Citation: C. Amsler et al. (Particle Data Group), PL **B667**, 1 (2008) and 2009 partial update for the 2010 edition (URL: http://pdg.lbl.gov)

$f_0(1370)$

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

See also the mini-reviews on scalar mesons under $f_0(600)$ (see the index for the page number) and on non-$q\overline{q}$ candidates in PDG 06, Journal of Physics, G **33** 1 (2006).

$f_0(1370)$ T-MATRIX POLE POSITION

Note that $\Gamma \approx 2\ \mathrm{Im}(\sqrt{s_{\mathrm{pole}}})$.

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
(1200–1500)−i(150–250) OUR ESTIMATE				
• • • We do not use the following data for averages, fits, limits, etc. • • •				
$(1373 \pm 15)-i(137 \pm 10)$	[1] BARGIOTTI	03	OBLX	$\overline{p}p$
$(1302 \pm 17)-i(166 \pm 18)$	[2] BARBERIS	00C		$450\ pp \to p_f 4\pi p_s$
$(1312 \pm 25 \pm 10)-i(109 \pm 22 \pm 15)$	BARBERIS	99D	OMEG	$450\ pp \to K^+K^-, \pi^+\pi^-$
$(1406 \pm 19)-i(80 \pm 6)$	[3] KAMINSKI	99	RVUE	$\pi\pi \to \pi\pi, K\overline{K}, \sigma\sigma$
$(1300 \pm 20)-i(120 \pm 20)$	ANISOVICH	98B	RVUE	Compilation
$(1290 \pm 15)-i(145 \pm 15)$	BARBERIS	97B	OMEG	$450\ pp \to pp2(\pi^+\pi^-)$
$(1548 \pm 40)-i(560 \pm 40)$	BERTIN	97C	OBLX	$0.0\ \overline{p}p \to \pi^+\pi^-\pi^0$
$(1380 \pm 40)-i(180 \pm 25)$	ABELE	96B	CBAR	$0.0\ \overline{p}p \to \pi^0 K^0_L K^0_L$
$(1300 \pm 15)-i(115 \pm 8)$	BUGG	96	RVUE	
$(1330 \pm 50)-i(150 \pm 40)$	[4] AMSLER	95B	CBAR	$\overline{p}p \to 3\pi^0$
$(1360 \pm 35)-i(150–300)$	[4] AMSLER	95C	CBAR	$\overline{p}p \to \pi^0\eta\eta$
$(1390 \pm 30)-i(190 \pm 40)$	[5] AMSLER	95D	CBAR	$\overline{p}p \to 3\pi^0, \pi^0\eta\eta, \pi^0\pi^0\eta$
$1346 - i249$	[6,7] JANSSEN	95	RVUE	$\pi\pi \to \pi\pi, K\overline{K}$
$1214 - i168$	[7,8] TORNQVIST	95	RVUE	$\pi\pi \to \pi\pi, K\overline{K}, K\pi, \eta\pi$
$1364 - i139$	AMSLER	94D	CBAR	$\overline{p}p \to \pi^0\pi^0\eta$
$(1365^{+20}_{-55})-i(134 \pm 35)$	ANISOVICH	94	CBAR	$\overline{p}p \to 3\pi^0, \pi^0\eta\eta$
$(1340 \pm 40)-i(127^{+30}_{-20})$	[9] BUGG	94	RVUE	$\overline{p}p \to 3\pi^0, \eta\eta\pi^0, \eta\pi^0\pi^0$
$(1430 \pm 5)-i(73 \pm 13)$	[10] KAMINSKI	94	RVUE	$\pi\pi \to \pi\pi, K\overline{K}$
$1515 - i214$	[7,11] ZOU	93	RVUE	$\pi\pi \to \pi\pi, K\overline{K}$
$1420 - i220$	[12] AU	87	RVUE	$\pi\pi \to \pi\pi, K\overline{K}$

[1] Coupled channel analysis of $\pi^+\pi^-\pi^0$, $K^+K^-\pi^0$, and $K^\pm K^0_S\pi^\mp$.
[2] Average between $\pi^+\pi^-2\pi^0$ and $2(\pi^+\pi^-)$.
[3] T-matrix pole on sheet $---$.
[4] Supersedes ANISOVICH 94.
[5] Coupled-channel analysis of $\overline{p}p \to 3\pi^0$, $\pi^0\eta\eta$, and $\pi^0\pi^0\eta$ on sheet IV. Demonstrates explicitly that $f_0(600)$ and $f_0(1370)$ are two different poles.
[6] Analysis of data from FALVARD 88.
[7] The pole is on Sheet III. Demonstrates explicitly that $f_0(600)$ and $f_0(1370)$ are two different poles.

[8] Uses data from BEIER 72B, OCHS 73, HYAMS 73, GRAYER 74, ROSSELET 77, CASON 83, ASTON 88, and ARMSTRONG 91B. Coupled channel analysis with flavor symmetry and all light two-pseudoscalars systems.
[9] Reanalysis of ANISOVICH 94 data.
[10] T-matrix pole on sheet III.
[11] Analysis of data from OCHS 73, GRAYER 74, and ROSSELET 77.
[12] Analysis of data from OCHS 73,GRAYER 74, BECKER 79, and CASON 83.

f_0(1370) BREIT-WIGNER MASS OR K-MATRIX POLE PARAMETER

VALUE (MeV)	DOCUMENT ID
1200 to 1500 OUR ESTIMATE	

$\pi\pi$ MODE

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$1470^{+\ 6}_{-\ 7}{}^{+\ 72}_{-255}$		[13] UEHARA	08A	BELL	10.6 $e^+e^- \rightarrow e^+e^-\pi^0\pi^0$
1259 ± 55	2.6k	BONVICINI	07	CLEO	$D^+ \rightarrow \pi^-\pi^+\pi^+$
1449 ± 13	4286	[14] GARMASH	06	BELL	$B^+ \rightarrow K^+\pi^+\pi^-$
1350 ± 50		ABLIKIM	05	BES2	$J/\psi \rightarrow \phi\pi^+\pi^-$
$1265\pm30^{+\ 20}_{-\ 35}$		ABLIKIM	05Q	BES2	$\psi(2S) \rightarrow \gamma\pi^+\pi^-K^+K^-$
$1434\pm18\pm\ 9$	848	AITALA	01A	E791	$D_s^+ \rightarrow \pi^-\pi^+\pi^+$
1308 ± 10		BARBERIS	99B	OMEG	450 $pp \rightarrow p_s p_f \pi^+\pi^-$
1315 ± 50		BELLAZZINI	99	GAM4	450 $pp \rightarrow pp\pi^0\pi^0$
1315 ± 30		ALDE	98	GAM4	100 $\pi^-p \rightarrow \pi^0\pi^0 n$
1280 ± 55		BERTIN	98	OBLX	0.05–0.405 $\overline{n}p \rightarrow \pi^+\pi^+\pi^-$
1186		[15,16] TORNQVIST	95	RVUE	$\pi\pi \rightarrow \pi\pi$, $K\overline{K}$, $K\pi$, $\eta\pi$
1472 ± 12		ARMSTRONG	91	OMEG	300 $pp \rightarrow pp\pi\pi$, $ppK\overline{K}$
1275 ± 20		BREAKSTONE	90	SFM	62 $pp \rightarrow pp\pi^+\pi^-$
1420 ± 20		AKESSON	86	SPEC	63 $pp \rightarrow pp\pi^+\pi^-$
1256		FROGGATT	77	RVUE	$\pi^+\pi^-$ channel

[13] Breit-Wigner mass. May also be the f_0(1500).
[14] Also observed by GARMASH 07 in $B^0 \rightarrow K_S^0\pi^+\pi^-$ decays. Supersedes GARMASH 05.
[15] Uses data from BEIER 72B, OCHS 73, HYAMS 73, GRAYER 74, ROSSELET 77, CASON 83, ASTON 88, and ARMSTRONG 91B. Coupled channel analysis with flavor symmetry and all light two-pseudoscalars systems.
[16] Also observed by ASNER 00 in $\tau^- \rightarrow \pi^-\pi^0\pi^0\nu_\tau$ decays

$K\overline{K}$ MODE

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
$1440\pm\ 6$	VLADIMIRSK...	06	SPEC	40 $\pi^-p \rightarrow K_S^0K_S^0n$
1391 ± 10	TIKHOMIROV	03	SPEC	40.0 π^-C $\rightarrow K_S^0K_S^0K_L^0$X
1440 ± 50	BOLONKIN	88	SPEC	40 $\pi^-p \rightarrow K_S^0K_S^0n$
$1463\pm\ 9$	ETKIN	82B	MPS	23 $\pi^-p \rightarrow n2K_S^0$
1425 ± 15	WICKLUND	80	SPEC	6 $\pi N \rightarrow K^+K^-N$
~ 1300	POLYCHRO...	79	STRC	7 $\pi^-p \rightarrow n2K_S^0$

4π MODE 2$(\pi\pi)_S$+$\rho\rho$

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
1395±40		ABELE	01	CBAR	0.0 $\overline{p}d \rightarrow \pi^- 4\pi^0 p$
1374±38		AMSLER	94	CBAR	0.0 $\overline{p}p \rightarrow \pi^+\pi^- 3\pi^0$
1345±12		ADAMO	93	OBLX	$\overline{n}p \rightarrow 3\pi^+ 2\pi^-$
1386±30		GASPERO	93	DBC	0.0 $\overline{p}n \rightarrow 2\pi^+ 3\pi^-$
∼ 1410	5751	[17] BETTINI	66	DBC	0.0 $\overline{p}n \rightarrow 2\pi^+ 3\pi^-$

[17] $\rho\rho$ dominant.

$\eta\eta$ MODE

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
1430	AMSLER	92	CBAR	0.0 $\overline{p}p \rightarrow \pi^0\eta\eta$
1220±40	ALDE	86D	GAM4	100 $\pi^- p \rightarrow n 2\eta$

COUPLED CHANNEL MODE

VALUE (MeV)	DOCUMENT ID		TECN
• • • We do not use the following data for averages, fits, limits, etc. • • •			
1306±20	[18] ANISOVICH	03	RVUE

[18] K-matrix pole from combined analysis of $\pi^- p \rightarrow \pi^0\pi^0 n$, $\pi^- p \rightarrow K\overline{K}n$, $\pi^+\pi^- \rightarrow \pi^+\pi^-$, $\overline{p}p \rightarrow \pi^0\pi^0\pi^0$, $\pi^0\eta\eta$, $\pi^0\pi^0\eta$, $\pi^+\pi^-\pi^0$, $K^+K^-\pi^0$, $K^0_S K^0_S \pi^0$, $K^+ K^0_S \pi^-$ at rest, $\overline{p}n \rightarrow \pi^-\pi^-\pi^+$, $K^0_S K^-\pi^0$, $K^0_S K^0_S \pi^-$ at rest.

$f_0(1370)$ BREIT-WIGNER WIDTH

VALUE (MeV)	DOCUMENT ID
200 to 500 OUR ESTIMATE	

$\pi\pi$ MODE

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$90^{+\ 2+\ 50}_{-\ 1-\ 22}$		[19] UEHARA	08A	BELL	10.6 $e^+e^- \rightarrow e^+e^-\pi^0\pi^0$
298± 21	2.6k	BONVICINI	07	CLEO	$D^+ \rightarrow \pi^-\pi^+\pi^+$
126± 25	4286	[20] GARMASH	06	BELL	$B^+ \rightarrow K^+\pi^+\pi^-$
265± 40		ABLIKIM	05	BES2	$J/\psi \rightarrow \phi\pi^+\pi^-$
$350\pm100^{+105}_{-\ 60}$		ABLIKIM	05Q	BES2	$\psi(2S) \rightarrow \gamma\pi^+\pi^- K^+K^-$
173± 32± 6	848	AITALA	01A	E791	$D^+_s \rightarrow \pi^-\pi^+\pi^+$
222± 20		BARBERIS	99B	OMEG	450 $pp \rightarrow p_s p_f \pi^+\pi^-$
255± 60		BELLAZZINI	99	GAM4	450 $pp \rightarrow pp\pi^0\pi^0$
190± 50		ALDE	98	GAM4	100 $\pi^- p \rightarrow \pi^0\pi^0 n$
323± 13		BERTIN	98	OBLX	0.05–0.405 $\overline{n}p \rightarrow \pi^+\pi^+\pi^-$
350		[21,22] TORNQVIST	95	RVUE	$\pi\pi \rightarrow \pi\pi$, $K\overline{K}$, $K\pi$, $\eta\pi$
195± 33		ARMSTRONG	91	OMEG	300 $pp \rightarrow pp\pi\pi$, $ppK\overline{K}$
285± 60		BREAKSTONE	90	SFM	62 $pp \rightarrow pp\pi^+\pi^-$
460± 50		AKESSON	86	SPEC	63 $pp \rightarrow pp\pi^+\pi^-$
∼ 400		[23] FROGGATT	77	RVUE	$\pi^+\pi^-$ channel

[19] Breit-Wigner width. May also be the $f_0(1500)$.
[20] Also observed by GARMASH 07 in $B^0 \to K_S^0 \pi^+ \pi^-$ decays. Supersedes GARMASH 05.
[21] Uses data from BEIER 72B, OCHS 73, HYAMS 73, GRAYER 74, ROSSELET 77, CASON 83, ASTON 88, and ARMSTRONG 91B. Coupled channel analysis with flavor symmetry and all light two-pseudoscalars systems.
[22] Also observed by ASNER 00 in $\tau^- \to \pi^- \pi^0 \pi^0 \nu_\tau$ decays
[23] Width defined as distance between 45 and 135° phase shift.

$K\overline{K}$ MODE

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
121 ± 15	VLADIMIRSK...	06	SPEC	$40\ \pi^- p \to K_S^0 K_S^0 n$
55 ± 26	TIKHOMIROV	03	SPEC	$40.0\ \pi^- \text{C} \to K_S^0 K_S^0 K_L^0 X$
250 ± 80	BOLONKIN	88	SPEC	$40\ \pi^- p \to K_S^0 K_S^0 n$
118^{+138}_{-16}	ETKIN	82B	MPS	$23\ \pi^- p \to n 2K_S^0$
160 ± 30	WICKLUND	80	SPEC	$6\ \pi N \to K^+ K^- N$
~ 150	POLYCHRO...	79	STRC	$7\ \pi^- p \to n 2K_S^0$

4π MODE $2(\pi\pi)_S+\rho\rho$

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
275 ± 55		ABELE	01	CBAR	$0.0\ \overline{p} d \to \pi^- 4\pi^0 p$
375 ± 61		AMSLER	94	CBAR	$0.0\ \overline{p} p \to \pi^+ \pi^- 3\pi^0$
398 ± 26		ADAMO	93	OBLX	$\overline{n} p \to 3\pi^+ 2\pi^-$
310 ± 50		GASPERO	93	DBC	$0.0\ \overline{p} n \to 2\pi^+ 3\pi^-$
~ 90	5751	[24] BETTINI	66	DBC	$0.0\ \overline{p} n \to 2\pi^+ 3\pi^-$

[24] $\rho\rho$ dominant.

$\eta\eta$ MODE

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
250	AMSLER	92	CBAR	$0.0\ \overline{p} p \to \pi^0 \eta\eta$
320 ± 40	ALDE	86D	GAM4	$100\ \pi^- p \to n 2\eta$

COUPLED CHANNEL MODE

VALUE (MeV)	DOCUMENT ID		TECN
• • • We do not use the following data for averages, fits, limits, etc. • • •			
147^{+30}_{-50}	[25] ANISOVICH	03	RVUE

[25] K-matrix pole from combined analysis of $\pi^- p \to \pi^0 \pi^0 n$, $\pi^- p \to K\overline{K} n$, $\pi^+ \pi^- \to \pi^+ \pi^-$, $\overline{p} p \to \pi^0 \pi^0 \pi^0$, $\pi^0 \eta\eta$, $\pi^0 \pi^0 \eta$, $\pi^+ \pi^- \pi^0$, $K^+ K^- \pi^0$, $K_S^0 K_S^0 \pi^0$, $K^+ K_S^0 \pi^-$ at rest, $\overline{p} n \to \pi^- \pi^- \pi^+$, $K_S^0 K^- \pi^0$, $K_S^0 K_S^0 \pi^-$ at rest.

$f_0(1370)$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	$\pi\pi$	seen
Γ_2	4π	seen
Γ_3	$4\pi^0$	seen
Γ_4	$2\pi^+2\pi^-$	seen
Γ_5	$\pi^+\pi^-2\pi^0$	seen
Γ_6	$\rho\rho$	dominant
Γ_7	$2(\pi\pi)_{S\text{-wave}}$	seen
Γ_8	$\pi(1300)\pi$	seen
Γ_9	$a_1(1260)\pi$	seen
Γ_{10}	$\eta\eta$	seen
Γ_{11}	$K\overline{K}$	seen
Γ_{12}	$K\overline{K}n\pi$	not seen
Γ_{13}	6π	not seen
Γ_{14}	$\omega\omega$	not seen
Γ_{15}	$\gamma\gamma$	seen
Γ_{16}	e^+e^-	not seen

$f_0(1370)$ PARTIAL WIDTHS

$\Gamma(\gamma\gamma)$ — Γ_{15}

See $\gamma\gamma$ widths under $f_0(600)$ and MORGAN 90.

$\Gamma(e^+e^-)$ — Γ_{16}

VALUE (eV)	CL%	DOCUMENT ID		TECN	COMMENT
<20	90	VOROBYEV	88	ND	$e^+e^- \to \pi^0\pi^0$

$f_0(1370)$ BRANCHING RATIOS

$\Gamma(\pi\pi)/\Gamma_{total}$ — Γ_1/Γ

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.26 ± 0.09	BUGG	96	RVUE	
<0.15	[26] AMSLER	94	CBAR	$\overline{p}p \to \pi^+\pi^-3\pi^0$
<0.06	GASPERO	93	DBC	0.0 $\overline{p}n \to$ hadrons

[26] Using AMSLER 95B ($3\pi^0$).

$\Gamma(4\pi)/\Gamma_{total}$ — $\Gamma_2/\Gamma = (\Gamma_3+\Gamma_4+\Gamma_5)/\Gamma$

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
>0.72	GASPERO	93	DBC	0.0 $\overline{p}n \to$ hadrons

$\Gamma(4\pi^0)/\Gamma(4\pi)$ — Γ_3/Γ_2

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
seen	ABELE	96	CBAR	0.0 $\overline{p}p \rightarrow 5\pi^0$
0.068±0.005	[27] GASPERO	93	DBC	0.0 $\overline{p}n \rightarrow$ hadrons

[27] Model-dependent evaluation.

$\Gamma(2\pi^+2\pi^-)/\Gamma(4\pi)$ — $\Gamma_4/\Gamma_2 = \Gamma_4/(\Gamma_3+\Gamma_4+\Gamma_5)$

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.420±0.014	[28] GASPERO	93	DBC	0.0 $\overline{p}n \rightarrow 2\pi^+3\pi^-$

[28] Model-dependent evaluation.

$\Gamma(\pi^+\pi^-2\pi^0)/\Gamma(4\pi)$ — $\Gamma_5/\Gamma_2 = \Gamma_5/(\Gamma_3+\Gamma_4+\Gamma_5)$

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.512±0.019	[29] GASPERO	93	DBC	0.0 $\overline{p}n \rightarrow$ hadrons

[29] Model-dependent evaluation.

$\Gamma(\rho\rho)/\Gamma(4\pi)$ — Γ_6/Γ_2

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.26±0.07	ABELE	01B	CBAR	0.0 $\overline{p}d \rightarrow 5\pi p$

$\Gamma(2(\pi\pi)_{S\text{-wave}})/\Gamma(\pi\pi)$ — Γ_7/Γ_1

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
5.6±2.6	[30] ABELE	01	CBAR	0.0 $\overline{p}d \rightarrow \pi^-4\pi^0 p$

[30] From the combined data of ABELE 96 and ABELE 96C.

$\Gamma(2(\pi\pi)_{S\text{-wave}})/\Gamma(4\pi)$ — Γ_7/Γ_2

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.51±0.09	ABELE	01B	CBAR	0.0 $\overline{p}d \rightarrow 5\pi p$

$\Gamma(\rho\rho)/\Gamma(2(\pi\pi)_{S\text{-wave}})$ — Γ_6/Γ_7

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
large	BARBERIS	00C		450 $pp \rightarrow p_f 4\pi p_s$
1.6 ±0.2	AMSLER	94	CBAR	$\overline{p}p \rightarrow \pi^+\pi^-3\pi^0$
~ 0.65	GASPERO	93	DBC	0.0 $\overline{p}n \rightarrow$ hadrons

$\Gamma(\pi(1300)\pi)/\Gamma(4\pi)$ — Γ_8/Γ_2

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.17±0.06	ABELE	01B	CBAR	0.0 $\overline{p}d \rightarrow 5\pi p$

$\Gamma(a_1(1260)\pi)/\Gamma(4\pi)$ — Γ_9/Γ_2

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.06 ± 0.02	ABELE	01B	CBAR	$0.0\ \overline{p}d \to 5\pi p$

$\Gamma(\eta\eta)/\Gamma(4\pi)$ — $\Gamma_{10}/\Gamma_2 = \Gamma_{10}/(\Gamma_3+\Gamma_4+\Gamma_5)$

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
$(28 \pm 11) \times 10^{-3}$	[31] ANISOVICH	02D	SPEC	Combined fit
$(4.7 \pm 2.0) \times 10^{-3}$	BARBERIS	00E		$450\ pp \to p_f \eta\eta p_s$

[31] From a combined K-matrix analysis of Crystal Barrel (0. $p\overline{p} \to \pi^0\pi^0\pi^0$, $\pi^0\eta\eta$, $\pi^0\pi^0\eta$), GAMS ($\pi p \to \pi^0\pi^0 n$, $\eta\eta n$, $\eta\eta' n$), and BNL ($\pi p \to K\overline{K} n$) data.

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

VALUE	DOCUMENT ID		TECN
• • • We do not use the following data for averages, fits, limits, etc. • • •			
0.35 ± 0.13	BUGG	96	RVUE

$\Gamma(K\overline{K})/\Gamma(\pi\pi)$ — Γ_{11}/Γ_1

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.08 ± 0.08	ABLIKIM	05	BES2	$J/\psi \to \phi\pi^+\pi^-$, ϕK^+K^-
0.91 ± 0.20	[32] BARGIOTTI	03	OBLX	$\overline{p}p$
0.12 ± 0.06	[33] ANISOVICH	02D	SPEC	Combined fit
$0.46 \pm 0.15 \pm 0.11$	BARBERIS	99D	OMEG	$450\ pp \to K^+K^-$, $\pi^+\pi^-$

[32] Coupled channel analysis of $\pi^+\pi^-\pi^0$, $K^+K^-\pi^0$, and $K^\pm K^0_S \pi^\mp$.

[33] From a combined K-matrix analysis of Crystal Barrel (0. $p\overline{p} \to \pi^0\pi^0\pi^0$, $\pi^0\eta\eta$, $\pi^0\pi^0\eta$), GAMS ($\pi p \to \pi^0\pi^0 n$, $\eta\eta n$, $\eta\eta' n$), and BNL ($\pi p \to K\overline{K} n$) data.

$\Gamma(K\overline{K}n\pi)/\Gamma_{total}$ — Γ_{12}/Γ

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
<0.03	GASPERO	93	DBC	$0.0\ \overline{p}n \to$ hadrons

$\Gamma(6\pi)/\Gamma_{total}$ — Γ_{13}/Γ

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
<0.22	GASPERO	93	DBC	$0.0\ \overline{p}n \to$ hadrons

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

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
<0.13	GASPERO	93	DBC	$0.0\ \overline{p}n \to$ hadrons

$f_0(1370)$ REFERENCES

UEHARA	08A	PR D78 052004	S. Uehara *et al.*	(BELLE Collab.)	
BONVICINI	07	PR D76 012001	G. Bonvicini *et al.*	(CLEO Collab.)	
GARMASH	07	PR D75 012006	A. Garmash *et al.*	(BELLE Collab.)	
GARMASH	06	PRL 96 251803	A. Garmash *et al.*	(BELLE Collab.)	
PDG	06	JPG 33 1	W.-M. Yao *et al.*	(PDG Collab.)	
VLADIMIRSK...	06	PAN 69 493	V.V. Vladimirsky *et al.*	(ITEP, Moscow)	
		Translated from YAF 69 515.			
ABLIKIM	05	PL B607 243	M. Ablikim *et al.*	(BES Collab.)	
ABLIKIM	05Q	PR D72 092002	M. Ablikim *et al.*	(BES Collab.)	
GARMASH	05	PR D71 092003	A. Garmash *et al.*	(BELLE Collab.)	
ANISOVICH	03	EPJ A16 229	V.V. Anisovich *et al.*		
BARGIOTTI	03	EPJ C26 371	M. Bargiotti *et al.*	(OBELIX Collab.)	
TIKHOMIROV	03	PAN 66 828	G.D. Tikhomirov *et al.*		
		Translated from YAF 66 860.			
ANISOVICH	02D	PAN 65 1545	V.V. Anisovich *et al.*		
		Translated from YAF 65 1583.			
ABELE	01	EPJ C19 667	A. Abele *et al.*	(Crystal Barrel Collab.)	
ABELE	01B	EPJ C21 261	A. Abele *et al.*	(Crystal Barrel Collab.)	
AITALA	01A	PRL 86 765	E.M. Aitala *et al.*	(FNAL E791 Collab.)	
ASNER	00	PR D61 012002	D.M. Asner *et al.*	(CLEO Collab.)	
BARBERIS	00C	PL B471 440	D. Barberis *et al.*	(WA 102 Collab.)	
BARBERIS	00E	PL B479 59	D. Barberis *et al.*	(WA 102 Collab.)	
BARBERIS	99B	PL B453 316	D. Barberis *et al.*	(Omega Expt.)	
BARBERIS	99D	PL B462 462	D. Barberis *et al.*	(Omega Expt.)	
BELLAZZINI	99	PL B467 296	R. Bellazzini *et al.*		
KAMINSKI	99	EPJ C9 141	R. Kaminski, L. Lesniak, B. Loiseau	(CRAC, PARIN)	
ALDE	98	EPJ A3 361	D. Alde *et al.*	(GAM4 Collab.)	
Also		PAN 62 405	D. Alde *et al.*	(GAMS Collab.)	
		Translated from YAF 62 446.			
ANISOVICH	98B	SPU 41 419	V.V. Anisovich *et al.*		
		Translated from UFN 168 481.			
BERTIN	98	PR D57 55	A. Bertin *et al.*	(OBELIX Collab.)	
BARBERIS	97B	PL B413 217	D. Barberis *et al.*	(WA 102 Collab.)	
BERTIN	97C	PL B408 476	A. Bertin *et al.*	(OBELIX Collab.)	
ABELE	96	PL B380 453	A. Abele *et al.*	(Crystal Barrel Collab.)	
ABELE	96B	PL B385 425	A. Abele *et al.*	(Crystal Barrel Collab.)	
ABELE	96C	NP A609 562	A. Abele *et al.*	(Crystal Barrel Collab.)	
BUGG	96	NP B471 59	D.V. Bugg, A.V. Sarantsev, B.S. Zou	(LOQM, PNPI)	
AMSLER	95B	PL B342 433	C. Amsler *et al.*	(Crystal Barrel Collab.)	
AMSLER	95C	PL B353 571	C. Amsler *et al.*	(Crystal Barrel Collab.)	
AMSLER	95D	PL B355 425	C. Amsler *et al.*	(Crystal Barrel Collab.)	
JANSSEN	95	PR D52 2690	G. Janssen *et al.*	(STON, ADLD, JULI)	
TORNQVIST	95	ZPHY C68 647	N.A. Tornqvist	(HELS)	
AMSLER	94	PL B322 431	C. Amsler *et al.*	(Crystal Barrel Collab.)	JPC
AMSLER	94D	PL B333 277	C. Amsler *et al.*	(Crystal Barrel Collab.)	
ANISOVICH	94	PL B323 233	V.V. Anisovich *et al.*	(Crystal Barrel Collab.)	JPC
BUGG	94	PR D50 4412	D.V. Bugg *et al.*	(LOQM)	
KAMINSKI	94	PR D50 3145	R. Kaminski, L. Lesniak, J.P. Maillet	(CRAC+)	
ADAMO	93	NP A558 13C	A. Adamo *et al.*	(OBELIX Collab.)	JPC
GASPERO	93	NP A562 407	M. Gaspero	(ROMAI)	JPC
ZOU	93	PR D48 R3948	B.S. Zou, D.V. Bugg	(LOQM)	
AMSLER	92	PL B291 347	C. Amsler *et al.*	(Crystal Barrel Collab.)	
ARMSTRONG	91	ZPHY C51 351	T.A. Armstrong *et al.*	(ATHU, BARI, BIRM+)	
ARMSTRONG	91B	ZPHY C52 389	T.A. Armstrong *et al.*	(ATHU, BARI, BIRM+)	
BREAKSTONE	90	ZPHY C48 569	A.M. Breakstone *et al.*	(ISU, BGNA, CERN+)	
MORGAN	90	ZPHY C48 623	D. Morgan, M.R. Pennington	(RAL, DURH)	
ASTON	88	NP B296 493	D. Aston *et al.*	(SLAC, NAGO, CINC, INUS)	
BOLONKIN	88	NP B309 426	B.V. Bolonkin *et al.*	(ITEP, SERP)	
FALVARD	88	PR D38 2706	A. Falvard *et al.*	(CLER, FRAS, LALO+)	
VOROBYEV	88	SJNP 48 273	P.V. Vorobiev *et al.*	(NOVO)	
		Translated from YAF 48 436.			
AU	87	PR D35 1633	K.L. Au, D. Morgan, M.R. Pennington	(DURH, RAL)	
AKESSON	86	NP B264 154	T. Akesson *et al.*	(Axial Field Spec. Collab.)	
ALDE	86D	NP B269 485	D.M. Alde *et al.*	(BELG, LAPP, SERP, CERN+)	
CASON	83	PR D28 1586	N.M. Cason *et al.*	(NDAM, ANL)	
ETKIN	82B	PR D25 1786	A. Etkin *et al.*	(BNL, CUNY, TUFTS, VAND)	
WICKLUND	80	PRL 45 1469	A.B. Wicklund *et al.*	(ANL)	
BECKER	79	NP B151 46	H. Becker *et al.*	(MPIM, CERN, ZEEM, CRAC)	
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