

$\psi(3770)$

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

$\psi(3770)$ MASS

From $m_{\psi(2S)}$ and mass difference below.

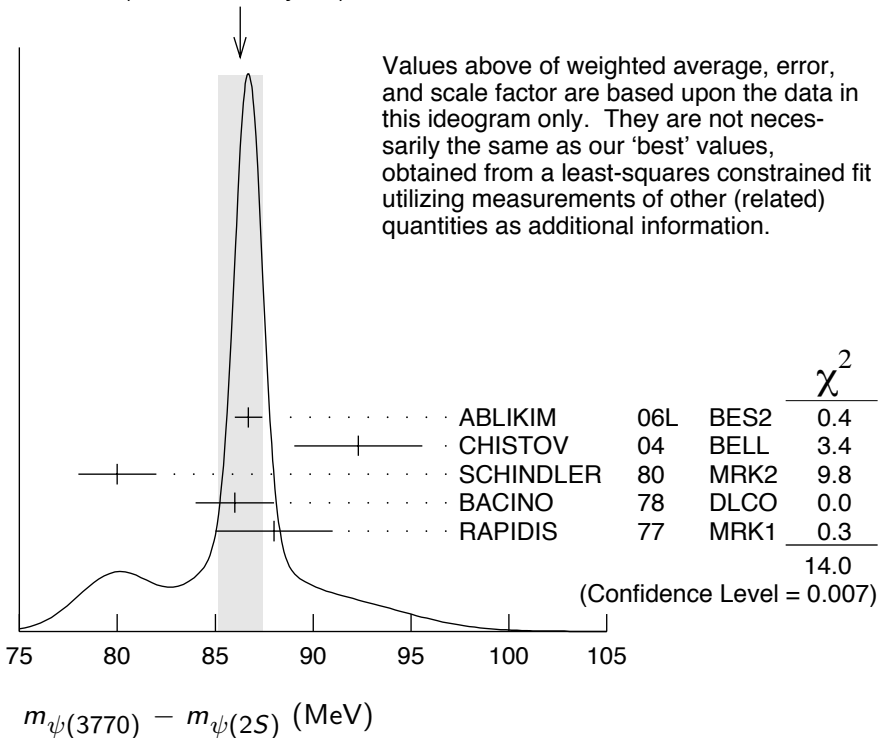
VALUE (MeV) DOCUMENT ID
3772.4 ± 1.1 OUR FIT Error includes scale factor of 1.8.

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

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
86.3 ± 1.1 OUR FIT Error includes scale factor of 1.8.				
86.3 ± 1.1 OUR AVERAGE Error includes scale factor of 1.9. See the ideogram below.				
86.7 ± 0.7		ABLIKIM	06L BES2	$e^+e^- \rightarrow \text{hadrons}$
92.3 ± 3.0 ± 1.3	34	CHISTOV	04 BELL	$B^+ \rightarrow \psi(3770) K^+$
80 ± 2		SCHINDLER	80 MRK2	e^+e^-
86 ± 2		¹ BACINO	78 DLCO	e^+e^-
88 ± 3		RAPIDIS	77 MRK1	e^+e^-

¹ SPEAR $\psi(2S)$ mass subtracted (see SCHINDLER 80).

WEIGHTED AVERAGE
86.3 ± 1.1 (Error scaled by 1.9)



$\psi(3770)$ WIDTH

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
25.2±1.8 OUR FIT			
26.3±1.9 OUR AVERAGE			
26.9±2.4±0.3	ABLIKIM	06L BES2	$e^+e^- \rightarrow$ hadrons
24 ±5	SCHINDLER	80 MRK2	e^+e^-
24 ±5	BACINO	78 DLCO	e^+e^-
28 ±5	RAPIDIS	77 MRK1	e^+e^-

$\psi(3770)$ DECAY MODES

In addition to the dominant decay mode to $D\bar{D}$, $\psi(3770)$ 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 $D\bar{D}$	(85 ±5) %	
Γ_2 $D^0\bar{D}^0$	(48.7 ±3.2) %	
Γ_3 D^+D^-	(36.1 ±2.8) %	
Γ_4 $J/\psi\pi^+\pi^-$	(1.93±0.28) × 10 ⁻³	
Γ_5 $J/\psi\pi^0\pi^0$	(8.0 ±3.0) × 10 ⁻⁴	
Γ_6 $J/\psi\eta$	(9 ±4) × 10 ⁻⁴	
Γ_7 $J/\psi\pi^0$	< 2.8 × 10 ⁻⁴	CL=90%
Γ_8 $\gamma\chi_{c0}$	(7.3 ±0.9) × 10 ⁻³	
Γ_9 $\gamma\chi_{c1}$	(2.9 ±0.6) × 10 ⁻³	
Γ_{10} $\gamma\chi_{c2}$	< 9 × 10 ⁻⁴	CL=90%
Γ_{11} e^+e^-	(9.8 ±1.2) × 10 ⁻⁶	S=1.1
Γ_{12} $K_S^0K_L^0$	< 1.2 × 10 ⁻⁵	CL=90%
Γ_{13} $2(\pi^+\pi^-)$	< 1.12 × 10 ⁻³	CL=90%
Γ_{14} $2(\pi^+\pi^-)\pi^0$	< 1.06 × 10 ⁻³	CL=90%
Γ_{15} $\eta\pi^+\pi^-$	< 1.24 × 10 ⁻³	CL=90%
Γ_{16} $\omega\pi^+\pi^-$	< 6.0 × 10 ⁻⁴	CL=90%
Γ_{17} $\eta3\pi$	< 1.34 × 10 ⁻³	CL=90%
Γ_{18} $\eta'3\pi$	< 2.44 × 10 ⁻³	CL=90%
Γ_{19} $K^+K^-\pi^+\pi^-$	< 9.0 × 10 ⁻⁴	CL=90%
Γ_{20} $\phi\pi^+\pi^-$	< 4.1 × 10 ⁻⁴	CL=90%
Γ_{21} $\phi f_0(980)$	< 4.5 × 10 ⁻⁴	CL=90%
Γ_{22} $K^+K^-\pi^+\pi^-\pi^0$	< 2.36 × 10 ⁻³	CL=90%
Γ_{23} ηK^+K^-	< 4.1 × 10 ⁻⁴	CL=90%
Γ_{24} ωK^+K^-	< 3.4 × 10 ⁻⁴	CL=90%
Γ_{25} $2(K^+K^-)$	< 6.0 × 10 ⁻⁴	CL=90%
Γ_{26} ϕK^+K^-	< 7.5 × 10 ⁻⁴	CL=90%

Γ_{27}	$2(K^+ K^-)\pi^0$	< 2.9	$\times 10^{-4}$	CL=90%
Γ_{28}	$\rho\bar{p}\pi^+\pi^-$	< 5.8	$\times 10^{-4}$	CL=90%
Γ_{29}	$\rho\bar{p}\pi^+\pi^-\pi^0$	< 1.85	$\times 10^{-3}$	CL=90%
Γ_{30}	$\eta\rho\bar{p}$	< 5.4	$\times 10^{-4}$	CL=90%
Γ_{31}	$\omega\rho\bar{p}$	< 2.9	$\times 10^{-4}$	CL=90%
Γ_{32}	$\rho\bar{p}K^+K^-$	< 3.2	$\times 10^{-4}$	CL=90%
Γ_{33}	$\phi\rho\bar{p}$	< 1.3	$\times 10^{-4}$	CL=90%
Γ_{34}	$\Lambda\bar{\Lambda}$	< 1.2	$\times 10^{-4}$	CL=90%
Γ_{35}	$\Lambda\bar{\Lambda}\pi^+\pi^-$	< 2.5	$\times 10^{-4}$	CL=90%
Γ_{36}	$\Lambda\bar{p}K^+$	< 2.8	$\times 10^{-4}$	CL=90%
Γ_{37}	$\Lambda\bar{p}K^+\pi^+\pi^-$	< 6.3	$\times 10^{-4}$	CL=90%
Γ_{38}	$\phi\eta$	$(3.1 \pm 0.7) \times 10^{-4}$		
Γ_{39}	$\pi^+\pi^-\pi^0$	not seen		
Γ_{40}	$\rho\pi$	not seen		
Γ_{41}	$\omega\pi^0$	not seen		
Γ_{42}	$\phi\pi^0$	not seen		
Γ_{43}	$\rho\eta$	not seen		
Γ_{44}	$\omega\eta$	not seen		
Γ_{45}	$\rho\eta'$	not seen		
Γ_{46}	$\omega\eta'$	not seen		
Γ_{47}	$\phi\eta'$	not seen		
Γ_{48}	$K^{*0}\bar{K}^0$	not seen		
Γ_{49}	$K^{*+}K^-$	not seen		
Γ_{50}	$b_1\pi$	not seen		

$\psi(3770)$ PARTIAL WIDTHS

$\Gamma(e^+e^-)$ Γ_{11}

VALUE (keV) EVTS DOCUMENT ID TECN COMMENT

0.247^{+0.028}_{-0.025} OUR FIT Error includes scale factor of 1.1.

0.219^{+0.028}_{-0.022} OUR AVERAGE

0.204 \pm 0.003^{+0.041}_{-0.027} 1.427M ² BESSON 06 CLEO $e^+e^- \rightarrow$ hadrons

0.276 \pm 0.050 SCHINDLER 80 MRK2 e^+e^-

0.18 \pm 0.06 BACINO 78 DLCO e^+e^-

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

0.37 \pm 0.09 ³ RAPIDIS 77 MRK1 e^+e^-

² BESSON 06 measure $\sigma(e^+e^- \rightarrow \psi(3770) \rightarrow \text{hadrons}) = 6.38 \pm 0.08^{+0.41}_{-0.30}$ 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.

³ See also $\Gamma(e^+e^-)/\Gamma_{\text{total}}$ below.

$\psi(3770)$ BRANCHING RATIOS

$\Gamma(D\bar{D})/\Gamma_{\text{total}}$ Γ_1/Γ

VALUE	DOCUMENT ID	TECN	COMMENT
0.85 ± 0.05 OUR AVERAGE			
$0.836 \pm 0.073 \pm 0.042$	ABLIKIM	06L BES2	$e^+e^- \rightarrow D\bar{D}$
$0.855 \pm 0.017 \pm 0.058$	⁴ ABLIKIM	06N BES2	$e^+e^- \rightarrow D\bar{D}$

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

VALUE	DOCUMENT ID	TECN	COMMENT
0.487 ± 0.032 OUR AVERAGE			
$0.467 \pm 0.047 \pm 0.023$	ABLIKIM	06L BES2	$e^+e^- \rightarrow D^0\bar{D}^0$
$0.499 \pm 0.013 \pm 0.038$	⁴ ABLIKIM	06N BES2	$e^+e^- \rightarrow D^0\bar{D}^0$

$\Gamma(D^+D^-)/\Gamma_{\text{total}}$ Γ_3/Γ

VALUE	DOCUMENT ID	TECN	COMMENT
0.361 ± 0.028 OUR AVERAGE			
$0.369 \pm 0.037 \pm 0.028$	ABLIKIM	06L BES2	$e^+e^- \rightarrow D^+D^-$
$0.357 \pm 0.011 \pm 0.034$	⁴ ABLIKIM	06N BES2	$e^+e^- \rightarrow D^+D^-$

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

VALUE	EVTS	DOCUMENT ID	TECN	COMMENT
1.28 ± 0.14 OUR AVERAGE				
$1.27 \pm 0.12 \pm 0.08$		ABLIKIM	06L BES2	$e^+e^- \rightarrow D\bar{D}$
$2.43 \pm 1.50 \pm 0.43$	34	⁵ CHISTOV	04 BELL	$B^+ \rightarrow \psi(3770)K^+$

$\Gamma(J/\psi\pi^+\pi^-)/\Gamma_{\text{total}}$ Γ_4/Γ

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

$\Gamma(J/\psi\pi^0\pi^0)/\Gamma_{\text{total}}$ Γ_5/Γ

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

$\Gamma(J/\psi\eta)/\Gamma_{\text{total}}$ Γ_6/Γ

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

$\Gamma(J/\psi\pi^0)/\Gamma_{\text{total}}$ Γ_7/Γ

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

$\Gamma(\gamma\chi_{c0})/\Gamma_{\text{total}}$ Γ_8/Γ

VALUE (units 10^{-3})	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
$7.3 \pm 0.7 \pm 0.6$		274 ± 27	⁶ BRIERE	06 CLEO	$e^+e^- \rightarrow \psi(3770) \rightarrow \gamma + \text{hadrons}$

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

< 44	90		⁷ COAN	06A CLEO	$e^+e^- \rightarrow \psi(3770) \rightarrow \gamma\gamma J/\psi$
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$\Gamma(\gamma\chi_{c1})/\Gamma_{\text{total}}$ Γ_9/Γ

VALUE (units 10^{-3})	EVTS	DOCUMENT ID	TECN	COMMENT
$2.9 \pm 0.5 \pm 0.4$		⁸ BRIERE	06 CLEO	$e^+e^- \rightarrow \psi(3770) \rightarrow \gamma + \text{hadrons}, \gamma\gamma J/\psi$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
$3.9 \pm 1.4 \pm 0.6$	54 ± 17	⁹ BRIERE	06 CLEO	$e^+e^- \rightarrow \psi(3770) \rightarrow \gamma + \text{hadrons}$
$2.8 \pm 0.5 \pm 0.4$	53 ± 10	⁷ COAN	06A CLEO	$e^+e^- \rightarrow \psi(3770) \rightarrow \gamma\gamma J/\psi$

$\Gamma(\gamma\chi_{c1})/\Gamma(J/\psi\pi^+\pi^-)$ Γ_9/Γ_4

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

$\Gamma(\gamma\chi_{c0})/\Gamma(\gamma\chi_{c1})$ Γ_8/Γ_9

VALUE	DOCUMENT ID	TECN	COMMENT
2.5 ± 0.6	¹¹ BRIERE	06 CLEO	$e^+e^- \rightarrow \psi(3770)$

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

$\Gamma(\gamma\chi_{c2})/\Gamma_{\text{total}}$ Γ_{10}/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID	TECN	COMMENT
<0.9	90	⁷ COAN	06A CLEO	$e^+e^- \rightarrow \psi(3770) \rightarrow \gamma\gamma J/\psi$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
<2.0	90	¹² BRIERE	06 CLEO	$e^+e^- \rightarrow \psi(3770) \rightarrow \gamma + \text{hadrons}$

$\Gamma(\gamma\chi_{c0})/\Gamma(\gamma\chi_{c2})$ Γ_8/Γ_{10}

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
>8	90	¹¹ BRIERE	06 CLEO	$e^+e^- \rightarrow \psi(3770)$

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

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

VALUE (units 10^{-5})	DOCUMENT ID	TECN	COMMENT
0.98 ± 0.12 OUR FIT	Error includes scale factor of 1.1.		
1.3 ± 0.2	RAPIDIS	77 MRK1	e^+e^-

$\Gamma(K_S^0 K_L^0)/\Gamma_{\text{total}}$ Γ_{12}/Γ

VALUE (units 10^{-5})	CL%	DOCUMENT ID	TECN	COMMENT
< 1.2	90	¹³ CRONIN-HEN..06	CLEO	$e^+e^- \rightarrow \psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
<21	90	¹⁴ ABLIKIM	04F BES	$e^+e^- \rightarrow \psi(3770)$

$\Gamma(2(\pi^+\pi^-))/\Gamma_{\text{total}}$ Γ_{13}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
<11.2	90	¹⁵ HUANG	06A CLEO	$e^+e^- \rightarrow \psi(3770)$

$\Gamma(2(\pi^+\pi^-\pi^0))/\Gamma_{\text{total}}$			Γ_{14}/Γ		
<u>VALUE (units 10^{-4})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<10.6	90	15 HUANG	06A	CLEO	$e^+e^- \rightarrow \psi(3770)$
$\Gamma(\eta\pi^+\pi^-)/\Gamma_{\text{total}}$			Γ_{15}/Γ		
<u>VALUE (units 10^{-4})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<12.4	90	15 HUANG	06A	CLEO	$e^+e^- \rightarrow \psi(3770)$
$\Gamma(\omega\pi^+\pi^-)/\Gamma_{\text{total}}$			Γ_{16}/Γ		
<u>VALUE (units 10^{-4})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<6.0	90	15 HUANG	06A	CLEO	$e^+e^- \rightarrow \psi(3770)$
$\Gamma(\eta 3\pi)/\Gamma_{\text{total}}$			Γ_{17}/Γ		
<u>VALUE (units 10^{-4})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<13.4	90	15 HUANG	06A	CLEO	$e^+e^- \rightarrow \psi(3770)$
$\Gamma(\eta' 3\pi)/\Gamma_{\text{total}}$			Γ_{18}/Γ		
<u>VALUE (units 10^{-4})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<24.4	90	15 HUANG	06A	CLEO	$e^+e^- \rightarrow \psi(3770)$
$\Gamma(K^+K^-\pi^+\pi^-)/\Gamma_{\text{total}}$			Γ_{19}/Γ		
<u>VALUE (units 10^{-4})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<9.0	90	15 HUANG	06A	CLEO	$e^+e^- \rightarrow \psi(3770)$
$\Gamma(\phi\pi^+\pi^-)/\Gamma_{\text{total}}$			Γ_{20}/Γ		
<u>VALUE (units 10^{-4})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<4.1	90	15 HUANG	06A	CLEO	$e^+e^- \rightarrow \psi(3770)$
$\Gamma(\phi f_0(980))/\Gamma_{\text{total}}$			Γ_{21}/Γ		
<u>VALUE (units 10^{-4})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<4.5	90	15 HUANG	06A	CLEO	$e^+e^- \rightarrow \psi(3770)$
$\Gamma(K^+K^-\pi^+\pi^-\pi^0)/\Gamma_{\text{total}}$			Γ_{22}/Γ		
<u>VALUE (units 10^{-4})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<23.6	90	15 HUANG	06A	CLEO	$e^+e^- \rightarrow \psi(3770)$
$\Gamma(\eta K^+K^-)/\Gamma_{\text{total}}$			Γ_{23}/Γ		
<u>VALUE (units 10^{-4})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<4.1	90	15 HUANG	06A	CLEO	$e^+e^- \rightarrow \psi(3770)$
$\Gamma(\omega K^+K^-)/\Gamma_{\text{total}}$			Γ_{24}/Γ		
<u>VALUE (units 10^{-4})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<3.4	90	15 HUANG	06A	CLEO	$e^+e^- \rightarrow \psi(3770)$

$\Gamma(2(K^+ K^-))/\Gamma_{\text{total}}$					Γ_{25}/Γ
<u>VALUE (units 10^{-4})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<6.0	90	15 HUANG	06A	CLEO	$e^+ e^- \rightarrow \psi(3770)$
$\Gamma(\phi K^+ K^-)/\Gamma_{\text{total}}$					Γ_{26}/Γ
<u>VALUE (units 10^{-4})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<7.5	90	15 HUANG	06A	CLEO	$e^+ e^- \rightarrow \psi(3770)$
$\Gamma(2(K^+ K^-)\pi^0)/\Gamma_{\text{total}}$					Γ_{27}/Γ
<u>VALUE (units 10^{-4})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<2.9	90	15 HUANG	06A	CLEO	$e^+ e^- \rightarrow \psi(3770)$
$\Gamma(\rho\bar{\rho}\pi^+\pi^-)/\Gamma_{\text{total}}$					Γ_{28}/Γ
<u>VALUE (units 10^{-4})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<5.8	90	15 HUANG	06A	CLEO	$e^+ e^- \rightarrow \psi(3770)$
$\Gamma(\rho\bar{\rho}\pi^+\pi^-\pi^0)/\Gamma_{\text{total}}$					Γ_{29}/Γ
<u>VALUE (units 10^{-4})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<18.5	90	15 HUANG	06A	CLEO	$e^+ e^- \rightarrow \psi(3770)$
$\Gamma(\eta\rho\bar{\rho})/\Gamma_{\text{total}}$					Γ_{30}/Γ
<u>VALUE (units 10^{-4})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<5.4	90	15 HUANG	06A	CLEO	$e^+ e^- \rightarrow \psi(3770)$
$\Gamma(\omega\rho\bar{\rho})/\Gamma_{\text{total}}$					Γ_{31}/Γ
<u>VALUE (units 10^{-4})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<2.9	90	15 HUANG	06A	CLEO	$e^+ e^- \rightarrow \psi(3770)$
$\Gamma(\rho\bar{\rho}K^+K^-)/\Gamma_{\text{total}}$					Γ_{32}/Γ
<u>VALUE (units 10^{-4})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<3.2	90	15 HUANG	06A	CLEO	$e^+ e^- \rightarrow \psi(3770)$
$\Gamma(\phi\rho\bar{\rho})/\Gamma_{\text{total}}$					Γ_{33}/Γ
<u>VALUE (units 10^{-4})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<1.3	90	15 HUANG	06A	CLEO	$e^+ e^- \rightarrow \psi(3770)$
$\Gamma(\Lambda\bar{\Lambda})/\Gamma_{\text{total}}$					Γ_{34}/Γ
<u>VALUE (units 10^{-4})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<1.2	90	15 HUANG	06A	CLEO	$e^+ e^- \rightarrow \psi(3770)$
$\Gamma(\Lambda\bar{\Lambda}\pi^+\pi^-)/\Gamma_{\text{total}}$					Γ_{35}/Γ
<u>VALUE (units 10^{-4})</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<2.5	90	15 HUANG	06A	CLEO	$e^+ e^- \rightarrow \psi(3770)$

$\Gamma(\Lambda\bar{p}K^+)/\Gamma_{\text{total}}$ Γ_{36}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
<2.8	90	¹⁵ HUANG	06A	CLEO $e^+e^- \rightarrow \psi(3770)$

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

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
<6.3	90	¹⁵ HUANG	06A	CLEO $e^+e^- \rightarrow \psi(3770)$

$\Gamma(\phi\eta)/\Gamma_{\text{total}}$ Γ_{38}/Γ

VALUE (units 10^{-4})	DOCUMENT ID	TECN	COMMENT
$3.1 \pm 0.6 \pm 0.3$	¹⁶ ADAMS	06	CLEC $3.773 e^+e^- \rightarrow \phi\eta$

⁴ From a measurement of $\sigma(e^+e^- \rightarrow D\bar{D})$ at $\sqrt{s} = 3773$ MeV, using the $\psi(3770)$ resonance parameters measured by ABLIKIM 06L.

⁵ See ADLER 88C for older measurements of this quantity.

⁶ Uses $B(\psi(2S) \rightarrow \gamma\chi_{c0}) = 9.33 \pm 0.14 \pm 0.61\%$ 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.

⁷ Using $\Gamma_{ee}(\psi(2S)) = (2.54 \pm 0.03 \pm 0.11)$ keV from ADAM 06 and taking $\sigma(e^+e^- \rightarrow D\bar{D})$ from HE 05 for $\sigma(e^+e^- \rightarrow \psi(3770))$.

⁸ Averages the two measurements from COAN 06A and BRIERE 06.

⁹ Uses $B(\psi(2S) \rightarrow \gamma\chi_{c1}) = 9.07 \pm 0.11 \pm 0.54\%$ from ATHAR 04, $\psi(2S)$ mass and width from PDG 04, and $\Gamma_{ee}(\psi(2S)) = 2.54 \pm 0.03 \pm 0.11$ keV from ADAM 06.

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

¹¹ Not independent of other results in BRIERE 06.

¹² Uses $B(\psi(2S) \rightarrow \gamma\chi_{c2}) = 9.22 \pm 0.11 \pm 0.46\%$ from ATHAR 04, $\psi(2S)$ mass and width from PDG 04, and $\Gamma_{ee}(\psi(2S)) = 2.54 \pm 0.03 \pm 0.11$ keV from ADAM 06.

¹³ Using $\sigma(e^+e^- \rightarrow \psi(3770) \rightarrow \text{hadrons}) = (6.38 \pm 0.08^{+0.41}_{-0.30})$ nb from BESSON 06 and $B(K_S^0 \rightarrow \pi^+\pi^-) = 0.6895 \pm 0.0014$.

¹⁴ Using $B(K_S^0 \rightarrow \pi^+\pi^-) = 0.6860 \pm 0.0027$.

¹⁵ Using $\sigma_{\text{tot}}(e^+e^- \rightarrow \psi(3770)) = 7.9 \pm 0.6$ nb at the resonance.

¹⁶ Comparing $\sigma(e^+e^- \rightarrow \phi\eta)$ at $\sqrt{s} = 3.773$ GeV and $\sqrt{s} = 3.671$ GeV, and using $\sigma(\psi(3770) \rightarrow D\bar{D}) = 6.39 \pm 0.20$ nb.

$\psi(3770)$ REFERENCES

ABLIKIM	06L	PRL 97 121801	M. Ablikim <i>et al.</i>	(BES Collab.)
ABLIKIM	06N	PL B641 145	M. Ablikim <i>et al.</i>	(BES Collab.)
ADAM	06	PRL 96 082004	N.E. Adam <i>et al.</i>	(CLEO Collab.)
ADAMS	06	PR D73 012002	G.S. Adams <i>et al.</i>	(CLEO Collab.)
BESSON	06	PRL 96 092002	D. Besson <i>et al.</i>	(CLEO Collab.)
BRIERE	06	PR D74 031106R	R.A. Briere <i>et al.</i>	(CLEO Collab.)
COAN	06A	PRL 96 182002	T.E. Coan <i>et al.</i>	(CLEO Collab.)
CRONIN-HEN...	06	PR D74 012005	D. Cronin-Hennessy <i>et al.</i>	(CLEO Collab.)
HUANG	06A	PRL 96 032003	G.S. Huang <i>et al.</i>	(CLEO Collab.)
BAI	05	PL B605 63	J.Z. Bai <i>et al.</i>	(BES Collab.)
HE	05	PRL 95 121801	Q. He <i>et al.</i>	(CLEO Collab.)
ABLIKIM	04F	PR D70 077101	M. Ablikim <i>et al.</i>	(BES Collab.)
ATHAR	04	PR D70 112002	S.B. Athar <i>et al.</i>	(CLEO Collab.)
CHISTOV	04	PRL 93 051803	R. Chistov <i>et al.</i>	(BELLE Collab.)
PDG	04	PL B592 1	S. Eidelman <i>et al.</i>	
ADLER	88C	PRL 60 89	J. Adler <i>et al.</i>	(Mark III Collab.)
SCHINDLER	80	PR D21 2716	R.H. Schindler <i>et al.</i>	(Mark II Collab.)
BACINO	78	PRL 40 671	W.J. Bacino <i>et al.</i>	(SLAC, UCLA, UCI)
RAPIDIS	77	PRL 39 526	P.A. Rapidis <i>et al.</i>	(Mark I Collab.)

————— **OTHER RELATED PAPERS** —————

ABLIKIM	06X	PRL 97 262001	M. Ablikim <i>et al.</i>	(BES Collab.)
AUBERT, BE	06F	PR D74 111103R	B. Aubert <i>et al.</i>	(BABAR Collab.)
ABLIKIM	05K	NP B727 395	M. Ablikim <i>et al.</i>	(BES Collab.)
ABLIKIM	05M	PR D72 072007	M. Ablikim <i>et al.</i>	(BES Collab.)
BARNES	05	PR D72 054026	T. Barnes, S. Godfrey, E.S. Swanson	
HE	05	PRL 95 121801	Q. He <i>et al.</i>	(CLEO Collab.)
VOLOSHIN	05	PR D71 114003	M.B. Voloshin	
VOLOSHIN	05A	PAN 68 771	M.B. Voloshin	
		Translated from YAF 68 804.		
ABLIKIM	04D	PL B603 130	M. Ablikim <i>et al.</i>	(BES Collab.)
LIU	04B	PR D70 094001	K.-Y. Liu, K.-T. Chao	
WANG	04C	PR D70 077505	P. Wang, X.H. Mo, C.Z. Yuan	
WANG	04D	PR D70 114014	P. Wang, C.Z. Yuan, X.H. Mo	
