$f_0(1710)$

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

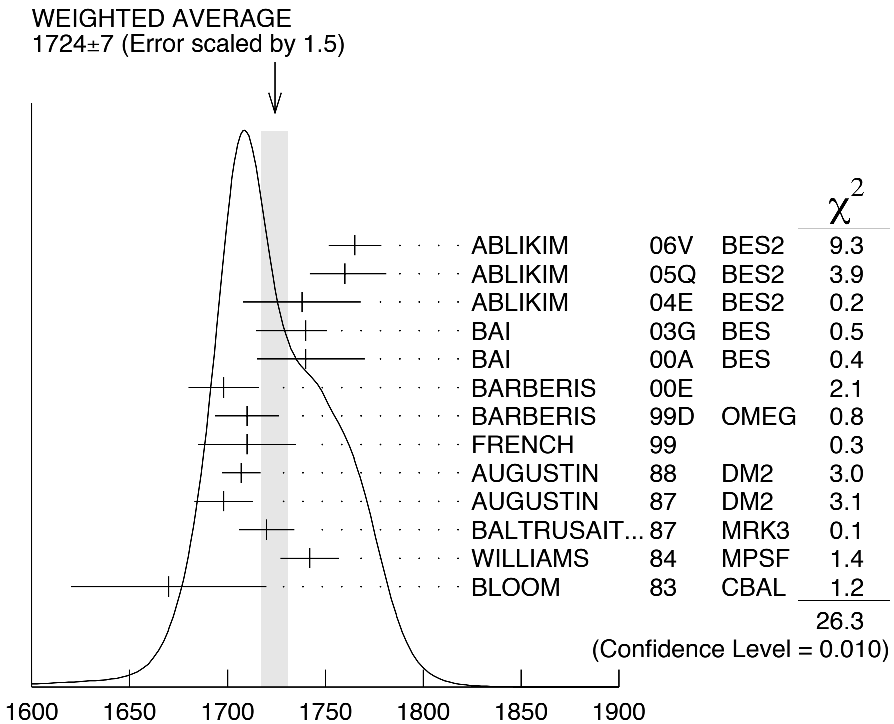
See our mini-review in the 2004 edition of this *Review*, PDG 04.

$f_0(1710)$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
1724± 7	**OUR AVERAGE**	Error includes scale factor of 1.5. See the ideogram below.			
$1765^{+4}_{-3}\pm13$		ABLIKIM	06V	BES2	$e^+e^- \to J/\psi \to \gamma\pi^+\pi^-$
$1760\pm15^{+15}_{-10}$		[1] ABLIKIM	05Q	BES2	$\psi(2S) \to \gamma\pi^+\pi^-K^+K^-$
1738 ± 30		ABLIKIM	04E	BES2	$J/\psi \to \omega K^+K^-$
$1740\pm4^{+10}_{-25}$		[2] BAI	03G	BES	$J/\psi \to \gamma K\overline{K}$
1740^{+30}_{-25}		[2] BAI	00A	BES	$J/\psi \to \gamma(\pi^+\pi^-\pi^+\pi^-)$
1698 ± 18		[3] BARBERIS	00E		$450\ pp \to p_f\eta\eta p_s$
$1710\pm12\pm11$		[4] BARBERIS	99D	OMEG	$450\ pp \to K^+K^-, \pi^+\pi^-$
1710 ± 25		[5] FRENCH	99		$300\ pp \to p_f(K^+K^-)p_s$
1707 ± 10		[6] AUGUSTIN	88	DM2	$J/\psi \to \gamma K^+K^-, K^0_SK^0_S$
1698 ± 15		[6] AUGUSTIN	87	DM2	$J/\psi \to \gamma\pi^+\pi^-$
$1720\pm10\pm10$		[7] BALTRUSAIT...	87	MRK3	$J/\psi \to \gamma K^+K^-$
1742 ± 15		[6] WILLIAMS	84	MPSF	$200\ \pi^-N \to 2K^0_SX$
1670 ± 50		BLOOM	83	CBAL	$J/\psi \to \gamma2\eta$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
1750 ± 13		AMSLER	06	CBAR	$1.64\ \overline{p}p \to K^+K^-\pi^0$
1747 ± 5	80k	[8,9] UMAN	06	E835	$5.2\ \overline{p}p \to \eta\eta\pi^0$
1776 ± 15		VLADIMIRSK...	06	SPEC	$40\ \pi^-p \to K^0_SK^0_Sn$
1790^{+40}_{-30}		[1] ABLIKIM	05	BES2	$J/\psi \to \phi\pi^+\pi^-$
1670 ± 20		[8] BINON	05	GAMS	$33\ \pi^-p \to \eta\eta n$
1726 ± 7	74	[9] CHEKANOV	04	ZEUS	$ep \to K^0_SK^0_SX$
$1732+15$		[10] ANISOVICH	03	RVUE	
1682 ± 16		TIKHOMIROV	03	SPEC	$40.0\ \pi^-C \to K^0_SK^0_SK^0_LX$
1670 ± 26	3651	[2,11] NICHITIU	02	OBLX	
1767 ± 14	221	[12] ACCIARRI	01H	L3	$\gamma\gamma \to K^0_SK^0_S$, E^{ee}_{cm}= 91, 183–209 GeV
1770 ± 12		[13,14] ANISOVICH	99B	SPEC	$0.6–1.2\ p\overline{p} \to \eta\eta\pi^0$
1730 ± 15		[2] BARBERIS	99	OMEG	$450\ pp \to p_sp_fK^+K^-$
1750 ± 20		[2] BARBERIS	99B	OMEG	$450\ pp \to p_sp_f\pi^+\pi^-$
1750 ± 30		[15] ANISOVICH	98B	RVUE	Compilation
1720 ± 39		BAI	98H	BES	$J/\psi \to \gamma\pi^0\pi^0$
1775 ± 1.5	57	[16] BARKOV	98		$\pi^-p \to K^0_SK^0_Sn$
1690 ± 11		[17] ABREU	96C	DLPH	$Z^0 \to K^+K^- + X$
$1696\pm5^{+9}_{-34}$		[7] BAI	96C	BES	$J/\psi \to \gamma K^+K^-$
$1781\pm8^{+10}_{-31}$		[2] BAI	96C	BES	$J/\psi \to \gamma K^+K^-$

1768±14		BALOSHIN	95	SPEC	40 $\pi^- C \to K^0_S K^0_S X$
1750±15	[18]	BUGG	95	MRK3	$J/\psi \to \gamma\pi^+\pi^-\pi^+\pi^-$
1620±16	[7]	BUGG	95	MRK3	$J/\psi \to \gamma\pi^+\pi^-\pi^+\pi^-$
1748±10	[6]	ARMSTRONG	93C	E760	$\overline{p}p \to \pi^0\eta\eta \to 6\gamma$
∼ 1750		BREAKSTONE	93	SFM	$pp \to pp\pi^+\pi^-\pi^+\pi^-$
1744±15	[19]	ALDE	92D	GAM2	38 $\pi^- p \to \eta\eta n$
1713±10	[20]	ARMSTRONG	89D	OMEG	300 $pp \to ppK^+K^-$
1706±10	[20]	ARMSTRONG	89D	OMEG	300 $pp \to ppK^0_S K^0_S$
1700±15	[7]	BOLONKIN	88	SPEC	40 $\pi^- p \to K^0_S K^0_S n$
1720±60	[2]	BOLONKIN	88	SPEC	40 $\pi^- p \to K^0_S K^0_S n$
1638±10	[21]	FALVARD	88	DM2	$J/\psi \to \phi K^+K^-, K^0_S K^0_S$
1690± 4	[22]	FALVARD	88	DM2	$J/\psi \to \phi K^+K^-, K^0_S K^0_S$
1755± 8	[23]	ALDE	86C	GAM2	38 $\pi^- p \to n2\eta$
1730^{+2}_{-10}	[24]	LONGACRE	86	RVUE	22 $\pi^- p \to n2K^0_S$
1650±50		BURKE	82	MRK2	$J/\psi \to \gamma 2\rho$
1640±50	[25,26]	EDWARDS	82D	CBAL	$J/\psi \to \gamma 2\eta$
1730±10 ±20	[27]	ETKIN	82C	MPS	23 $\pi^- p \to n2K^0_S$

[1] This state may be different from $f_0(1710)$, see CLOSE 05.
[2] $J^P = 0^+$.
[3] T-matrix pole.
[4] Supersedes BARBERIS 99 and BARBERIS 99B.
[5] $J^P = 0^+$, supersedes by ARMSTRONG 89D.
[6] No J^{PC} determination.
[7] $J^P = 2^+$.
[8] Breit-Wigner mass.
[9] Systematic errors not estimated.
[10] K-matrix pole, assuming $J^P = 0^+$, from combined analysis of $\pi^- p \to \pi^0\pi^0 n$, $\pi^- p \to K\overline{K}n$, $\pi^+\pi^- \to \pi^+\pi^-$, $\overline{p}p \to \pi^0\pi^0\pi^0$, $\pi^0\eta\eta$, $\pi^0\pi^0\eta$, $\pi^+\pi^-\pi^0$, $K^+K^-\pi^0$, $K^0_S K^0_S \pi^0$, $K^+K^0_S\pi^-$ at rest, $\overline{p}n \to \pi^-\pi^-\pi^+$, $K^0_S K^-\pi^0$, $K^0_S K^0_S \pi^-$ at rest.
[11] Decaying to $f_0(1370)\pi\pi$.
[12] Spin 2 dominant, isospin not determined, could also be I=1.
[13] $J^P = 0^+$.
[14] Not seen by AMSLER 02.
[15] T-matrix pole, assuming $J^P = 0^+$
[16] No J^{PC} determination.
[17] No J^{PC} determination, width not determined.
[18] From a fit to the 0^+ partial wave.
[19] ALDE 92D combines all the GAMS-2000 data.
[20] $J^P = 2^+$, superseded by FRENCH 99.
[21] From an analysis ignoring interference with $f'_2(1525)$.
[22] From an analysis including interference with $f'_2(1525)$.
[23] Superseded by ALDE 92D.
[24] Uses MRK3 data. From a partial-wave analysis of data using a K-matrix formalism with 5 poles, but assuming spin 2. Fit with constrained inelasticity.
[25] $J^P = 2^+$ preferred.
[26] From fit neglecting nearby $f'_2(1525)$. Replaced by BLOOM 83.
[27] Superseded by LONGACRE 86.



$f_0(1710)$ mass (MeV)

$f_0(1710)$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
137 ± 8 OUR AVERAGE		Error includes scale factor of 1.1.		
145 ± 8 ±69		ABLIKIM 06V	BES2	$e^+ e^- \to J/\psi \to \gamma \pi^+ \pi^-$
125 ± 25 $^{+10}_{-15}$		[28] ABLIKIM 05Q	BES2	$\psi(2S) \to \gamma \pi^+ \pi^- K^+ K^-$
125 ± 20		ABLIKIM 04E	BES2	$J/\psi \to \omega K^+ K^-$
166 $^{+5}_{-8}$ $^{+15}_{-10}$		[29] BAI 03G	BES	$J/\psi \to \gamma K \overline{K}$
120 $^{+50}_{-40}$		[29] BAI 00A	BES	$J/\psi \to \gamma(\pi^+ \pi^- \pi^+ \pi^-)$
120 ± 26		[30] BARBERIS 00E		450 $p p \to p_f \eta \eta p_s$
126 ± 16 ±18		[31] BARBERIS 99D	OMEG	450 $p p \to K^+ K^-, \pi^+ \pi^-$
105 ± 34		[32] FRENCH 99		300 $p p \to p_f (K^+ K^-) p_s$
166.4 ± 33.2		[33] AUGUSTIN 88	DM2	$J/\psi \to \gamma K^+ K^-, K^0_S K^0_S$
136 ± 28		[33] AUGUSTIN 87	DM2	$J/\psi \to \gamma \pi^+ \pi^-$
130 ± 20		[34] BALTRUSAIT...87	MRK3	$J/\psi \to \gamma K^+ K^-$
57 ± 38		[6] WILLIAMS 84	MPSF	200 $\pi^- N \to 2K^0_S X$
160 ± 80		BLOOM 83	CBAL	$J/\psi \to \gamma 2\eta$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
148 $^{+40}_{-30}$		AMSLER 06	CBAR	1.64 $\overline{p} p \to K^+ K^- \pi^0$
188 ± 13	80k	[28,35] UMAN 06	E835	5.2 $\overline{p} p \to \eta \eta \pi^0$

250 ± 30			VLADIMIRSK...	06	SPEC	$40\ \pi^- p \to K^0_S K^0_S n$
270 $^{+60}_{-30}$		[36]	ABLIKIM	05	BES2	$J/\psi \to \phi \pi^+ \pi^-$
260 ± 50		[28]	BINON	05	GAMS	$33\ \pi^- p \to \eta \eta n$
38 $^{+20}_{-14}$	74	[35]	CHEKANOV	04	ZEUS	$e p \to K^0_S K^0_S X$
144 ± 30		[37,38]	ANISOVICH	03	RVUE	
320 $^{+50}_{-20}$		[38,39]	ANISOVICH	03	RVUE	
102 ± 26			TIKHOMIROV	03	SPEC	$40.0\ \pi^- C \to K^0_S K^0_S K^0_L X$
267 ± 44	3651	[29,40]	NICHITIU	02	OBLX	
187 ± 60	221	[41]	ACCIARRI	01H	L3	$\gamma\gamma \to K^0_S K^0_S$, E^{ee}_{cm}= 91, 183–209 GeV
220 ± 40		[42,43]	ANISOVICH	99B	SPEC	0.6–1.2 $p \overline{p} \to \eta \eta \pi^0$
100 ± 25		[29]	BARBERIS	99	OMEG	$450\ p p \to p_s p_f K^+ K^-$
160 ± 30		[29]	BARBERIS	99B	OMEG	$450\ p p \to p_s p_f \pi^+ \pi^-$
250 ±140		[44]	ANISOVICH	98B	RVUE	Compilation
30 ± 7	57	[45]	BARKOV	98		$\pi^- p \to K^0_S K^0_S n$
103 ± 18 $^{+30}_{-11}$		[34]	BAI	96C	BES	$J/\psi \to \gamma K^+ K^-$
85 ± 24 $^{+22}_{-19}$		[29]	BAI	96C	BES	$J/\psi \to \gamma K^+ K^-$
56 ± 19			BALOSHIN	95	SPEC	$40\ \pi^- C \to K^0_S K^0_S X$
160 ± 40		[46]	BUGG	95	MRK3	$J/\psi \to \gamma \pi^+ \pi^- \pi^+ \pi^-$
160 $^{+60}_{-20}$		[34]	BUGG	95	MRK3	$J/\psi \to \gamma \pi^+ \pi^- \pi^+ \pi^-$
264 ± 25		[33]	ARMSTRONG	93C	E760	$\overline{p} p \to \pi^0 \eta \eta \to 6\gamma$
200 to 300			BREAKSTONE	93	SFM	$p p \to p p \pi^+ \pi^- \pi^+ \pi^-$
< 80 90% CL		[47]	ALDE	92D	GAM2	$38\ \pi^- p \to \eta \eta N^*$
181 ± 30		[48]	ARMSTRONG	89D	OMEG	$300\ p p \to p p K^+ K^-$
104 ± 30		[48]	ARMSTRONG	89D	OMEG	$300\ p p \to p p K^0_S K^0_S$
30 ± 20		[34]	BOLONKIN	88	SPEC	$40\ \pi^- p \to K^0_S K^0_S n$
350 ±150		[29]	BOLONKIN	88	SPEC	$40\ \pi^- p \to K^0_S K^0_S n$
148 ± 17		[49]	FALVARD	88	DM2	$J/\psi \to \phi K^+ K^-, K^0_S K^0_S$
184 ± 6		[50]	FALVARD	88	DM2	$J/\psi \to \phi K^+ K^-, K^0_S K^0_S$
122 $^{+74}_{-15}$		[51]	LONGACRE	86	RVUE	$22\ \pi^- p \to n 2K^0_S$
200 ±100			BURKE	82	MRK2	$J/\psi \to \gamma 2\rho$
220 $^{+100}_{-70}$		[52,53]	EDWARDS	82D	CBAL	$J/\psi \to \gamma 2\eta$
200 $^{+156}_{-9}$		[54]	ETKIN	82B	MPS	$23\ \pi^- p \to n 2K^0_S$

[28] Breit-Wigner width.
[29] $J^P = 0^+$.
[30] T-matrix pole.
[31] Supersedes BARBERIS 99 and BARBERIS 99B.
[32] $J^P = 0^+$, supersedes by ARMSTRONG 89D.
[33] No J^{PC} determination.
[34] $J^P = 2^+$.
[35] Systematic errors not estimated.
[36] This state may be different from $f_0(1710)$, see CLOSE 05.

[37] (Solution I)
[38] K-matrix pole, assuming $J^P = 0^+$, from combined analysis of $\pi^- p \to \pi^0 \pi^0 n$, $\pi^- p \to K \overline{K} n$, $\pi^+ \pi^- \to \pi^+ \pi^-$, $\overline{p} p \to \pi^0 \pi^0 \pi^0$, $\pi^0 \eta \eta$, $\pi^0 \pi^0 \eta$, $\pi^+ \pi^- \pi^0$, $K^+ K^- \pi^0$, $K^0_S K^0_S \pi^0$, $K^+ K^0_S \pi^-$ at rest, $\overline{p} n \to \pi^- \pi^- \pi^+$, $K^0_S K^- \pi^0$, $K^0_S K^0_S \pi^-$ at rest.
[39] (Solution I)
[40] Decaying to $f_0(1370)\pi\pi$.
[41] Spin 2 dominant, isospin not determined, could also be I=1.
[42] $J^P = 0^+$.
[43] Not seen by AMSLER 02.
[44] T-matrix pole, assuming $J^P = 0^+$
[45] No J^{PC} determination.
[46] From a fit to the 0^+ partial wave.
[47] ALDE 92D combines all the GAMS-2000 data.
[48] $J^P = 2^+$, (0^+ excluded).
[49] From an analysis ignoring interference with $f'_2(1525)$.
[50] From an analysis including interference with $f'_2(1525)$.
[51] Uses MRK3 data. From a partial-wave analysis of data using a K-matrix formalism with 5 poles, but assuming spin 2. Fit with constrained inelasticity.
[52] $J^P = 2^+$ preferred.
[53] From fit neglecting nearby $f'_2(1525)$. Replaced by BLOOM 83.
[54] From an amplitude analysis of the $K^0_S K^0_S$ system, superseded by LONGACRE 86.

$f_0(1710)$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	$K\overline{K}$	seen
Γ_2	$\eta\eta$	seen
Γ_3	$\pi\pi$	seen
Γ_4	$\gamma\gamma$	
Γ_5	$\omega\omega$	seen

$f_0(1710)$ $\Gamma(i)\Gamma(\gamma\gamma)/\Gamma(\text{total})$

$\Gamma(K\overline{K}) \times \Gamma(\gamma\gamma)/\Gamma_{\text{total}}$ — $\Gamma_1\Gamma_4/\Gamma$

VALUE (eV)	CL%	DOCUMENT ID		TECN	COMMENT
<110	95	[56] BEHREND	89C	CELL	$\gamma\gamma \to K^0_S K^0_S$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
49±11±13		[57] ACCIARRI	01H	L3	$\gamma\gamma \to K^0_S K^0_S$, E^{ee}_{cm}= 91, 183–209 GeV
<480	95	ALBRECHT	90G	ARG	$\gamma\gamma \to K^+ K^-$
<280	95	[56] ALTHOFF	85B	TASS	$\gamma\gamma \to K\overline{K}\pi$

$\Gamma(\pi\pi) \times \Gamma(\gamma\gamma)/\Gamma_{\text{total}}$ — $\Gamma_3\Gamma_4/\Gamma$

VALUE (keV)	CL%	DOCUMENT ID		TECN	COMMENT
<0.82	95	[55] BARATE	00E	ALEP	$\gamma\gamma \to \pi^+\pi^-$

[55] Assuming spin 0.
[56] Assuming helicity 2.
[57] Spin 2 dominant, isospin not determined, could also be I=1.

$f_0(1710)$ BRANCHING RATIOS

$\Gamma(K\overline{K})/\Gamma_{\rm total}$ — Γ_1/Γ

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
$0.38^{+0.09}_{-0.19}$	[58,59] LONGACRE	86	MPS	22 $\pi^- p \to n 2K^0_S$

$\Gamma(\eta\eta)/\Gamma_{\rm total}$ — Γ_2/Γ

VALUE	DOCUMENT ID		TECN
• • • We do not use the following data for averages, fits, limits, etc. • • •			
$0.18^{+0.03}_{-0.13}$	[58,59] LONGACRE	86	RVUE

$\Gamma(\pi\pi)/\Gamma_{\rm total}$ — Γ_3/Γ

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
not seen	AMSLER	02	CBAR	0.9 $\overline{p}p \to \pi^0\eta\eta, \pi^0\pi^0\pi^0$
$0.039^{+0.002}_{-0.024}$	[58,59] LONGACRE	86	RVUE	

$\Gamma(\pi\pi)/\Gamma(K\overline{K})$ — Γ_3/Γ_1

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
$\mathbf{0.41^{+0.11}_{-0.17}}$		ABLIKIM	06V	BES2	$e^+e^- \to J/\psi \to \gamma\pi^+\pi^-$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
< 0.11	95	[60] ABLIKIM	04E	BES2	$J/\psi \to \omega K^+K^-$
$5.8\ ^{+9.1}_{-5.5}$		[61] ANISOVICH	02D	SPEC	Combined fit
$0.2\ \pm0.024\pm0.036$		BARBERIS	99D	OMEG	450 $pp \to K^+K^-, \pi^+\pi^-$
0.39 ± 0.14		ARMSTRONG	91	OMEG	300 $pp \to pp\pi\pi, ppK\overline{K}$

$\Gamma(\eta\eta)/\Gamma(K\overline{K})$ — Γ_2/Γ_1

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
0.48±0.15		BARBERIS	00E		450 $pp \to p_f\eta\eta p_s$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$0.46^{+0.70}_{-0.38}$		[61] ANISOVICH	02D	SPEC	Combined fit
<0.02	90	[62] PROKOSHKIN	91	GA24	300 $\pi^- p \to \pi^- p\eta\eta$

$\Gamma(\omega\omega)/\Gamma_{\rm total}$ — Γ_5/Γ

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
seen	180	ABLIKIM	06H	BES	$J/\psi \to \gamma\omega\omega$

[58] From a partial-wave analysis of data using a K-matrix formalism with 5 poles, but assuming spin 2.
[59] Fit with constrained inelasticity.
[60] Using data from ABLIKIM 04A.
[61] 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.
[62] Combining results of GAM4 with those of ARMSTRONG 89D.

$f_0(1710)$ REFERENCES

ABLIKIM	06H	PR D73 112007	M. Ablikim *et al.*	(BES Collab.)
ABLIKIM	06V	PL B642 441	M. Ablikim *et al.*	(BES Collab.)
AMSLER	06	PL B639 165	C. Amsler *et al.*	(CBAR Collab.)
UMAN	06	PR D73 052009	I. Uman *et al.*	(FNAL E835)
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.)
BINON	05	PAN 68 960	F. Binon *et al.*	
		Translated from YAF 68 998.		
CLOSE	05	PR D71 094022	F.E. Close, Q. Zhao	
ABLIKIM	04A	PL B598 149	M. Ablikim *et al.*	(BES Collab.)
ABLIKIM	04E	PL B603 138	M. Ablikim *et al.*	(BES Collab.)
CHEKANOV	04	PL B578 33	S. Chekanov *et al.*	(ZEUS Collab.)
PDG	04	PL B592 1	S. Eidelman *et al.*	
ANISOVICH	03	EPJ A16 229	V.V. Anisovich *et al.*	
BAI	03G	PR D68 052003	J.Z. Bai *et al.*	(BES Collab.)
TIKHOMIROV	03	PAN 66 828	G.D. Tikhomirov *et al.*	
		Translated from YAF 66 860.		
AMSLER	02	EPJ C23 29	C. Amsler *et al.*	
ANISOVICH	02D	PAN 65 1545	V.V. Anisovich *et al.*	
		Translated from YAF 65 1583.		
NICHITIU	02	PL B545 261	F. Nichitiu *et al.*	(OBELIX Collab.)
ACCIARRI	01H	PL B501 173	M. Acciarri *et al.*	(L3 Collab.)
BAI	00A	PL B472 207	J.Z. Bai *et al.*	(BES Collab.)
BARATE	00E	PL B472 189	R. Barate *et al.*	(ALEPH Collab.)
BARBERIS	00E	PL B479 59	D. Barberis *et al.*	(WA 102 Collab.)
ANISOVICH	99B	PL B449 154	A.V. Anisovich *et al.*	
BARBERIS	99	PL B453 305	D. Barberis *et al.*	(Omega Expt.)
BARBERIS	99B	PL B453 316	D. Barberis *et al.*	(Omega Expt.)
BARBERIS	99D	PL B462 462	D. Barberis *et al.*	(Omega Expt.)
FRENCH	99	PL B460 213	B. French *et al.*	(WA76 Collab.)
ANISOVICH	98B	SPU 41 419	V.V. Anisovich *et al.*	
		Translated from UFN 168 481.		
BAI	98H	PRL 81 1179	J.Z. Bai *et al.*	(BES Collab.)
BARKOV	98	JETPL 68 764	B.P. Barkov *et al.*	
ABREU	96C	PL B379 309	P. Abreu *et al.*	(DELPHI Collab.)
BAI	96C	PRL 77 3959	J.Z. Bai *et al.*	(BES Collab.)
BALOSHIN	95	PAN 58 46	O.N. Baloshin *et al.*	(ITEP)
		Translated from YAF 58 50.		
BUGG	95	PL B353 378	D.V. Bugg *et al.*	(LOQM, PNPI, WASH)
ARMSTRONG	93C	PL B307 394	T.A. Armstrong *et al.*	(FNAL, FERR, GENO+)
BREAKSTONE	93	ZPHY C58 251	A.M. Breakstone *et al.*	(IOWA, CERN, DORT+)
ALDE	92D	PL B284 457	D.M. Alde *et al.*	(GAM2 Collab.)
Also		SJNP 54 451	D.M. Alde *et al.*	(GAM2 Collab.)
		Translated from YAF 54 745.		
ARMSTRONG	91	ZPHY C51 351	T.A. Armstrong *et al.*	(ATHU, BARI, BIRM+)
PROKOSHKIN	91	SPD 36 155	Y.D. Prokoshkin	(GAM2, GAM4 Collab.)
		Translated from DANS 316 900.		
ALBRECHT	90G	ZPHY C48 183	H. Albrecht *et al.*	(ARGUS Collab.)
ARMSTRONG	89D	PL B227 186	T.A. Armstrong, M. Benayoun	(ATHU, BARI, BIRM+)
BEHREND	89C	ZPHY C43 91	H.J. Behrend *et al.*	(CELLO Collab.)
AUGUSTIN	88	PRL 60 2238	J.E. Augustin *et al.*	(DM2 Collab.)
BOLONKIN	88	NP B309 426	B.V. Bolonkin *et al.*	(ITEP, SERP)
FALVARD	88	PR D38 2706	A. Falvard *et al.*	(CLER, FRAS, LALO+)
AUGUSTIN	87	ZPHY C36 369	J.E. Augustin *et al.*	(LALO, CLER, FRAS+)
BALTRUSAIT...	87	PR D35 2077	R.M. Baltrusaitis *et al.*	(Mark III Collab.)
ALDE	86C	PL B182 105	D.M. Alde *et al.*	(SERP, BELG, LANL, LAPP)
LONGACRE	86	PL B177 223	R.S. Longacre *et al.*	(BNL, BRAN, CUNY+)
ALTHOFF	85B	ZPHY C29 189	M. Althoff *et al.*	(TASSO Collab.)
WILLIAMS	84	PR D30 877	E.G.H. Williams *et al.*	(VAND, NDAM, TUFTS+)
BLOOM	83	ARNS 33 143	E.D. Bloom, C. Peck	(SLAC, CIT)
BURKE	82	PRL 49 632	D.L. Burke *et al.*	(LBL, SLAC)
EDWARDS	82D	PRL 48 458	C. Edwards *et al.*	(CIT, HARV, PRIN+)
ETKIN	82B	PR D25 1786	A. Etkin *et al.*	(BNL, CUNY, TUFTS, VAND)
ETKIN	82C	PR D25 2446	A. Etkin *et al.*	(BNL, CUNY, TUFTS, VAND)

OTHER RELATED PAPERS

ABLIKIM	06H	PR D73 112007	M. Ablikim *et al.*	(BES Collab.)
CHEN	06	PR D73 014516	Y. Chen, A. Alexandru, S.J. Dong	
FARIBORZ	06	PR D74 054030	A.H. Fariborz	
GLOZMAN	06	PR D73 017503	L.Ya. Glozman	
HE	06	PR D73 051502R	X.-G. He, X.-Q. Li, X.-Q. Zeng	
CHANOWITZ	05	PRL 95 172001	M. Chanowitz	
GIACOSA	05	PR C71 025202	F. Giacosa *et al.*	
GIACOSA	05A	PL B622 277	F. Giacosa *et al.*	
GIACOSA	05B	PR D72 094006	F. Giacosa *et al.*	
VIJANDE	05	PR D72 034025	J. Vijande, A. Valarce, F. Fernandez	
ZHAO	05	PR D72 074001	Q. Zhao	
ZHAO	05A	PL B631 22	Q. Zhao, B.-S. Zou, Z.-B. Ma	
LINK	04	PL B585 200	J.M. Link *et al.*	(FNAL FOCUS Collab.)
TESHIMA	04	JPG 30 663	T. Teshima *et al.*	
ANISOVICH	03B	PAN 66 741	V.V. Anisovich, V.A. Nikonov, A.V. Sarantsev	
		Translated from YAF 66 772.		
AMSLER	02B	PL B541 22	C. Amsler	
JIN	02	PR D66 057505	H. Jin, X. Zhang	
KLEEFELD	02	PR D66 034007	F. Kleefeld *et al.*	
RUPP	02	PR D65 078501	G. Rupp, E. vanBeveren, M.D. Scadron	
SHAKIN	02	PR D65 078502	C.M. Shakin, H. Wang	
TESHIMA	02	JPG 28 1391	T. Teshima, I. Kitamura, N. Morisita	
VOLKOV	02	PAN 65 1657	M.K. Volkov, V.L. Yudichev	
		Translated from YAF 65 1701.		
LI	01B	EPJ C19 529	D.-M. Li, H. Yu, Q.-X. Shen	
VOLKOV	01	PAN 64 2006	M.K. Volkov, V.L. Yudichev	
		Translated from YAF 64 2091.		
ANISOVICH	99H	PL B467 289	A.V. Anisovich, V.V. Anisovich	
GRYGOREV	99	PAN 62 470	V.K. Grygorev *et al.*	
		Translated from YAF 62 513.		
PROKOSHKIN	99	PAN 62 356	Yu.D. Prokoshkin	
		Translated from YAF 62 396.		
ANISOVICH	97	PL B395 123	A.V. Anisovich, A.V. Sarantsev	(PNPI)
LINDENBAUM	92	PL B274 492	S.J. Lindenbaum, R.S. Longacre	(BNL)
BISELLO	89B	PR D39 701	G. Busetto *et al.*	(DM2 Collab.)
ASTON	88D	NP B301 525	D. Aston *et al.*	(SLAC, NAGO, CINC, INUS)
AKESSON	86	NP B264 154	T. Akesson *et al.*	(Axial Field Spec. Collab.)
ARMSTRONG	86B	PL 167B 133	T.A. Armstrong *et al.*	(ATHU, BARI, BIRM+)
BALTRUSAIT...	86B	PR D33 1222	R.M. Baltrusaitis *et al.*	(Mark III Collab.)
ALTHOFF	83	PL 121B 216	M. Althoff *et al.*	(TASSO Collab.)
BARNETT	83B	PL 120B 455	B. Barnett *et al.*	(JHU)
BARNES	82B	NP B198 380	T. Barnes, F.E. Close, S. Monaghan	(RHEL, OXFTP)
TANIMOTO	82	PL 116B 198	M. Tanimoto	(BIEL)