

$f_1(1285)$

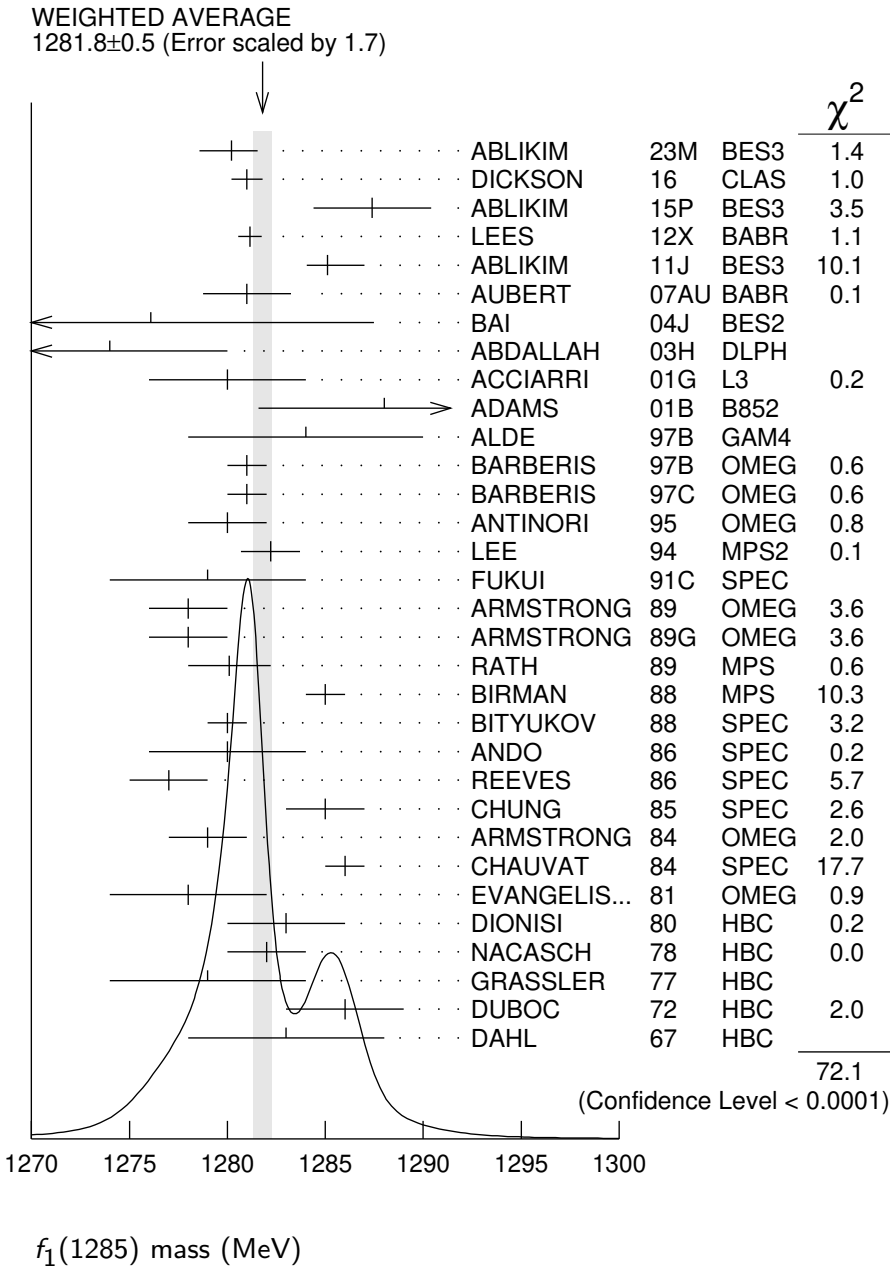
$$I^G(J^{PC}) = 0^+(1^{++})$$

 $f_1(1285)$ MASS

VALUE (MeV)	EVTs	DOCUMENT ID	TECN	COMMENT
1281.8 ± 0.5 OUR AVERAGE		Error includes scale factor of 1.7. See the ideogram below.		
1280.2 ± 0.6 $^{+1.2}_{-1.5}$	126K	ABLIKIM	23M BES3	$J/\psi \rightarrow \gamma K_S^0 K_S^0 \pi^0$
1281.0 ± 0.8		DICKSON	16 CLAS	2.55 $\gamma p \rightarrow \eta \pi^+ \pi^- p$
1287.4 ± 3.0	87	ABLIKIM	15P BES3	$J/\psi \rightarrow K^+ K^- 3\pi$
1281.16 ± 0.39 ± 0.45		¹ LEES	12X BABR	$\tau^- \rightarrow \pi^- f_1(1285) \nu_\tau$
1285.1 ± 1.0 $^{+1.6}_{-0.3}$		² ABLIKIM	11J BES3	$J/\psi \rightarrow \omega(\eta \pi^+ \pi^-)$
1281 ± 2 ± 1		AUBERT	07AU BABR	10.6 $e^+ e^- \rightarrow f_1(1285) \pi^+ \pi^- \gamma$
1276.1 ± 8.1 ± 8.0	203	BAI	04J BES2	$J/\psi \rightarrow \gamma \gamma \pi^+ \pi^-$
1274 ± 6	237	ABDALLAH	03H DLPH	91.2 $e^+ e^- \rightarrow K_S^0 K^\pm \pi^\mp + X$
1280 ± 4		ACCIARRI	01G L3	
1288 ± 4 ± 5	20k	ADAMS	01B B852	18 GeV $\pi^- p \rightarrow K^+ K^- \pi^0 n$
1284 ± 6	1400	ALDE	97B GAM4	100 $\pi^- p \rightarrow \eta \pi^0 \pi^0 n$
1281 ± 1		BARBERIS	97B OMEG	450 $pp \rightarrow pp2(\pi^+ \pi^-)$
1281 ± 1		BARBERIS	97C OMEG	450 $pp \rightarrow pp K_S^0 K^\pm \pi^\mp$
1280 ± 2		³ ANTINORI	95 OMEG	300,450 $pp \rightarrow pp2(\pi^+ \pi^-)$
1282.2 ± 1.5		LEE	94 MPS2	18 $\pi^- p \rightarrow K^+ \bar{K}^0 2\pi^- p$
1279 ± 5		FUKUI	91C SPEC	8.95 $\pi^- p \rightarrow \eta \pi^+ \pi^- n$
1278 ± 2	140	ARMSTRONG	89 OMEG	300 $pp \rightarrow K \bar{K} \pi pp$
1278 ± 2		ARMSTRONG	89G OMEG	85 $\pi^+ p \rightarrow 4\pi \pi p$, $pp \rightarrow 4\pi pp$
1280.1 ± 2.1	60	RATH	89 MPS	21.4 $\pi^- p \rightarrow K_S^0 K_S^0 \pi^0 n$
1285 ± 1	4750	⁴ BIRMAN	88 MPS	8 $\pi^- p \rightarrow K^+ \bar{K}^0 \pi^- n$
1280 ± 1	504	BITYUKOV	88 SPEC	32.5 $\pi^- p \rightarrow K^+ K^- \pi^0 n$
1280 ± 4		ANDO	86 SPEC	8 $\pi^- p \rightarrow \eta \pi^+ \pi^- n$
1277 ± 2	420	REEVES	86 SPEC	6.6 $p\bar{p} \rightarrow KK\pi X$
1285 ± 2		CHUNG	85 SPEC	8 $\pi^- p \rightarrow NK\bar{K}\pi$
1279 ± 2	604	ARMSTRONG	84 OMEG	85 $\pi^+ p \rightarrow K\bar{K}\pi\pi p$, $pp \rightarrow K\bar{K}\pi pp$
1286 ± 1		CHAUVAT	84 SPEC	ISR 31.5 pp
1278 ± 4		EVANGELIS...	81 OMEG	12 $\pi^- p \rightarrow \eta \pi^+ \pi^- \pi^- p$
1283 ± 3	103	DIONISI	80 HBC	4 $\pi^- p \rightarrow K\bar{K}\pi n$
1282 ± 2	320	NACASCH	78 HBC	0.7,0.76 $\bar{p}p \rightarrow K\bar{K}3\pi$

1279	± 5	210	GRASSLER	77	HBC	$16 \pi^\mp p$
1286	± 3	180	DUBOC	72	HBC	$1.2 \bar{p} p \rightarrow 2K4\pi$
1283	± 5		DAHL	67	HBC	$1.6\text{--}4.2 \pi^- p$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●						
1289.3	± 2.8	234	ABLIKIM	19BA	BES3	$e^+ e^- \rightarrow \psi(2S)$
1284.2	± 2.2		⁵ AAIJ	14Y	LHCB	$\bar{B}_{(s)}^0 \rightarrow J/\psi 2(\pi^+ \pi^-)$
1281.9	± 0.5		⁵ SOSA	99	SPEC	$pp \rightarrow p_{\text{slow}} (K_S^0 K^+ \pi^-) p_{\text{fast}}$
1282.8	± 0.6		⁵ SOSA	99	SPEC	$pp \rightarrow p_{\text{slow}} (K_S^0 K^- \pi^+) p_{\text{fast}}$
1270	± 10		AMELIN	95	VES	$37 \pi^- N \rightarrow \pi^- \pi^+ \pi^- \gamma N$
1280	± 2		ABATZIS	94	OMEG	$450 pp \rightarrow pp2(\pi^+ \pi^-)$
1282	± 4		ARMSTRONG	93C	E760	$\bar{p} p \rightarrow \pi^0 \eta \eta \rightarrow 6\gamma$
1270	± 6	± 10	ARMSTRONG	92C	OMEG	$300 pp \rightarrow pp\pi^+ \pi^- \gamma$
1281	± 1		ARMSTRONG	89E	OMEG	$300 pp \rightarrow pp2(\pi^+ \pi^-)$
1279	± 6	± 10	BECKER	87	MRK3	$e^+ e^- \rightarrow \phi K \bar{K} \pi$
1286	± 9	16	GIDAL	87	MRK2	$e^+ e^- \rightarrow e^+ e^- \eta \pi^+ \pi^-$
1287	± 5	353	BITYUKOV	84B	SPEC	$32 \pi^- p \rightarrow K^+ K^- \pi^0 n$
~ 1279			⁶ TORNQVIST	82B	RVUE	
1275	± 6	31	BROMBERG	80	SPEC	$100 \pi^- p \rightarrow K \bar{K} \pi X$
1288	± 9	200	GURTU	79	HBC	$4.2 K^- p \rightarrow n \eta 2\pi$
~ 1275.0		46	⁷ STANTON	79	CNTR	$8.5 \pi^- p \rightarrow n 2\gamma 2\pi$
1271	± 10	34	CORDEN	78	OMEG	$12\text{--}15 \pi^- p \rightarrow K^+ K^- \pi n$
1295	± 12	85	CORDEN	78	OMEG	$12\text{--}15 \pi^- p \rightarrow n 5\pi$
1292	± 10	150	DEFOIX	72	HBC	$0.7 \bar{p} p \rightarrow 7\pi$
1280	± 3	500	⁸ THUN	72	MMS	$13.4 \pi^- p$
1303	± 8		BARDADIN-...	71	HBC	$8 \pi^+ p \rightarrow p 6\pi$
1283	± 6		BOESEBECK	71	HBC	$16.0 \pi p \rightarrow p 5\pi$
1270	± 10		CAMPBELL	69	DBC	$2.7 \pi^+ d$
1285	± 7		LORSTAD	69	HBC	$0.7 \bar{p} p$, 4,5-body
1290	± 7		D'ANDLAU	68	HBC	$1.2 \bar{p} p$, 5-6 body

¹ Using the $2\pi^+ 2\pi^-$ and $\pi^+ \pi^- \eta$ modes of $f_1(1285)$ decay.² The selected process is $J/\psi \rightarrow \omega a_0(980) \pi$.³ Supersedes ABATZIS 94, ARMSTRONG 89E.⁴ From partial wave analysis of $K^+ \bar{K}^0 \pi^-$ system.⁵ No systematic error given.⁶ From a unitarized quark-model calculation.⁷ From phase shift analysis of $\eta \pi^+ \pi^-$ system.⁸ Seen in the missing mass spectrum.



$f_1(1285)$ WIDTH

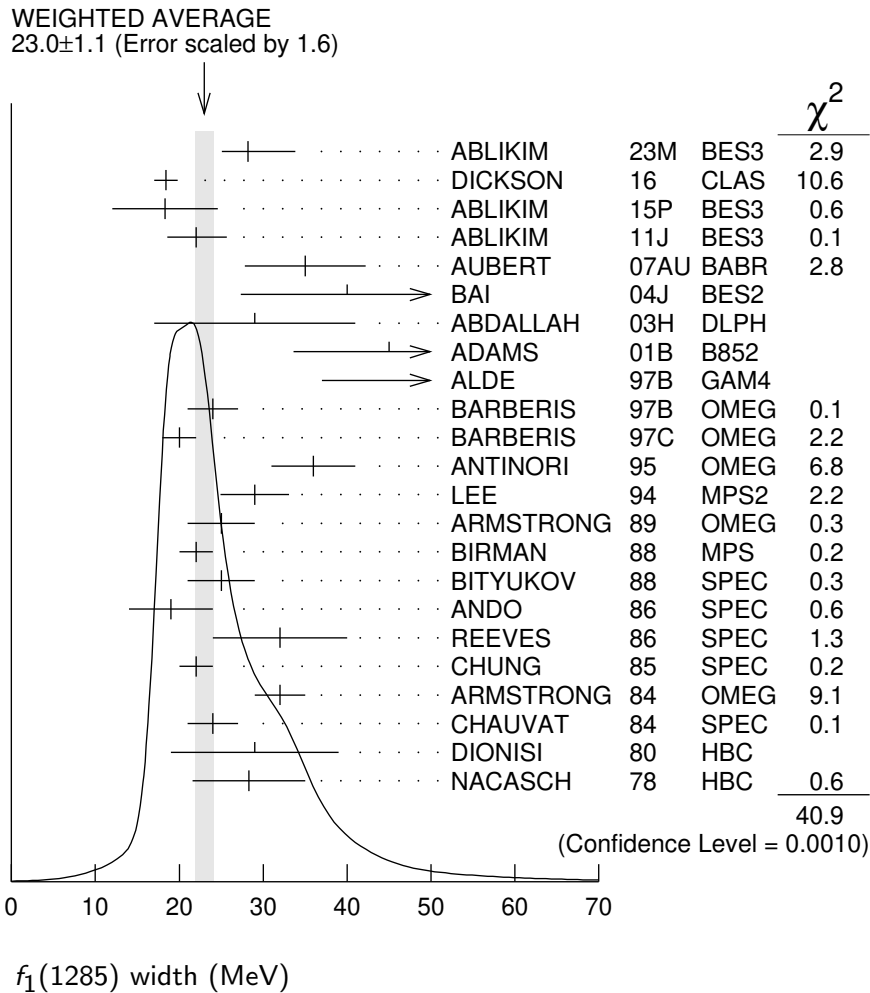
Only experiments giving width error less than 20 MeV are kept for averaging.

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
23.0± 1.1 OUR AVERAGE		Error includes scale factor of 1.6. See the ideogram below.		
28.2± 1.1 ⁺ _{2.9}	5.5 126K	ABLIKIM	23M BES3	$J/\psi \rightarrow \gamma K_S^0 K_S^0 \pi^0$
18.4± 1.4		DICKSON	16 CLAS	2.55 $\gamma p \rightarrow \eta \pi^+ \pi^- p$
18.3± 6.3	87	ABLIKIM	15P BES3	$J/\psi \rightarrow K^+ K^- 3\pi$
22.0± 3.1 ⁺ _{1.5}		¹ ABLIKIM	11J BES3	$J/\psi \rightarrow \omega(\eta \pi^+ \pi^-)$

35 ± 6 ± 4		AUBERT	07AU BABR	10.6 $e^+e^- \rightarrow f_1(1285)\pi^+\pi^-\gamma$
40.0 ± 8.6 ± 9.3	203	BAI	04J BES2	$J/\psi \rightarrow \gamma\gamma\pi^+\pi^-$
29 ± 12	237	ABDALLAH	03H DLPH	91.2 $e^+e^- \rightarrow K_S^0 K^\pm \pi^\mp + X$
45 ± 9 ± 7	20k	ADAMS	01B B852	18 GeV $\pi^- p \rightarrow K^+ K^- \pi^0 n$
55 ± 18	1400	ALDE	97B GAM4	100 $\pi^- p \rightarrow \eta\pi^0\pi^0 n$
24 ± 3		BARBERIS	97B OMEG	450 $pp \rightarrow pp2(\pi^+\pi^-)$
20 ± 2		BARBERIS	97C OMEG	450 $pp \rightarrow ppK_S^0 K^\pm \pi^\mp$
36 ± 5		² ANTINORI	95 OMEG	300,450 $pp \rightarrow pp2(\pi^+\pi^-)$
29.0 ± 4.1		LEE	94 MPS2	18 $\pi^- p \rightarrow K^+ \bar{K}^0 2\pi^- p$
25 ± 4	140	ARMSTRONG	89 OMEG	300 $pp \rightarrow K \bar{K} \pi pp$
22 ± 2	4750	³ BIRMAN	88 MPS	8 $\pi^- p \rightarrow K^+ \bar{K}^0 \pi^- n$
25 ± 4	504	BITYUKOV	88 SPEC	32.5 $\pi^- p \rightarrow K^+ K^- \pi^0 n$
19 ± 5		ANDO	86 SPEC	8 $\pi^- p \rightarrow \eta\pi^+\pi^- n$
32 ± 8	420	REEVES	86 SPEC	6.6 $p\bar{p} \rightarrow KK\pi X$
22 ± 2		CHUNG	85 SPEC	8 $\pi^- p \rightarrow NK\bar{K}\pi$
32 ± 3	604	ARMSTRONG	84 OMEG	85 $\pi^+ p \rightarrow K\bar{K}\pi\pi p$, $pp \rightarrow K\bar{K}\pi pp$
24 ± 3		CHAUVAT	84 SPEC	ISR 31.5 pp
29 ± 10	103	DIONISI	80 HBC	4 $\pi^- p \rightarrow K\bar{K}\pi n$
28.3 ± 6.7	320	NACASCH	78 HBC	0.7, 0.76 $\bar{p}p \rightarrow K\bar{K}3\pi$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
17.1 ± 3.4	234	ABLIKIM	19BA BES3	$e^+e^- \rightarrow \psi(2S)$
32.4 ± 5.8		⁴ AAIJ	14Y LHCb	$\bar{B}_{(s)}^0 \rightarrow J/\psi 2(\pi^+\pi^-)$
18.2 ± 1.2		⁴ SOSA	99 SPEC	$pp \rightarrow p_{\text{slow}} (K_S^0 K^+ \pi^-)$ p_{fast}
19.4 ± 1.5		⁴ SOSA	99 SPEC	$pp \rightarrow p_{\text{slow}} (K_S^0 K^- \pi^+)$ p_{fast}
40 ± 5		ABATZIS	94 OMEG	450 $pp \rightarrow pp2(\pi^+\pi^-)$
31 ± 5		ARMSTRONG	89E OMEG	300 $pp \rightarrow pp2(\pi^+\pi^-)$
41 ± 12		ARMSTRONG	89G OMEG	85 $\pi^+ p \rightarrow 4\pi\pi p$, $pp \rightarrow 4\pi pp$
17.9 ± 10.9	60	RATH	89 MPS	21.4 $\pi^- p \rightarrow K_S^0 K_S^0 \pi^0 n$
14 $\begin{smallmatrix} +20 \\ -14 \end{smallmatrix}$ ± 10	16	BECKER	87 MRK3	$e^+e^- \rightarrow \phi K\bar{K}\pi$
26 ± 12		EVANGELIS...	81 OMEG	12 $\pi^- p \rightarrow \eta\pi^+\pi^-\pi^- p$
25 ± 15	200	GURTU	79 HBC	4.2 $K^- p \rightarrow n\eta 2\pi$
~ 10		⁵ STANTON	79 CNTR	8.5 $\pi^- p \rightarrow n2\gamma 2\pi$
24 ± 18	210	GRASSLER	77 HBC	16 $\pi^\mp p$
28 ± 5	150	⁶ DEFOIX	72 HBC	0.7 $\bar{p}p \rightarrow 7\pi$
46 ± 9	180	⁶ DUBOC	72 HBC	1.2 $\bar{p}p \rightarrow 2K4\pi$
37 ± 5	500	⁷ THUN	72 MMS	13.4 $\pi^- p$
10 ± 10		BOESEBECK	71 HBC	16.0 $\pi p \rightarrow p5\pi$
30 ± 15		CAMPBELL	69 DBC	2.7 $\pi^+ d$
60 ± 15		⁶ LORSTAD	69 HBC	0.7 $\bar{p}p$, 4,5-body
35 ± 10		⁶ DAHL	67 HBC	1.6–4.2 $\pi^- p$

¹ The selected process is $J/\psi \rightarrow \omega a_0(980)\pi$.

- ²Supersedes ABATZIS 94, ARMSTRONG 89E.
- ³From partial wave analysis of $K^+\bar{K}^0\pi^-$ system.
- ⁴No systematic error given.
- ⁵From phase shift analysis of $\eta\pi^+\pi^-$ system.
- ⁶Resolution is not unfolded.
- ⁷Seen in the missing mass spectrum.



$f_1(1285)$ DECAY MODES

Mode		Fraction (Γ_i/Γ)	Scale factor/ Confidence level
Γ_1	4π	$(32.7 \pm 1.8) \%$	$S=1.2$
Γ_2	$\pi^0\pi^0\pi^+\pi^-$	$(21.8 \pm 1.2) \%$	$S=1.2$
Γ_3	$2\pi^+2\pi^-$	$(10.9 \pm 0.6) \%$	$S=1.2$
Γ_4	$\rho^0\pi^+\pi^-$	$(10.9 \pm 0.6) \%$	$S=1.2$
Γ_5	$\rho^0\rho^0$	seen	
Γ_6	$4\pi^0$	$< 7 \times 10^{-4}$	CL=90%
Γ_7	$\eta\pi^+\pi^-$	$(35 \pm 15) \%$	
Γ_8	$\eta\pi\pi$	$(52.2 \pm 1.9) \%$	$S=1.2$

Γ_9	$a_0(980)\pi$ [ignoring $a_0(980) \rightarrow K\bar{K}$]	$(38 \pm 4) \%$	
Γ_{10}	$\eta\pi\pi$ [excluding $a_0(980)\pi$]	$(14 \pm 4) \%$	
Γ_{11}	$K\bar{K}\pi$	$(9.0 \pm 0.4) \%$	S=1.1
Γ_{12}	$K\bar{K}^*(892)$	not seen	
Γ_{13}	$\pi^+\pi^-\pi^0$	$(3.0 \pm 0.9) \times 10^{-3}$	
Γ_{14}	$\rho^\pm\pi^\mp$	$< 3.1 \times 10^{-3}$	CL=95%
Γ_{15}	$\gamma\rho^0$	$(6.1 \pm 1.0) \%$	S=1.7
Γ_{16}	$\phi\gamma$	$(7.4 \pm 2.6) \times 10^{-4}$	
Γ_{17}	e^+e^-	$< 9.4 \times 10^{-9}$	CL=90%
Γ_{18}	$\gamma\gamma^*$		
Γ_{19}	$\gamma\gamma$		

CONSTRAINED FIT INFORMATION

An overall fit to 6 branching ratios uses 18 measurements and one constraint to determine 5 parameters. The overall fit has a $\chi^2 = 24.0$ for 14 degrees of freedom.

The following *off-diagonal* array elements are the correlation coefficients $\langle \delta x_i \delta x_j \rangle / (\delta x_i \delta x_j)$, in percent, from the fit to 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_9	−29			
x_{10}	−12	−89		
x_{11}	22	−9	−4	
x_{15}	−24	−8	−3	−27
	x_1	x_9	x_{10}	x_{11}

$f_1(1285) \Gamma(i) \Gamma(\gamma\gamma) / \Gamma(\text{total})$

$\Gamma(\eta\pi\pi) \times \Gamma(\gamma\gamma) / \Gamma_{\text{total}}$		$\Gamma_8 \Gamma_{19} / \Gamma = (\Gamma_9 + \Gamma_{10}) \Gamma_{19} / \Gamma$		
VALUE (keV)	CL%	DOCUMENT ID	TECN	COMMENT
<0.62	95	GIDAL	87	MRK2 $e^+e^- \rightarrow e^+e^-\eta\pi^+\pi^-$

$\Gamma(\eta\pi\pi) \times \Gamma(\gamma\gamma^*) / \Gamma_{\text{total}}$		$\Gamma_8 \Gamma_{18} / \Gamma = (\Gamma_9 + \Gamma_{10}) \Gamma_{18} / \Gamma$		
VALUE (keV)	EVTS	DOCUMENT ID	TECN	COMMENT
1.4 ± 0.4 OUR AVERAGE		Error includes scale factor of 1.4.		

1.18 ± 0.25 ± 0.20	26	^{1,2} AIHARA	88B	TPC	$e^+e^- \rightarrow e^+e^-\eta\pi^+\pi^-$
2.30 ± 0.61 ± 0.42		^{1,3} GIDAL	87	MRK2	$e^+e^- \rightarrow e^+e^-\eta\pi^+\pi^-$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
1.8 ± 0.3 ± 0.3	420	⁴ ACHARD	02B	L3	183–209 $e^+e^- \rightarrow e^+e^-\eta\pi^+\pi^-$

¹ Assuming a ρ -pole form factor.

² Published value multiplied by $\eta\pi\pi$ branching ratio 0.49.

³ Published value divided by 2 and multiplied by the $\eta\pi\pi$ branching ratio 0.49.

⁴ Published value multiplied by the $\eta\pi\pi$ branching ratio 0.52.

$f_1(1285)$ BRANCHING RATIOS **$\Gamma(K\bar{K}\pi)/\Gamma(4\pi)$** **$\Gamma_{11}/\Gamma_1$**

VALUE	DOCUMENT ID	TECN	COMMENT
0.274 ± 0.017 OUR FIT	Error includes scale factor of 1.4.		
0.271 ± 0.016 OUR AVERAGE	Error includes scale factor of 1.2.		
0.265 ± 0.014	¹ BARBERIS	97C	OMEG 450 $pp \rightarrow ppK_S^0 K^\pm \pi^\mp$
0.28 ± 0.05	² ARMSTRONG	89E	OMEG 300 $pp \rightarrow pp f_1(1285)$
$0.37 \pm 0.03 \pm 0.05$	³ ARMSTRONG	89G	OMEG 85 $\pi p \rightarrow 4\pi X$

¹ Using $2(\pi^+ \pi^-)$ data from BARBERIS 97B.² Assuming $\rho\pi\pi$ and $a_0(980)\pi$ intermediate states.³ 4π consistent with being entirely $\rho\pi\pi$. **$\Gamma(\pi^0 \pi^0 \pi^+ \pi^-)/\Gamma_{\text{total}}$** **$\Gamma_2/\Gamma = \frac{2}{3}\Gamma_1/\Gamma$**

VALUE	DOCUMENT ID
0.218 ± 0.012 OUR FIT	Error includes scale factor of 1.2.

 $\Gamma(2\pi^+ 2\pi^-)/\Gamma_{\text{total}}$ **$\Gamma_3/\Gamma = \frac{1}{3}\Gamma_1/\Gamma$**

VALUE	DOCUMENT ID
0.109 ± 0.006 OUR FIT	Error includes scale factor of 1.2.

 $\Gamma(\rho^0 \pi^+ \pi^-)/\Gamma_{\text{total}}$ **$\Gamma_4/\Gamma = \frac{1}{3}\Gamma_1/\Gamma$**

VALUE	DOCUMENT ID
0.109 ± 0.006 OUR FIT	Error includes scale factor of 1.2.

 $\Gamma(\rho^0 \pi^+ \pi^-)/\Gamma(2\pi^+ 2\pi^-)$ **Γ_4/Γ_3**

VALUE	DOCUMENT ID	TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •			
1.0 ± 0.4	GRASSLER	77	HBC 16 GeV $\pi^\pm p$

 $\Gamma(\rho^0 \rho^0)/\Gamma_{\text{total}}$ **Γ_5/Γ**

VALUE	DOCUMENT ID	COMMENT
seen	BARBERIS 00C	450 $pp \rightarrow p_f 4\pi p_s$

 $\Gamma(4\pi^0)/\Gamma_{\text{total}}$ **Γ_6/Γ**

VALUE (units 10^{-4})	CL%	DOCUMENT ID	TECN	COMMENT
<7	90	ALDE	87	GAM4 100 $\pi^- p \rightarrow 4\pi^0 n$

 $\Gamma(\pi^+ \pi^- \pi^0)/\Gamma(\eta \pi^+ \pi^-)$ **Γ_{13}/Γ_7**

VALUE (%)	EVTS	DOCUMENT ID	TECN	COMMENT
$0.86 \pm 0.16 \pm 0.20$	2.3k	¹ DOROFEEV 11	VES	$\pi^- N \rightarrow \pi^- f_1(1285) N$

¹ Value obtained selecting the region corresponding to $f_0(980)$ in the $\pi^+ \pi^-$ mass spectrum. **$\Gamma(\eta \pi \pi)/\Gamma_{\text{total}}$** **$\Gamma_8/\Gamma = (\Gamma_9 + \Gamma_{10})/\Gamma$**

VALUE	DOCUMENT ID
0.522 ± 0.019 OUR FIT	Error includes scale factor of 1.2.

$\Gamma(4\pi)/\Gamma(\eta\pi\pi)$ $\Gamma_1/\Gamma_8 = \Gamma_1/(\Gamma_9 + \Gamma_{10})$

VALUE	DOCUMENT ID	TECN	COMMENT
0.63±0.06 OUR FIT	Error includes scale factor of 1.2.		
0.41±0.14 OUR AVERAGE			
0.37±0.11±0.11	BOLTON	92	MRK3 $J/\psi \rightarrow \gamma f_1(1285)$
0.64±0.40	GURTU	79	HBC $4.2 K^- p$
• • • We do not use the following data for averages, fits, limits, etc. • • •			
0.93±0.30	¹ GRASSLER	77	HBC $16 \pi^\mp p$
¹ Assuming $\rho\pi\pi$ and $a_0(980)\pi$ intermediate states.			

 $\Gamma(2\pi^+ 2\pi^-)/\Gamma(\eta\pi\pi)$ Γ_3/Γ_8

VALUE	DOCUMENT ID	TECN	COMMENT
0.28±0.02±0.02	¹ LEES	12X	BABR $\tau^- \rightarrow \pi^- f_1(1285) \nu_\tau$
¹ Assuming $B(f_1(1285) \rightarrow \pi\pi\eta) = 3/2 B(f_1(1285) \rightarrow \pi^+ \pi^- \eta)$.			

 $\Gamma(a_0(980)\pi [\text{ignoring } a_0(980) \rightarrow K\bar{K}])/\Gamma(\eta\pi\pi)$ $\Gamma_9/\Gamma_8 = \Gamma_9/(\Gamma_9 + \Gamma_{10})$

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
0.72±0.08 OUR FIT				
0.72±0.07 OUR AVERAGE				
0.74±0.02±0.09		DICKSON	16	CLAS $\gamma p \rightarrow f_1(1285)p$
0.72±0.15		GURTU	79	HBC $4.2 K^- p$
0.6 ^{+0.3} _{-0.2}		CORDEN	78	OMEG $12-15 \pi^- p$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
>0.69	95	ACHARD	02B	L3 $183-209 e^+ e^- \rightarrow e^+ e^- \eta \pi^+ \pi^-$
0.28±0.07		ALDE	97B	GAM4 $100 \pi^- p \rightarrow \eta \pi^0 \pi^0 n$
1.0 ±0.3		GRASSLER	77	HBC $16 \pi^\mp p$

 $\Gamma(K\bar{K}\pi)/\Gamma(\eta\pi\pi)$ $\Gamma_{11}/\Gamma_8 = \Gamma_{11}/(\Gamma_9 + \Gamma_{10})$

VALUE	DOCUMENT ID	TECN	COMMENT
0.172±0.011 OUR FIT			
0.176±0.012 OUR AVERAGE			
0.216±0.010±0.031	DICKSON	16	CLAS $\gamma p \rightarrow f_1(1285)p$
0.166±0.01 ±0.008	BARBERIS	98c	OMEG $450 p p \rightarrow p_f f_1(1285) p_s$
0.42 ±0.15	GURTU	79	HBC $4.2 K^- p$
0.5 ±0.2	¹ CORDEN	78	OMEG $12-15 \pi^- p$
0.20 ±0.08	² DEFOIX	72	HBC $0.7 \bar{p} p \rightarrow 7\pi$
0.16 ±0.08	CAMPBELL	69	DBC $2.7 \pi^+ d$

¹ CORDEN 78 assumes low-mass $\eta\pi\pi$ region is dominantly 1^{++} . See BARBERIS 98c and MANAK 00A for discussion.

² $K\bar{K}$ system characterized by the $I = 1$ threshold enhancement. (See under $a_0(980)$).

 $\Gamma(K\bar{K}^*(892))/\Gamma_{\text{total}}$ Γ_{12}/Γ

VALUE	DOCUMENT ID	TECN	COMMENT
not seen	NACASCH	78	HBC $0.7, 0.76 \bar{p} p \rightarrow K\bar{K} 3\pi$
• • • We do not use the following data for averages, fits, limits, etc. • • •			
seen	¹ ACHARD	07	L3 $183-209 e^+ e^- \rightarrow e^+ e^- K_S^0 K^\pm \pi^\mp$

¹ A clear signal of 19.8 ± 4.4 events observed at high Q^2 .

$\Gamma(\pi^+\pi^-\pi^0)/\Gamma_{\text{total}}$ Γ_{13}/Γ

VALUE (%)	EVTs	DOCUMENT ID	TECN	COMMENT
0.30±0.055±0.074	2.3k	¹ DOROFEEV	11	VES $\pi^- N \rightarrow \pi^- f_1(1285) N$

¹ Value obtained selecting the region corresponding to $f_0(980)$ in the $\pi^+\pi^-$ mass spectrum. The systematic error includes the uncertainty on the partial width $f_1 \rightarrow \eta\pi\pi$ obtained from PDG 10 data.

 $\Gamma(\rho^\pm\pi^\mp)/\Gamma_{\text{total}}$ Γ_{14}/Γ

VALUE (%)	CL%	DOCUMENT ID	TECN	COMMENT
<0.31	95	DOROFEEV	11	VES $\pi^- N \rightarrow \pi^- f_1(1285) N$

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

VALUE (units 10^{-2})	CL%	DOCUMENT ID	TECN	COMMENT
6.1±1.0 OUR FIT				Error includes scale factor of 1.7.

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

$2.8 \pm 0.7 \pm 0.6$		¹ AMELIN	95	VES	37 $\pi^- N \rightarrow \pi^- \pi^+ \pi^- \gamma N$
<5	95	BITYUKOV	91B	SPEC	32 $\pi^- p \rightarrow \pi^+ \pi^- \gamma n$

¹ Not an independent measurement.

 $\Gamma(\gamma\rho^0)/\Gamma(2\pi^+2\pi^-)$ $\Gamma_{15}/\Gamma_3 = \Gamma_{15}/\frac{1}{3}\Gamma_1$

VALUE	DOCUMENT ID	TECN	COMMENT
0.55±0.10 OUR FIT			Error includes scale factor of 1.5.
0.45±0.18	¹ COFFMAN	90	MRK3 $J/\psi \rightarrow \gamma\gamma\pi^+\pi^-$

¹ Using $B(J/\psi \rightarrow \gamma f_1(1285) \rightarrow \gamma\gamma\rho^0) = 0.25 \times 10^{-4}$ and $B(J/\psi \rightarrow \gamma f_1(1285) \rightarrow \gamma 2\pi^+ 2\pi^-) = 0.55 \times 10^{-4}$ given by MIR 88.

 $\Gamma(\eta\pi\pi)/\Gamma(\gamma\rho^0)$ $\Gamma_8/\Gamma_{15} = (\Gamma_9 + \Gamma_{10})/\Gamma_{15}$

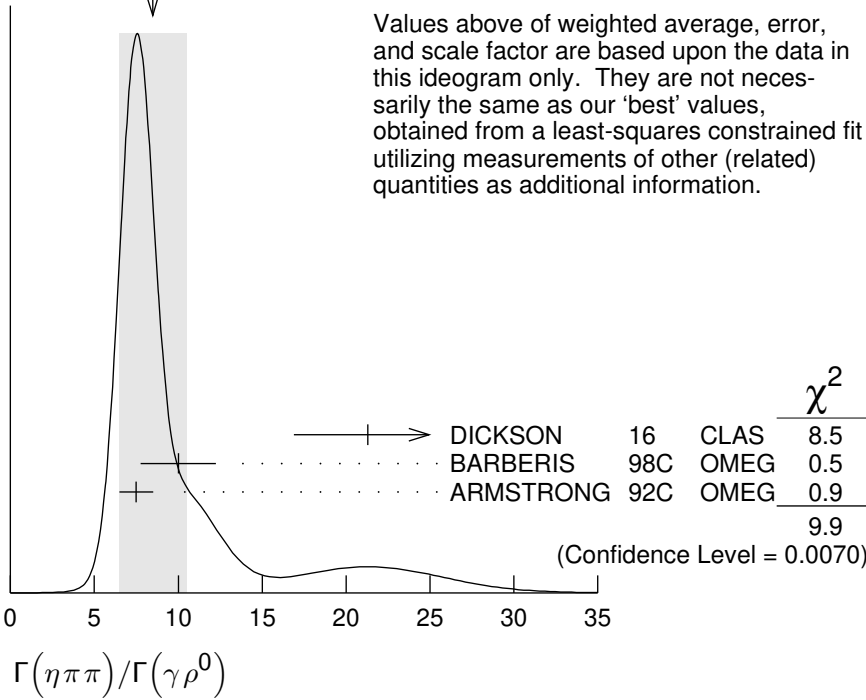
VALUE	DOCUMENT ID	TECN	COMMENT
8.6±1.6 OUR FIT			Error includes scale factor of 1.9.

8.5±2.0 OUR AVERAGE Error includes scale factor of 2.2. See the ideogram below.

21.3±4.4	DICKSON	16	CLAS $\gamma p \rightarrow f_1(1285) p$
10.0±1.0±2.0	BARBERIS	98C	OMEG 450 $pp \rightarrow p_f f_1(1285) p_s$
7.5±1.0	¹ ARMSTRONG	92C	OMEG 300 $pp \rightarrow pp\pi^+\pi^-\gamma, pp\eta\pi^+\pi^-$

¹ Published value multiplied by 1.5.

WEIGHTED AVERAGE
8.5±2.0 (Error scaled by 2.2)



$\Gamma(\gamma\rho^0)/\Gamma(\kappa\bar{K}\pi)$

Γ_{15}/Γ_{11}

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
>0.035	90	¹ COFFMAN 90	MRK3	$J/\psi \rightarrow \gamma\gamma\pi^+\pi^-$
¹ Using $B(J/\psi \rightarrow \gamma f_1(1285) \rightarrow \gamma\gamma\rho^0) = 0.25 \times 10^{-4}$ and $B(J/\psi \rightarrow \gamma f_1(1285) \rightarrow \gamma K\bar{K}\pi) = 0.72 \times 10^{-3}$.				

$\Gamma(\phi\gamma)/\Gamma(\kappa\bar{K}\pi)$

Γ_{16}/Γ_{11}

VALUE (units 10^{-2})	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
0.82±0.21±0.20		19	BITYUKOV 88	SPEC	32.5 $\pi^- p \rightarrow K^+ K^- \pi^0 n$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.50	95		BARBERIS 98C	OMEG	450 $pp \rightarrow p_f f_1(1285) p_s$
<0.93	95		AMELIN 95	VES	37 $\pi^- N \rightarrow \pi^- \pi^+ \pi^- \gamma N$

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

Γ_{17}/Γ

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<9.4 × 10⁻⁹	90	¹ ACHASOV 20	SND	$e^+e^- \rightarrow \eta\pi^0\pi^0$
¹ ACHASOV 20 reports two candidate events corresponding to a significance of 2.5 σ and the branching fraction of $(5.1^{+3.7}_{-2.7}) \times 10^{-9}$.				

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