$f_1(1285)$

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

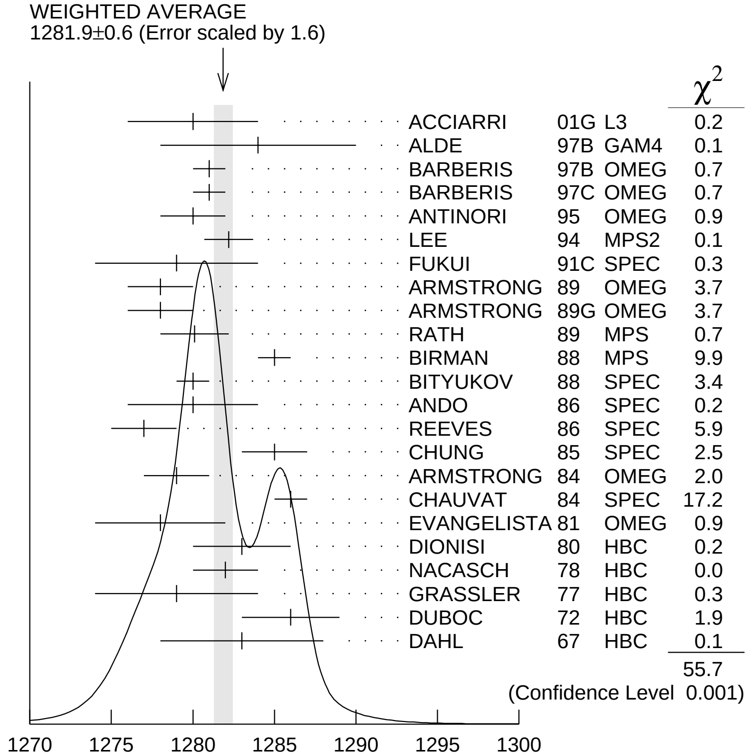
$f_1(1285)$ MASS

VALUE (MeV)	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
1281.9± 0.6 OUR AVERAGE Error includes scale factor of 1.6. See the ideogram below.						
1280 ±4	95		ACCIARRI	01G	L3	
1284 ±6		1400	ALDE	97B	GAM4	100 $\pi^- p \to \eta\pi^0\pi^0 n$
1281 ±1			BARBERIS	97B	OMEG	450 $pp \to pp2(\pi^+\pi^-)$
1281 ±1			BARBERIS	97C	OMEG	450 $pp \to ppK^0_S K^\pm\pi^\mp$
1280 ±2			[1] ANTINORI	95	OMEG	300,450 $pp \to pp2(\pi^+\pi^-)$
1282.2± 1.5			LEE	94	MPS2	18 $\pi^- p \to K^+\overline{K}^0 2\pi^- p$
1279 ±5			FUKUI	91C	SPEC	8.95 $\pi^- p \to \eta\pi^+\pi^- n$
1278 ±2		140	ARMSTRONG	89	OMEG	300 $pp \to K\overline{K}\pi pp$
1278 ±2			ARMSTRONG	89G	OMEG	85 $\pi^+ p \to 4\pi\pi p$, $pp \to 4\pi pp$
1280.1± 2.1		60	RATH	89	MPS	21.4 $\pi^- p \to K^0_S K^0_S \pi^0 n$
1285 ±1		4750	[2] BIRMAN	88	MPS	8 $\pi^- p \to K^+\overline{K}^0\pi^- n$
1280 ±1		504	BITYUKOV	88	SPEC	32.5 $\pi^- p \to K^+K^-\pi^0 n$
1280 ±4			ANDO	86	SPEC	8 $\pi^- p \to \eta\pi^+\pi^- n$
1277 ±2		420	REEVES	86	SPEC	6.6 $p\overline{p} \to KK\pi X$
1285 ±2			CHUNG	85	SPEC	8 $\pi^- p \to NK\overline{K}\pi$
1279 ±2		604	ARMSTRONG	84	OMEG	85 $\pi^+ p \to K\overline{K}\pi\pi p$, $pp \to K\overline{K}\pi pp$
1286 ±1			CHAUVAT	84	SPEC	ISR 31.5 pp
1278 ±4			EVANGELISTA	81	OMEG	12 $\pi^- p \to \eta\pi^+\pi^-\pi^- p$
1283 ±3		103	DIONISI	80	HBC	4 $\pi^- p \to K\overline{K}\pi n$
1282 ±2		320	NACASCH	78	HBC	0.7,0.76 $\overline{p}p \to K\overline{K}3\pi$
1279 ±5		210	GRASSLER	77	HBC	16 $\pi^\mp p$
1286 ±3		180	DUBOC	72	HBC	1.2 $\overline{p}p \to 2K4\pi$
1283 ±5			DAHL	67	HBC	1.6–4.2 $\pi^- p$

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

1281.9± 0.5		[3] SOSA	99 SPEC	$pp \to p_{slow} (K^0_S K^+ \pi^-) p_{fast}$
1282.8± 0.6		[3] SOSA	99 SPEC	$pp \to p_{slow} (K^0_S K^- \pi^+) p_{fast}$
1270 ±10		AMELIN	95 VES	37 $\pi^- N \to \pi^- \pi^+ \pi^- \gamma N$
1280 ± 2		ABATZIS	94 OMEG	450 $pp \to pp 2(\pi^+ \pi^-)$
1282 ± 4		ARMSTRONG	93C E760	$\overline{p}p \to \pi^0 \eta\eta \to 6\gamma$
1270 ± 6 ±10		ARMSTRONG	92C OMEG	300 $pp \to pp\pi^+ \pi^- \gamma$
1264 ± 8		AUGUSTIN	90 DM2	$J/\psi \to \gamma\eta\pi^+ \pi^-$
1281 ± 1		ARMSTRONG	89E OMEG	300 $pp \to pp 2(\pi^+ \pi^-)$
1279 ± 6 ±10	16	BECKER	87 MRK3	$e^+ e^- \to \phi K \overline{K} \pi$
1286 ± 9		GIDAL	87 MRK2	$e^+ e^- \to e^+ e^- \eta\pi^+ \pi^-$
1287 ± 5	353	BITYUKOV	84B SPEC	32 $\pi^- p \to K^+ K^- \pi^0 n$
~ 1279		[4] TORNQVIST	82B RVUE	
1275 ± 6	31	BROMBERG	80 SPEC	100 $\pi^- p \to K \overline{K} \pi X$
1288 ± 9	200	GURTU	79 HBC	4.2 $K^- p \to n\eta 2\pi$
~ 1275.0	46	[5] STANTON	79 CNTR	8.5 $\pi^- p \to n 2\gamma 2\pi$
1271 ±10	34	CORDEN	78 OMEG	12–15 $\pi^- p \to K^+ K^- \pi n$
1295 ±12	85	CORDEN	78 OMEG	12–15 $\pi^- p \to n 5\pi$
1292 ±10	150	DEFOIX	72 HBC	0.7 $\overline{p}p \to 7\pi$
1280 ± 3	500	[6] THUN	72 MMS	13.4 $\pi^- p$
1303 ± 8		BARDADIN-...	71 HBC	8 $\pi^+ p \to p 6\pi$
1283 ± 6		BOESEBECK	71 HBC	16.0 $\pi p \to p 5\pi$
1270 ±10		CAMPBELL	69 DBC	2.7 $\pi^+ d$
1285 ± 7		LORSTAD	69 HBC	0.7 $\overline{p}p$, 4,5-body
1290 ± 7		D'ANDLAU	68 HBC	1.2 $\overline{p}p$, 5–6 body

[1] Supersedes ABATZIS 94, ARMSTRONG 89E.
[2] From partial wave analysis of $K^+ \overline{K}^0 \pi^-$ system.
[3] No systematic error given.
[4] From a unitarized quark-model calculation.
[5] From phase shift analysis of $\eta\pi^+ \pi^-$ system.
[6] Seen in the missing mass spectrum.



$f_1(1285)$ mass (MeV)

$f_1(1285)$ WIDTH

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

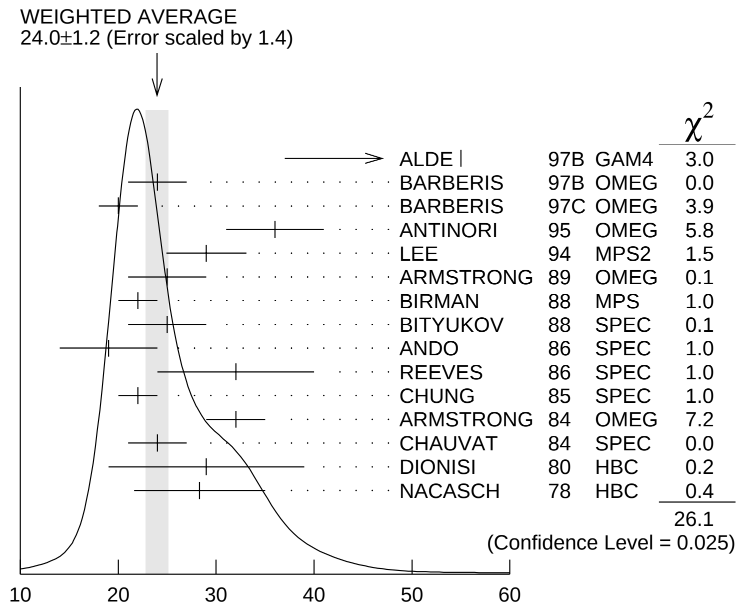
VALUE (MeV)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
24.0± 1.2 OUR AVERAGE		Error includes scale factor of 1.4. See the ideogram below.			
55 ±18	1400	ALDE	97B	GAM4	100 $\pi^- p \rightarrow \eta\pi^0\pi^0 n$
24 ± 3		BARBERIS	97B	OMEG	450 $pp \rightarrow pp2(\pi^+\pi^-)$
20 ± 2		BARBERIS	97C	OMEG	450 $pp \rightarrow ppK^0_S K^\pm\pi^\mp$
36 ± 5		[7] ANTINORI	95	OMEG	300,450 $pp \rightarrow pp2(\pi^+\pi^-)$
29.0± 4.1		LEE	94	MPS2	18 $\pi^- p \rightarrow K^+\overline{K}^0 2\pi^- p$
25 ± 4	140	ARMSTRONG	89	OMEG	300 $pp \rightarrow K\overline{K}\pi pp$
22 ± 2	4750	[8] BIRMAN	88	MPS	8 $\pi^- p \rightarrow K^+\overline{K}^0\pi^- n$
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	$6.6\ p\overline{p} \rightarrow K K \pi X$
22 ± 2		CHUNG 85	SPEC	$8\ \pi^- p \rightarrow N K \overline{K} \pi$
32 ± 3	604	ARMSTRONG 84	OMEG	$85\ \pi^+ p \rightarrow K\overline{K}\pi\pi p$, $pp \rightarrow K\overline{K}\pi pp$
24 ± 3		CHAUVAT 84	SPEC	ISR 31.5 pp
29 ±10	103	DIONISI 80	HBC	$4\ \pi^- p \rightarrow K\overline{K}\pi n$
28.3± 6.7	320	NACASCH 78	HBC	$0.7, 0.76\ \overline{p}p \rightarrow K\overline{K} 3\pi$

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

18.2± 1.2		[9] SOSA 99	SPEC	$pp \rightarrow p_{slow} (K^0_S K^+ \pi^-) p_{fast}$
19.4± 1.5		[9] SOSA 99	SPEC	$pp \rightarrow p_{slow} (K^0_S K^- \pi^+) p_{fast}$
40 ± 5		ABATZIS 94	OMEG	$450\ pp \rightarrow pp 2(\pi^+\pi^-)$
44 ±20		AUGUSTIN 90	DM2	$J/\psi \rightarrow \gamma\eta\pi^+\pi^-$
31 ± 5		ARMSTRONG 89E	OMEG	$300\ pp \rightarrow pp 2(\pi^+\pi^-)$
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	$21.4\ \pi^- p \rightarrow K^0_S K^0_S \pi^0 n$
$14\ ^{+20}_{-14}$ ±10	16	BECKER 87	MRK3	$e^+ e^- \rightarrow \phi K \overline{K} \pi$
26 ±12		EVANGELISTA 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		[10] STANTON 79	CNTR	$8.5\ \pi^- p \rightarrow n 2\gamma 2\pi$
24 ±18	210	GRASSLER 77	HBC	$16\ \pi^\mp p$
28 ± 5	150	[11] DEFOIX 72	HBC	$0.7\ \overline{p}p \rightarrow 7\pi$
46 ± 9	180	[11] DUBOC 72	HBC	$1.2\ \overline{p}p \rightarrow 2K 4\pi$
37 ± 5	500	[12] THUN 72	MMS	$13.4\ \pi^- p$
10 ±10		BOESEBECK 71	HBC	$16.0\ \pi p \rightarrow p 5\pi$
30 ±15		CAMPBELL 69	DBC	$2.7\ \pi^+ d$
60 ±15		[11] LORSTAD 69	HBC	$0.7\ \overline{p}p$, 4,5-body
35 ±10		[11] DAHL 67	HBC	$1.6–4.2\ \pi^- p$

[7] Supersedes ABATZIS 94, ARMSTRONG 89E.
[8] From partial wave analysis of $K^+ \overline{K}^0 \pi^-$ system.
[9] No systematic error given.
[10] From phase shift analysis of $\eta\pi^+\pi^-$ system.
[11] Resolution is not unfolded.
[12] Seen in the missing mass spectrum.



$f_1(1285)$ width (MeV)

$f_1(1285)$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)	Scale factor/ Confidence level
Γ_1	4π	$(33.1^{+2.1}_{-1.8})$ %	S=1.3
Γ_2	$\pi^0\pi^0\pi^+\pi^-$	$(22.0^{+1.4}_{-1.2})$ %	S=1.3
Γ_3	$2\pi^+2\pi^-$	$(11.0^{+0.7}_{-0.6})$ %	S=1.3
Γ_4	$\rho^0\pi^+\pi^-$	$(11.0^{+0.7}_{-0.6})$ %	S=1.3
Γ_5	$\rho^0\rho^0$	seen	
Γ_6	$4\pi^0$	$< 7 \times 10^{-4}$	CL=90%
Γ_7	$\eta\pi\pi$	(52 ± 16) %	
Γ_8	$a_0(980)\pi$ [ignoring $a_0(980) \to K\overline{K}$]	(36 ± 7) %	
Γ_9	$\eta\pi\pi$ [excluding $a_0(980)\pi$]	(16 ± 7) %	
Γ_{10}	$K\overline{K}\pi$	(9.0 ± 0.4) %	S=1.1
Γ_{11}	$K\overline{K}^*(892)$	not seen	
Γ_{12}	$\gamma\rho^0$	(5.5 ± 1.3) %	S=2.8
Γ_{13}	$\phi\gamma$	$(7.4 \pm 2.6) \times 10^{-4}$	
Γ_{14}	$\gamma\gamma^*$		
Γ_{15}	$\gamma\gamma$		

CONSTRAINED FIT INFORMATION

An overall fit to 7 branching ratios uses 16 measurements and one constraint to determine 5 parameters. The overall fit has a $\chi^2 =$ 24.7 for 12 degrees of freedom.

The following *off-diagonal* array elements are the correlation coefficients $\left\langle\delta x_i \delta x_j\right\rangle/(\delta x_i \cdot \delta x_j)$, 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_8	−17			
x_9	−8	−95		
x_{10}	46	−9	−4	
x_{12}	−36	−4	−2	−34
	x_1	x_8	x_9	x_{10}

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

$\Gamma(\eta\pi\pi) \times \Gamma(\gamma\gamma)/\Gamma_{\text{total}}$ — $\Gamma_7\Gamma_{15}/\Gamma = (\Gamma_8+\Gamma_9)\Gamma_{15}/\Gamma$

VALUE (keV)	*CL%*	*DOCUMENT ID*		*TECN*	*COMMENT*
<0.62	95	GIDAL	87	MRK2	$e^+ e^- \rightarrow e^+ e^- \eta\pi^+\pi^-$

$\Gamma(\eta\pi\pi) \times \Gamma(\gamma\gamma^*)/\Gamma_{\text{total}}$ — $\Gamma_7\Gamma_{14}/\Gamma = (\Gamma_8+\Gamma_9)\Gamma_{14}/\Gamma$

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	[13,14] AIHARA	88B	TPC	$e^+ e^- \rightarrow e^+ e^- \eta\pi^+\pi^-$
2.30±0.61±0.42		[13,15] 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	[16] ACHARD	02B	L3	183–209 $e^+ e^- \rightarrow e^+ e^- \eta\pi^+\pi^-$

[13] Assuming a ρ-pole form factor.
[14] Published value multiplied by $\eta\pi\pi$ branching ratio 0.49.
[15] Published value divided by 2 and multiplied by the $\eta\pi\pi$ branching ratio 0.49.
[16] Published value multiplied by the $\eta\pi\pi$ branching ratio 0.52.

$f_1(1285)$ BRANCHING RATIOS

$\Gamma(K\overline{K}\pi)/\Gamma(4\pi)$ — Γ_{10}/Γ_1

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
0.271±0.016 OUR FIT Error includes scale factor of 1.3.				
0.271±0.016 OUR AVERAGE Error includes scale factor of 1.2.				
0.265±0.014	[17] BARBERIS	97C	OMEG	450 $pp \rightarrow ppK^0_S K^\pm\pi^\mp$
0.28 ±0.05	[18] ARMSTRONG	89E	OMEG	300 $pp \rightarrow ppf_1(1285)$
0.37 ±0.03 ±0.05	[19] ARMSTRONG	89G	OMEG	85 $\pi p \rightarrow 4\pi X$

[17] Using $2(\pi^+\pi^-)$ data from BARBERIS 97B.
[18] Assuming $\rho\pi\pi$ and $a_0(980)\pi$ intermediate states.
[19] 4π consistent with being entirely $\rho\pi\pi$.

$\Gamma(\pi^0\pi^0\pi^+\pi^-)/\Gamma_{total}$ — $\Gamma_2/\Gamma = \frac{2}{3}\Gamma_1/\Gamma$

VALUE	DOCUMENT ID
$0.220^{+0.014}_{-0.012}$ OUR FIT Error includes scale factor of 1.3.	

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

VALUE	DOCUMENT ID
$0.110^{+0.007}_{-0.006}$ OUR FIT Error includes scale factor of 1.3.	

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

VALUE	DOCUMENT ID
$0.110^{+0.007}_{-0.006}$ OUR FIT Error includes scale factor of 1.3.	

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

VALUE	DOCUMENT ID		COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •			
seen	BARBERIS	00C	450 $pp \to p_f 4\pi p_s$

$\Gamma(K\overline{K}\pi)/\Gamma(\eta\pi\pi)$ — $\Gamma_{10}/\Gamma_7 = \Gamma_{10}/(\Gamma_8+\Gamma_9)$

VALUE	DOCUMENT ID		TECN	COMMENT
0.171±0.013 OUR FIT Error includes scale factor of 1.1.				
0.170±0.012 OUR AVERAGE				
0.166±0.01 ±0.008	BARBERIS	98C	OMEG	450 $pp \to p_f f_1(1285) p_s$
0.42 ±0.15	GURTU	79	HBC	4.2 $K^- p$
0.5 ±0.2	[20] CORDEN	78	OMEG	12–15 $\pi^- p$
0.20 ±0.08	[21] DEFOIX	72	HBC	0.7 $\overline{p}p \to 7\pi$
0.16 ±0.08	CAMPBELL	69	DBC	2.7 $\pi^+ d$

[20] CORDEN 78 assumes low-mass $\eta\pi\pi$ region is dominantly 1^{++}. See BARBERIS 98C and MANAK 00A for discussion.
[21] $K\overline{K}$ system characterized by the $I=1$ threshold enhancement. (See under $a_0(980)$).

$\Gamma(a_0(980)\pi$ [ignoring $a_0(980) \to K\overline{K}$]$)/\Gamma(\eta\pi\pi)$ — $\Gamma_8/\Gamma_7 = \Gamma_8/(\Gamma_8+\Gamma_9)$

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
0.69±0.13 OUR FIT						
$0.69^{+0.13}_{-0.12}$ OUR AVERAGE						
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	318	ACHARD	02B	L3	183–209 $e^+e^- \to e^+e^-\eta\pi^+\pi^-$
0.28±0.07		1400	ALDE	97B	GAM4	100 $\pi^- p \to \eta\pi^0\pi^0 n$
1.0 ±0.3			GRASSLER	77	HBC	16 $\pi^\mp p$

$\Gamma(4\pi)/\Gamma(\eta\pi\pi)$ — $\Gamma_1/\Gamma_7 = \Gamma_1/(\Gamma_8+\Gamma_9)$

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	$J/\psi \to \gamma f_1(1285)$
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	[22] GRASSLER	77	HBC	16 $\pi^\mp p$

[22] Assuming $\rho\pi\pi$ and $a_0(980)\pi$ intermediate states.

$\Gamma(K\overline{K}^*(892))/\Gamma_{total}$ — Γ_{11}/Γ

VALUE	DOCUMENT ID		TECN	COMMENT
not seen	NACASCH	78	HBC	0.7,0.76 $\overline{p}p \to K\overline{K}3\pi$

$\Gamma(\rho^0\pi^+\pi^-)/\Gamma(2\pi^+2\pi^-)$ — 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 $\pi^\pm p$

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

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

$\Gamma(\phi\gamma)/\Gamma(K\overline{K}\pi)$ — Γ_{13}/Γ_{10}

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

$\Gamma(\gamma\rho^0)/\Gamma(K\overline{K}\pi)$ — Γ_{12}/Γ_{10}

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
>0.035	90	[23] COFFMAN	90	MRK3	$J/\psi \to \gamma\gamma\pi^+\pi^-$

[23] Using B($J/\psi \to \gamma f_1(1285) \to \gamma\gamma\rho^0$)=0.25 × 10^{-4} and B($J/\psi \to \gamma f_1(1285) \to \gamma K\overline{K}\pi$)=< 0.72 × 10^{-3}.

$\Gamma(\gamma\rho^0)/\Gamma(2\pi^+2\pi^-)$ — $\Gamma_{12}/\Gamma_3 = \Gamma_{12}/\frac{1}{3}\Gamma_1$

VALUE	DOCUMENT ID		TECN	COMMENT
0.50±0.13 OUR FIT Error includes scale factor of 2.5.				
0.45±0.18	[24] COFFMAN	90	MRK3	$J/\psi \to \gamma\gamma\pi^+\pi^-$

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

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

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
0.055±0.013 OUR FIT Error includes scale factor of 2.8.					
0.028±0.007±0.006		AMELIN	95	VES	37 $\pi^- N \to \pi^-\pi^+\pi^-\gamma N$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.05	95	BITYUKOV	91B	SPEC	32 $\pi^- p \to \pi^+\pi^-\gamma n$

$\Gamma(\eta\pi\pi)/\Gamma(\gamma\rho^0)$ — $\Gamma_7/\Gamma_{12} = (\Gamma_8+\Gamma_9)/\Gamma_{12}$

VALUE	DOCUMENT ID		TECN	COMMENT
9.5±2.0 OUR FIT Error includes scale factor of 2.5.				
7.9±0.9 OUR AVERAGE				
10.0±1.0±2.0	BARBERIS	98C	OMEG	450 $pp \to p_f f_1(1285) p_s$
7.5±1.0	[25] ARMSTRONG	92C	OMEG	300 $pp \to pp\pi^+\pi^-\gamma$, $pp\eta\pi^+\pi^-$

[25] Published value multiplied by 1.5.

$f_1(1285)$ REFERENCES

ACHARD	02B	PL B526 269	P. Achard *et al.*	(L3 Collab.)
ACCIARRI	01G	PL B501 1	M. Acciarri *et al.*	(L3 Collab.)
BARBERIS	00C	PL B471 440	D. Barberis *et al.*	(WA 102 Collab.)
MANAK	00A	PR D62 012003	J.J. Manak *et al.*	
SOSA	99	PRL 83 913	M. Sosa *et al.*	
BARBERIS	98C	PL B440 225	D. Barberis *et al.*	(WA 102 Collab.)
ALDE	97B	PAN 60 386	D. Alde *et al.*	(GAMS Collab.)
		Translated from YAF 60 458.		
BARBERIS	97B	PL B413 217	D. Barberis *et al.*	(WA 102 Collab.)
BARBERIS	97C	PL B413 225	D. Barberis *et al.*	(WA 102 Collab.)
AMELIN	95	ZPHY C66 71	D.V. Amelin *et al.*	(VES Collab.)
ANTINORI	95	PL B353 589	F. Antinori *et al.*	(ATHU, BARI, BIRM+)
ABATZIS	94	PL B324 509	S. Abatzis *et al.*	(ATHU, BARI, BIRM+)
LEE	94	PL B323 227	J.H. Lee *et al.*	(BNL, IND, KYUN, MASD+)
ARMSTRONG	93C	PL B307 394	T.A. Armstrong *et al.*	(FNAL, FERR, GENO+)
ARMSTRONG	92C	ZPHY C54 371	T.A. Armstrong *et al.*	(ATHU, BARI, BIRM+)
BOLTON	92	PL B278 495	T. Bolton *et al.*	(Mark III Collab.)
BITYUKOV	91B	SJNP 54 318	S.I. Bityukov *et al.*	(SERP)
		Translated from YAF 54 529.		
FUKUI	91C	PL B267 293	S. Fukui *et al.*	(SUGI, NAGO, KEK, KYOT+)
AUGUSTIN	90	PR D42 10	J.E. Augustin *et al.*	(DM2 Collab.)
COFFMAN	90	PR D41 1410	D.M. Coffman *et al.*	(Mark III Collab.)
ARMSTRONG	89	PL B221 216	T.A. Armstrong *et al.*	(CERN, CDEF, BIRM+) JPC
ARMSTRONG	89E	PL B228 536	T.A. Armstrong, M. Benayoun	(ATHU, BARI, BIRM+)
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RATH	89	PR D40 693	M.G. Rath *et al.*	(NDAM, BRAN, BNL, CUNY+)
AIHARA	88B	PL B209 107	H. Aihara *et al.*	(TPC-2γ Collab.)
BIRMAN	88	PRL 61 1557	A. Birman *et al.*	(BNL, FSU, IND, MASD) JP
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MIR	88	Photon-Photon 88, 126	R. Mir	(Mark III Collab.)
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ALDE	87	PL B198 286	D.M. Alde *et al.*	(LANL, BRUX, SERP, LAPP)
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CHUNG	85	PRL 55 779	S.U. Chung *et al.*	(BNL, FLOR, IND+) JP
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BROMBERG	80	PR D22 1513	C.M. Bromberg *et al.*	(CIT, FNAL, ILLC+)	
DIONISI	80	NP B169 1	C. Dionisi *et al.*	(CERN, MADR, CDEF+)	
GURTU	79	NP B151 181	A. Gurtu *et al.*	(CERN, ZEEM, NIJM, OXF)	
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CORDEN	78	NP B144 253	M.J. Corden *et al.*	(BIRM, RHEL, TELA+)	JP
NACASCH	78	NP B135 203	R. Nacasch *et al.*	(PARIS, MADR, CERN)	
GRASSLER	77	NP B121 189	H. Grassler *et al.*	(AACH3, BERL, BONN+)	
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