$ 1.4 $\times 10^{-5}$	CL=90%
Γ_{15}	$\rho^0\eta$	$<$ 5 $\times 10^{-4}$	CL=90%
Γ_{16}	$\phi\pi^0$	$<$ 3 $\times 10^{-5}$	CL=90%
Γ_{17}	$\omega\pi^0$	$<$ 6 $\times 10^{-4}$	CL=90%
Γ_{18}	$\pi^+\pi^-\pi^0$	$<$ 5 $\times 10^{-6}$	CL=90%
Γ_{19}	$\rho\pi$	$<$ 5 $\times 10^{-6}$	CL=90%
Γ_{20}	$K^*(892)^+K^-$ + c.c.	$<$ 1.4 $\times 10^{-5}$	CL=90%
Γ_{21}	$K^*(892)^0\overline{K}^0$ + c.c.	$<$ 1.2 $\times 10^{-3}$	CL=90%
Γ_{22}	$K^0_SK^0_L$	$<$ 1.2 $\times 10^{-5}$	CL=90%
Γ_{23}	$2(\pi^+\pi^-)$	$<$ 1.12 $\times 10^{-3}$	CL=90%
Γ_{24}	$2(\pi^+\pi^-)\pi^0$	$<$ 1.06 $\times 10^{-3}$	CL=90%
Γ_{25}	$2(\pi^+\pi^-\pi^0)$	$<$ 5.85 %	CL=90%
Γ_{26}	$\omega\pi^+\pi^-$	$<$ 6.0 $\times 10^{-4}$	CL=90%
Γ_{27}	$3(\pi^+\pi^-)$	$<$ 9.1 $\times 10^{-3}$	
Γ_{28}	$3(\pi^+\pi^-)\pi^0$	$<$ 1.37 %	
Γ_{29}	$3(\pi^+\pi^-)2\pi^0$	$<$ 11.74 %	CL=90%
Γ_{30}	$\eta\pi^+\pi^-$	$<$ 1.24 $\times 10^{-3}$	CL=90%
Γ_{31}	$\pi^+\pi^-2\pi^0$	$<$ 8.9 $\times 10^{-3}$	CL=90%
Γ_{32}	$\rho^0\pi^+\pi^-$	$<$ 6.9 $\times 10^{-3}$	CL=90%
Γ_{33}	$\eta 3\pi$	$<$ 1.34 $\times 10^{-3}$	CL=90%
Γ_{34}	$\eta 2(\pi^+\pi^-)$	$<$ 2.43 %	

Γ_{35}	$\eta\rho^0\pi^+\pi^-$	$<$	1.45	%	CL=90%
Γ_{36}	$\eta' 3\pi$	$<$	2.44	$\times 10^{-3}$	CL=90%
Γ_{37}	$K^+K^-\pi^+\pi^-$	$<$	9.0	$\times 10^{-4}$	CL=90%
Γ_{38}	$\phi\pi^+\pi^-$	$<$	4.1	$\times 10^{-4}$	CL=90%
Γ_{39}	$K^+K^-2\pi^0$	$<$	4.2	$\times 10^{-3}$	CL=90%
Γ_{40}	$4(\pi^+\pi^-)$	$<$	1.67	%	CL=90%
Γ_{41}	$4(\pi^+\pi^-)\pi^0$	$<$	3.06	%	CL=90%
Γ_{42}	$\phi f_0(980)$	$<$	4.5	$\times 10^{-4}$	CL=90%
Γ_{43}	$K^+K^-\pi^+\pi^-\pi^0$	$<$	2.36	$\times 10^{-3}$	CL=90%
Γ_{44}	$K^+K^-\rho^0\pi^0$	$<$	8	$\times 10^{-4}$	CL=90%
Γ_{45}	$K^+K^-\rho^+\pi^-$	$<$	1.46	%	CL=90%
Γ_{46}	ωK^+K^-	$<$	3.4	$\times 10^{-4}$	CL=90%
Γ_{47}	$\phi\pi^+\pi^-\pi^0$	$<$	3.8	$\times 10^{-3}$	CL=90%
Γ_{48}	$K^{*0}K^-\pi^+\pi^0 +$ c.c.	$<$	1.62	%	CL=90%
Γ_{49}	$K^{*+}K^-\pi^+\pi^- +$ c.c.	$<$	3.23	%	CL=90%
Γ_{50}	$K^+K^-\pi^+\pi^-2\pi^0$	$<$	2.67	%	CL=90%
Γ_{51}	$K^+K^-2(\pi^+\pi^-)$	$<$	1.03	%	CL=90%
Γ_{52}	$K^+K^-2(\pi^+\pi^-)\pi^0$	$<$	3.60	%	CL=90%
Γ_{53}	ηK^+K^-	$<$	4.1	$\times 10^{-4}$	CL=90%
Γ_{54}	$\eta K^+K^-\pi^+\pi^-$	$<$	1.24	%	CL=90%
Γ_{55}	$\rho^0 K^+K^-$	$<$	5.0	$\times 10^{-3}$	CL=90%
Γ_{56}	$2(K^+K^-)$	$<$	6.0	$\times 10^{-4}$	CL=90%
Γ_{57}	ϕK^+K^-	$<$	7.5	$\times 10^{-4}$	CL=90%
Γ_{58}	$2(K^+K^-)\pi^0$	$<$	2.9	$\times 10^{-4}$	CL=90%
Γ_{59}	$2(K^+K^-)\pi^+\pi^-$	$<$	3.2	$\times 10^{-3}$	CL=90%
Γ_{60}	$K^0_S K^-\pi^+$	$<$	3.2	$\times 10^{-3}$	CL=90%
Γ_{61}	$K^0_S K^-\pi^+\pi^0$	$<$	1.33	%	CL=90%
Γ_{62}	$K^0_S K^-\rho^+$	$<$	6.6	$\times 10^{-3}$	CL=90%
Γ_{63}	$K^0_S K^-2\pi^+\pi^-$	$<$	8.7	$\times 10^{-3}$	CL=90%
Γ_{64}	$K^0_S K^-\pi^+\rho^0$	$<$	1.6	%	CL=90%
Γ_{65}	$K^0_S K^-\pi^+\eta$	$<$	1.3	%	CL=90%
Γ_{66}	$K^0_S K^-2\pi^+\pi^-\pi^0$	$<$	4.18	%	CL=90%
Γ_{67}	$K^0_S K^-2\pi^+\pi^-\eta$	$<$	4.8	%	CL=90%
Γ_{68}	$K^0_S K^-\pi^+2(\pi^+\pi^-)$	$<$	1.22	%	CL=90%
Γ_{69}	$K^0_S K^-\pi^+2\pi^0$	$<$	2.65	%	CL=90%
Γ_{70}	$K^0_S K^-K^+K^-\pi^+$	$<$	4.9	$\times 10^{-3}$	CL=90%
Γ_{71}	$K^0_S K^-K^+K^-\pi^+\pi^0$	$<$	3.0	%	CL=90%
Γ_{72}	$K^0_S K^-K^+K^-\pi^+\eta$	$<$	2.2	%	CL=90%
Γ_{73}	$K^{*0}K^-\pi^+ +$ c.c.	$<$	9.7	$\times 10^{-3}$	CL=90%
Γ_{74}	$p\overline{p}\pi^0$	$<$	1.2	$\times 10^{-3}$	
Γ_{75}	$p\overline{p}\pi^+\pi^-$	$<$	5.8	$\times 10^{-4}$	CL=90%
Γ_{76}	$\Lambda\overline{\Lambda}$	$<$	1.2	$\times 10^{-4}$	CL=90%
Γ_{77}	$p\overline{p}\pi^+\pi^-\pi^0$	$<$	1.85	$\times 10^{-3}$	CL=90%

Γ_{78}	$\omega p\overline{p}$	$<$	2.9	$\times 10^{-4}$	CL=90%
Γ_{79}	$\Lambda\overline{\Lambda}\pi^0$	$<$	7	$\times 10^{-5}$	CL=90%
Γ_{80}	$p\overline{p}2(\pi^+\pi^-)$	$<$	2.6	$\times 10^{-3}$	CL=90%
Γ_{81}	$\eta p\overline{p}$	$<$	5.4	$\times 10^{-4}$	CL=90%
Γ_{82}	$\eta p\overline{p}\pi^+\pi^-$	$<$	3.3	$\times 10^{-3}$	CL=90%
Γ_{83}	$\rho^0 p\overline{p}$	$<$	1.7	$\times 10^{-3}$	CL=90%
Γ_{84}	$p\overline{p}K^+K^-$	$<$	3.2	$\times 10^{-4}$	CL=90%
Γ_{85}	$\eta p\overline{p}K^+K^-$	$<$	6.9	$\times 10^{-3}$	CL=90%
Γ_{86}	$\pi^0 p\overline{p}K^+K^-$	$<$	1.2	$\times 10^{-3}$	CL=90%
Γ_{87}	$\phi p\overline{p}$	$<$	1.3	$\times 10^{-4}$	CL=90%
Γ_{88}	$\Lambda\overline{\Lambda}\pi^+\pi^-$	$<$	2.5	$\times 10^{-4}$	CL=90%
Γ_{89}	$\Lambda\overline{p}K^+$	$<$	2.8	$\times 10^{-4}$	CL=90%
Γ_{90}	$\Lambda\overline{p}K^+\pi^+\pi^-$	$<$	6.3	$\times 10^{-4}$	CL=90%
Γ_{91}	$\Lambda\overline{\Lambda}\eta$	$<$	1.9	$\times 10^{-4}$	CL=90%
Γ_{92}	$\Sigma^+\overline{\Sigma}^-$	$<$	1.0	$\times 10^{-4}$	CL=90%
Γ_{93}	$\Sigma^0\overline{\Sigma}^0$	$<$	4	$\times 10^{-5}$	CL=90%
Γ_{94}	$\Xi^+\overline{\Xi}^-$	$<$	1.5	$\times 10^{-4}$	CL=90%
Γ_{95}	$\Xi^0\overline{\Xi}^0$	$<$	1.4	$\times 10^{-4}$	CL=90%

Radiative decays

Γ_{96}	$\gamma\chi_{c2}$	$<$	9	$\times 10^{-4}$	CL=90%
Γ_{97}	$\gamma\chi_{c1}$	(	2.9 $\pm$0.6)	$\times 10^{-3}$	
Γ_{98}	$\gamma\chi_{c0}$	(	7.3 $\pm$0.9)	$\times 10^{-3}$	
Γ_{99}	$\gamma\eta'$	$<$	1.8	$\times 10^{-4}$	CL=90%
Γ_{100}	$\gamma\eta$	$<$	1.5	$\times 10^{-4}$	CL=90%
Γ_{101}	$\gamma\pi^0$	$<$	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 $\chi^2 = 20.0$ 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	98		
x_8	0	0	
Γ	0	0	-44
	x_2	x_3	x_8

	Mode	Rate (MeV)	Scale factor
Γ_2	$D^0\overline{D}^0$	14.1 ±1.4	1.7
Γ_3	D^+D^-	11.2 ±1.1	1.7
Γ_8	e^+e^-	(2.62±0.18) × 10^{-4}	1.4

ψ(3770) PARTIAL WIDTHS

$\Gamma(e^+e^-)$ Γ_8

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.				
$0.154^{+0.079}_{-0.058}{}^{+0.021}_{-0.027}$		[9,10] ANASHIN	12A	KEDR	$e^+e^- \to D\overline{D}$
0.22 ±0.05		[11,12] ABLIKIM	08D	BES2	$e^+e^- \to$ hadrons
0.277±0.011±0.013		[12] ABLIKIM	07E	BES2	$e^+e^- \to$ hadrons
$0.203\pm0.003^{+0.041}_{-0.027}$	1.4M	[12,13] BESSON	06	CLEO	$e^+e^- \to$ hadrons
0.276±0.050		[12] SCHINDLER	80	MRK2	e^+e^-
0.18 ±0.06		[12] BACINO	78	DLCO	e^+e^-
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$0.414^{+0.072}_{-0.080}{}^{+0.093}_{-0.028}$		[10,14] ANASHIN	12A	KEDR	$e^+e^- \to D\overline{D}$
0.37 ±0.09		[15] RAPIDIS	77	LGW	e^+e^-

[9] Solution I of the two solutions.
[10] Taking into account interference between the resonant and non-resonant $D\overline{D}$ production.
[11] 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 $\delta = 0^\circ$.
[12] Interference between the resonant and non-resonant $D\overline{D}$ production not taken into account.
[13] 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 ψ(3770) mass and width from our 2004 edition, PDG 04.
[14] Solution II of the two solutions.
[15] See also $\Gamma(e^+e^-)/\Gamma_{\text{total}}$ below.

ψ(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		[16] ABLIKIM	08B	BES2	$e^+e^- \to$ non-$D\overline{D}$
$1.033\pm0.014^{+0.048}_{-0.066}$	1.427M	[17] BESSON	06	CLEO	$e^+e^- \to$ hadrons
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.866±0.050±0.036		[18,19] ABLIKIM	07K	BES2	$e^+e^- \to$ non-$D\overline{D}$
0.836±0.073±0.042		[19] ABLIKIM	06L	BES2	$e^+e^- \to D\overline{D}$
0.855±0.017±0.058		[19,20] ABLIKIM	06N	BES2	$e^+e^- \to D\overline{D}$

$\Gamma(D^0\overline{D}^0)/\Gamma_{total}$ Γ_2/Γ

VALUE	DOCUMENT ID		TECN	COMMENT
0.52 ±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	[20] ABLIKIM	06N	BES2	$e^+e^- \to D^0\overline{D}^0$

$\Gamma(D^+D^-)/\Gamma_{total}$ 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	[20] ABLIKIM	06N	BES2	$e^+e^- \to D^+D^-$

$\Gamma(D^0\overline{D}^0)/\Gamma(D^+D^-)$ Γ_2/Γ_3

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
1.260±0.021 OUR FIT					
1.260±0.021 OUR AVERAGE					
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	$e^+e^- \to D\overline{D}\gamma$
1.258±0.016±0.014		DOBBS	07	CLEO	$e^+e^- \to D\overline{D}$
1.27 ±0.12 ±0.08		ABLIKIM	06L	BES2	$e^+e^- \to D\overline{D}$
2.43 ±1.50 ±0.43	34	[21] CHISTOV	04	BELL	$B^+ \to \psi(3770)K^+$

$\Gamma(J/\psi\pi^+\pi^-)/\Gamma_{total}$ Γ_4/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_5/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_6/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_7/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_8/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^-

[16] Neglecting interference.
[17] 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.
[18] Using $\sigma^{obs} = 7.07 \pm 0.58$ nb and neglecting interference.
[19] Not independent of ABLIKIM 08B.
[20] 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.
[21] See ADLER 88C for older measurements of this quantity.

DECAYS TO LIGHT HADRONS

$\Gamma(b_1(1235)\pi)/\Gamma_{total}$ Γ_9/Γ

VALUE (units 10^{-5})	CL%	DOCUMENT ID		TECN	COMMENT
<1.4	90	[22] ADAMS	06	CLEO	$e^+e^- \to \psi(3770)$

$\Gamma(\phi\eta')/\Gamma_{total}$ Γ_{10}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<7	90	[22] ADAMS	06	CLEO	$e^+e^- \to \psi(3770)$

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

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<4	90	[22] ADAMS	06	CLEO	$e^+e^- \to \psi(3770)$

$\Gamma(\rho^0\eta')/\Gamma_{total}$ Γ_{12}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<6	90	[22] ADAMS	06	CLEO	$e^+e^- \to \psi(3770)$

$\Gamma(\phi\eta)/\Gamma_{total}$ Γ_{13}/Γ

VALUE (units 10^{-4})	DOCUMENT ID		TECN	COMMENT
3.1±0.6±0.3	[22] ADAMS	06	CLEO	3.773 $e^+e^- \to \phi\eta$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
<19	[23] ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

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

VALUE (units 10^{-5})	CL%	DOCUMENT ID		TECN	COMMENT
<1.4	90	[22] ADAMS	06	CLEO	$e^+e^- \to \psi(3770)$

$\Gamma(\rho^0\eta)/\Gamma_{total}$ Γ_{15}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<5	90	[22] ADAMS	06	CLEO	$e^+e^- \to \psi(3770)$

$\Gamma(\phi\pi^0)/\Gamma_{total}$ Γ_{16}/Γ

VALUE (units 10^{-5})	CL%	DOCUMENT ID		TECN	COMMENT
< 3	90	[22] ADAMS	06	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<50		[23] ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

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

VALUE (units 10^{-4})	CL%		DOCUMENT ID		TECN	COMMENT
<6	90	[22]	ADAMS	06	CLEO	$e^+e^- \to \psi(3770)$

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

VALUE (units 10^{-6})	CL%		DOCUMENT ID		TECN	COMMENT
<5	90	[22,24]	ADAMS	06	CLEO	$e^+e^- \to \psi(3770)$

$\Gamma(\rho\pi)/\Gamma_{total}$ Γ_{19}/Γ

VALUE (units 10^{-6})	CL%		DOCUMENT ID		TECN	COMMENT
<5	90	[22,24]	ADAMS	06	CLEO	$e^+e^- \to \psi(3770)$

$\Gamma(K^*(892)^+K^- + \text{c.c.})/\Gamma_{total}$ Γ_{20}/Γ

VALUE (units 10^{-5})	CL%		DOCUMENT ID		TECN	COMMENT
<1.4	90	[22]	ADAMS	06	CLEO	$e^+e^- \to \psi(3770)$

$\Gamma(K^*(892)^0\overline{K}^0 + \text{c.c.})/\Gamma_{total}$ Γ_{21}/Γ

VALUE (units 10^{-3})	CL%		DOCUMENT ID		TECN	COMMENT
<1.2	90	[22]	ADAMS	06	CLEO	$e^+e^- \to \psi(3770)$

$\Gamma(K_S^0K_L^0)/\Gamma_{total}$ Γ_{22}/Γ

VALUE (units 10^{-5})	CL%		DOCUMENT ID		TECN	COMMENT
< 1.2	90	[25]	CRONIN-HEN..	06	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
<21	90	[26]	ABLIKIM	04F	BES	$e^+e^- \to \psi(3770)$

$\Gamma(2(\pi^+\pi^-))/\Gamma_{total}$ Γ_{23}/Γ

VALUE (units 10^{-4})	CL%		DOCUMENT ID		TECN	COMMENT
<11.2	90	[27]	HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
<48		[23]	ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

$\Gamma(2(\pi^+\pi^-)\pi^0)/\Gamma_{total}$ Γ_{24}/Γ

VALUE (units 10^{-4})	CL%		DOCUMENT ID		TECN	COMMENT
<10.6	90	[27]	HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
<62		[23]	ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

$\Gamma(2(\pi^+\pi^-\pi^0))/\Gamma_{total}$ Γ_{25}/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_{26}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
< 6.0	90	[27] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<55	90	[23] ABLIKIM	07I	BES2	3.77 e^+e^-

$\Gamma(3(\pi^+\pi^-))/\Gamma_{total}$ Γ_{27}/Γ

VALUE (units 10^{-4})	DOCUMENT ID		TECN	COMMENT
<91	[23] ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

$\Gamma(3(\pi^+\pi^-)\pi^0)/\Gamma_{total}$ Γ_{28}/Γ

VALUE (units 10^{-4})	DOCUMENT ID		TECN	COMMENT
<137	[23] ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

$\Gamma(3(\pi^+\pi^-)2\pi^0)/\Gamma_{total}$ Γ_{29}/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_{30}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID		TECN	COMMENT
<1.24	90	[27] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<2.3	90	[23] ABLIKIM	10D	BES2	$e^+e^- \to \psi(3770)$

$\Gamma(\pi^+\pi^-2\pi^0)/\Gamma_{total}$ Γ_{31}/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_{32}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID		TECN	COMMENT
<6.9	90	[23] ABLIKIM	07F	BES2	$e^+e^- \to \psi(3770)$

$\Gamma(\eta 3\pi)/\Gamma_{total}$ Γ_{33}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<13.4	90	[27] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$

$\Gamma(\eta 2(\pi^+\pi^-))/\Gamma_{total}$ Γ_{34}/Γ

VALUE (units 10^{-4})	DOCUMENT ID		TECN	COMMENT
<243	[23] ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

$\Gamma(\eta\rho^0\pi^+\pi^-)/\Gamma_{total}$ Γ_{35}/Γ

VALUE (units 10^{-2})	CL%	DOCUMENT ID		TECN	COMMENT
<1.45	90	[23] ABLIKIM	10D	BES2	$e^+e^- \to \psi(3770)$

$\Gamma(\eta' 3\pi)/\Gamma_{total}$ Γ_{36}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<24.4	90	[27] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$

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

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
< 9.0	90	[27] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<48		[23] ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

$\Gamma(\phi\pi^+\pi^-)/\Gamma_{total}$ Γ_{38}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
< 4.1	90	[27] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<16		[23] ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

$\Gamma(K^+K^-2\pi^0)/\Gamma_{total}$ Γ_{39}/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_{40}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID		TECN	COMMENT
<16.7	90	[23] ABLIKIM	07F	BES2	$e^+e^- \to \psi(3770)$

$\Gamma(4(\pi^+\pi^-)\pi^0)/\Gamma_{total}$ Γ_{41}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID		TECN	COMMENT
<30.6	90	[23] ABLIKIM	07F	BES2	$e^+e^- \to \psi(3770)$

$\Gamma(\phi f_0(980))/\Gamma_{total}$ Γ_{42}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<4.5	90	[27] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$

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

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
< 23.6	90	[27] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<111		[23] ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

$\Gamma(K^+K^-\rho^0\pi^0)/\Gamma_{total}$ Γ_{44}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<8	90	[23] ABLIKIM	07I	BES2	3.77 e^+e^-

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

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<146	90	[23] ABLIKIM	07I	BES2	3.77 e^+e^-

$\Gamma(\omega K^+ K^-)/\Gamma_{total}$ Γ_{46}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
< 3.4	90	[27] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<66	90	[23] ABLIKIM	07I	BES2	3.77 e^+e^-

$\Gamma(\phi\pi^+\pi^-\pi^0)/\Gamma_{total}$ Γ_{47}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<38	90	[23] ABLIKIM	07I	BES2	3.77 e^+e^-

$\Gamma(K^{*0}K^-\pi^+\pi^0 + \text{c.c.})/\Gamma_{total}$ Γ_{48}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<162	90	[23] ABLIKIM	07I	BES2	3.77 e^+e^-

$\Gamma(K^{*+}K^-\pi^+\pi^- + \text{c.c.})/\Gamma_{total}$ Γ_{49}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<323	90	[23] ABLIKIM	07I	BES2	3.77 e^+e^-

$\Gamma(K^+K^-\pi^+\pi^-2\pi^0)/\Gamma_{total}$ Γ_{50}/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_{51}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID		TECN	COMMENT
<10.3	90	[23] ABLIKIM	07F	BES2	$e^+e^- \to \psi(3770)$

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

VALUE (units 10^{-3})	CL%	DOCUMENT ID		TECN	COMMENT
<36.0	90	[23] ABLIKIM	07F	BES2	$e^+e^- \to \psi(3770)$

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

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
< 4.1	90	[27] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<31	90	[23] ABLIKIM	10D	BES2	$e^+e^- \to \psi(3770)$

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

VALUE (units 10^{-2})	CL%	DOCUMENT ID		TECN	COMMENT
<1.24	90	[23] ABLIKIM	10D	BES2	$e^+e^- \to \psi(3770)$

$\Gamma(\rho^0 K^+ K^-)/\Gamma_{total}$ Γ_{55}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID		TECN	COMMENT
<5.0	90	[23] ABLIKIM	07F	BES2	$e^+e^- \to \psi(3770)$

$\Gamma(2(K^+K^-))/\Gamma_{total}$ Γ_{56}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
< 6.0	90	[27] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<17		[23] ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

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

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
< 7.5	90	[27] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<24		[23] ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

$\Gamma(2(K^+K^-)\pi^0)/\Gamma_{total}$ Γ_{58}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
< 2.9	90	[27] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<46		[23] ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

$\Gamma(2(K^+K^-)\pi^+\pi^-)/\Gamma_{total}$ Γ_{59}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID		TECN	COMMENT
<3.2	90	[23] ABLIKIM	07F	BES2	$e^+e^- \to \psi(3770)$

$\Gamma(K^0_S K^-\pi^+)/\Gamma_{total}$ Γ_{60}/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_{61}/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_{62}/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_{63}/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_{64}/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_{65}/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_{66}/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_{67}/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_{68}/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_{69}/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_{70}/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_{71}/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_{72}/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_{73}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID		TECN	COMMENT
<9.7	90	[23] ABLIKIM	07F	BES2	$e^+e^- \to \psi(3770)$

$\Gamma(p\bar{p}\pi^0)/\Gamma_{total}$ Γ_{74}/Γ

VALUE (units 10^{-4})	DOCUMENT ID		TECN	COMMENT
<12	[23] ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

$\Gamma(p\bar{p}\pi^+\pi^-)/\Gamma_{total}$ Γ_{75}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
< 5.8	90	[27] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<16		[23] ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

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

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<1.2	90	[27] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<4	90	[23] ABLIKIM	07F	BES2	$e^+e^- \to \psi(3770)$

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

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<18.5	90	[27] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<73		[23] ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

$\Gamma(\omega p\bar{p})/\Gamma_{total}$ Γ_{78}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
< 2.9	90	[27] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<30	90	[28] ABLIKIM	07I	BES2	3.77 e^+e^-

$\Gamma(\Lambda\bar{\Lambda}\pi^0)/\Gamma_{total}$ Γ_{79}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
< 0.7	90	[29] ABLIKIM	13Q	BES3	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<12	90	[23] ABLIKIM	07I	BES2	3.77 e^+e^-

$\Gamma(p\bar{p}2(\pi^+\pi^-))/\Gamma_{total}$ Γ_{80}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID		TECN	COMMENT
<2.6	90	[23] ABLIKIM	07F	BES2	$e^+e^- \to \psi(3770)$

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

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
< 5.4	90	[27] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<11	90	[23] ABLIKIM	10D	BES2	$e^+e^- \to \psi(3770)$

$\Gamma(\eta p\bar{p}\pi^+\pi^-)/\Gamma_{total}$ Γ_{82}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID		TECN	COMMENT
<3.3	90	[23] ABLIKIM	10D	BES2	$e^+e^- \to \psi(3770)$

$\Gamma(\rho^0 p\bar{p})/\Gamma_{total}$ Γ_{83}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID		TECN	COMMENT
<1.7	90	[23] ABLIKIM	07F	BES2	$e^+e^- \to \psi(3770)$

$\Gamma(p\bar{p}K^+K^-)/\Gamma_{total}$ Γ_{84}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
< 3.2	90	[27] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<11		[23] ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

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

VALUE (units 10^{-3})	CL%	DOCUMENT ID		TECN	COMMENT
<6.9	90	[23] ABLIKIM	10D	BES2	$e^+e^- \to \psi(3770)$

$\Gamma(\pi^0 p\bar{p}K^+K^-)/\Gamma_{total}$ Γ_{86}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID		TECN	COMMENT
<1.2	90	[23] ABLIKIM	10D	BES2	$e^+e^- \to \psi(3770)$

$\Gamma(\phi p\bar{p})/\Gamma_{total}$ Γ_{87}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<1.3	90	[27] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<9		[23] ABLIKIM	07B	BES2	$e^+e^- \to \psi(3770)$

$\Gamma(\Lambda\bar{\Lambda}\pi^+\pi^-)/\Gamma_{total}$ Γ_{88}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
< 2.5	90	[27] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
< 4.7	90	[29] ABLIKIM	13Q	BES3	$e^+e^- \to \psi(3770)$
<39	90	[23] ABLIKIM	07F	BES2	$e^+e^- \to \psi(3770)$

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

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<2.8	90	[27] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$

$\Gamma(\Lambda\bar{p}K^+\pi^+\pi^-)/\Gamma_{total}$ Γ_{90}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<6.3	90	[27] HUANG	06A	CLEO	$e^+e^- \to \psi(3770)$

$\Gamma(\Lambda\bar{\Lambda}\eta)/\Gamma_{total}$ Γ_{91}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<1.9	90	[29] ABLIKIM	13Q	BES3	$e^+e^- \to \psi(3770)$

$\Gamma(\Sigma^+\bar{\Sigma}^-)/\Gamma_{total}$ Γ_{92}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<1.0	90	[29] ABLIKIM	13Q	BES3	$e^+e^- \to \psi(3770)$

$\Gamma(\Sigma^0\bar{\Sigma}^0)/\Gamma_{total}$ Γ_{93}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<0.4	90	[29] ABLIKIM	13Q	BES3	$e^+e^- \to \psi(3770)$

$\Gamma(\Xi^+\bar{\Xi}^-)/\Gamma_{total}$ Γ_{94}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<1.5	90	[29] ABLIKIM	13Q	BES3	$e^+e^- \to \psi(3770)$

$\Gamma(\Xi^0\overline{\Xi}^0)/\Gamma_{total}$ Γ_{95}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<1.4	90	[29] ABLIKIM	13Q	BES3	$e^+e^- \to \psi(3770)$

[22] 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.
[23] 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.
[24] Data suggest possible destructive interference with continuum.
[25] Using $\sigma(e^+e^- \to \psi(3770) \to$ hadrons$) = (6.38 \pm 0.08^{+0.41}_{-0.30})$ nb from BESSON 06 and B($K^0_S \to \pi^+\pi^-$) $= 0.6895 \pm 0.0014$.
[26] Using B($K^0_S \to \pi^+\pi^-$) $= 0.6860 \pm 0.0027$.
[27] Using $\sigma_{tot}(e^+e^- \to \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.
[28] Using $\sigma^{\rm obs} = 7.15 \pm 0.27 \pm 0.27$ nb and neglecting interference.
[29] Assuming that interference effects between resonance and continuum can be neglected.

RADIATIVE DECAYS

$\Gamma(\gamma\chi_{c2})/\Gamma_{total}$ Γ_{96}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID		TECN	COMMENT
<0.9	90	[30] COAN	06A	CLEO	$e^+e^- \to \psi(3770) \to \gamma\gamma J/\psi$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<2.0	90	[31] BRIERE	06	CLEO	$e^+e^- \to \psi(3770) \to \gamma +$ hadrons

$\Gamma(\gamma\chi_{c1})/\Gamma_{total}$ Γ_{97}/Γ

VALUE (units 10^{-3})	EVTS	DOCUMENT ID		TECN	COMMENT
2.9±0.5±0.4		[32] 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 ± 17	[33] BRIERE	06	CLEO	$e^+e^- \to \psi(3770) \to \gamma +$ hadrons
2.8±0.5±0.4	53 ± 10	[30] COAN	06A	CLEO	$e^+e^- \to \psi(3770) \to \gamma\gamma J/\psi$

$\Gamma(\gamma\chi_{c1})/\Gamma(J/\psi\pi^+\pi^-)$ Γ_{97}/Γ_4

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
1.49±0.31±0.26	53 ± 10	[34] COAN	06A	CLEO	$e^+e^- \to \psi(3770) \to \gamma\gamma J/\psi$

$\Gamma(\gamma\chi_{c0})/\Gamma_{total}$ Γ_{98}/Γ

VALUE (units 10^{-3})	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
7.3±0.7±0.6		274 ± 27	[35] 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		[30] COAN	06A	CLEO	$e^+e^- \to \psi(3770) \to \gamma\gamma J/\psi$

$\Gamma(\gamma\chi_{c0})/\Gamma(\gamma\chi_{c2})$ Γ_{98}/Γ_{96}

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
>8	90	[36] BRIERE	06	CLEO	$e^+e^- \to \psi(3770)$

$\Gamma(\gamma\chi_{c0})/\Gamma(\gamma\chi_{c1})$ Γ_{98}/Γ_{97}

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
2.5 ± 0.6	[36] BRIERE	06	CLEO	$e^+e^- \to \psi(3770)$

$\Gamma(\gamma\eta')/\Gamma_{\text{total}}$ Γ_{99}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<1.8	90	[37] PEDLAR	09	CLE3	$\psi(2S) \to \gamma X$

$\Gamma(\gamma\eta)/\Gamma_{\text{total}}$ Γ_{100}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<1.5	90	[37] PEDLAR	09	CLE3	$\psi(2S) \to \gamma X$

$\Gamma(\gamma\pi^0)/\Gamma_{\text{total}}$ Γ_{101}/Γ

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

[30] 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 $\sigma(e^+e^- \to \psi(3770))$.

[31] 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.

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

[33] 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.

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

[35] Uses $B(\psi(2S) \to \gamma\chi_{c0}) = 9.33 \pm 0.14 \pm 0.61$ % 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.

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

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

$\psi(3770)$ REFERENCES

ABLIKIM	13Q	PR D87 112011	Ablikim M. *et al.*	(BES III 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 159901E	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	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 159901E	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.)