

$f'_2(1525)$ $I^G(J^{PC}) = 0^+(2^{++})$ **$f'_2(1525)$ MASS**

VALUE (MeV)	DOCUMENT ID
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1525±5 OUR ESTIMATE This is only an educated guess; the error given is larger than the error on the average of the published values.

PRODUCED BY PION BEAM

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
1521±13		TIKHOMIROV 03	SPEC	$40.0 \pi^- C \rightarrow K_S^0 K_S^0 K_L^0 X$
1547 ⁺¹⁰ ₋₂	2	LONGACRE 86	MPS	$22 \pi^- p \rightarrow K_S^0 K_S^0 n$
1496 ⁺⁹ ₋₈	3	CHABAUD 81	ASPK	$6 \pi^- p \rightarrow K^+ K^- n$
1497 ⁺⁸ ₋₉	CHABAUD	81	ASPK	$18.4 \pi^- p \rightarrow K^+ K^- n$
1492±29		GORLICH 80	ASPK	$17 \pi^- p$ polarized $\rightarrow K^+ K^- n$
1502±25	4	CORDEN 79	OMEG	$12\text{--}15 \pi^- p \rightarrow \pi^+ \pi^- n$
1480	14	CRENNELL 66	HBC	$6.0 \pi^- p \rightarrow K_S^0 K_S^0 n$

PRODUCED BY K^\pm BEAM

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
1523.4± 1.3 OUR AVERAGE Includes data from the datablock that follows this one.				
Error includes scale factor of 1.1.				
1526.8± 4.3		ASTON 88D	LASS	$11 K^- p \rightarrow K_S^0 K_S^0 \Lambda$
1504 ± 12		BOLONKIN 86	SPEC	$40 K^- p \rightarrow K_S^0 K_S^0 Y$
1529 ± 3		ARMSTRONG 83B	OMEG	$18.5 K^- p \rightarrow K^- K^+ \Lambda$
1521 ± 6	650	AGUILAR...	HBC	$4.2 K^- p \rightarrow \Lambda K^+ K^-$
1521 ± 3	572	ALHARRAN 81	HBC	$8.25 K^- p \rightarrow \Lambda K \bar{K}$
1522 ± 6	123	BARREIRO 77	HBC	$4.15 K^- p \rightarrow \Lambda K_S^0 K_S^0$
1528 ± 7	166	EVANGELIS...	77	OMEG $10 K^- p \rightarrow K^+ K^- (\Lambda, \Sigma)$
1527 ± 3	120	BRANDENB...	76C	ASPK $13 K^- p \rightarrow K^+ K^- (\Lambda, \Sigma)$
1519 ± 7	100	AGUILAR...	72B	HBC $3.9, 4.6 K^- p \rightarrow K \bar{K} (\Lambda, \Sigma)$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
1513 ± 10	5	BARKOV 99	SPEC	$40 K^- p \rightarrow K_S^0 K_S^0 y$

PRODUCED IN $e^+ e^-$ ANNIHILATION

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
The data in this block is included in the average printed for a previous datablock.				

1520.7± 2.0 OUR AVERAGE

1521 ± 5		ABLIKIM 05	BES2	$J/\psi \rightarrow \phi K^+ K^-$
1518 ± 1 ± 3		ABE 04	BELL	$10.6 e^+ e^- \rightarrow e^+ e^- K^+ K^-$
1519 ± 2 ± 15 ₋₅		BAI 03G	BES	$J/\psi \rightarrow \gamma K \bar{K}$
1523 ± 6	331	ACCIARRI 01H	L3	$91, 183\text{--}209 e^+ e^- \rightarrow e^+ e^- K_S^0 K_S^0$

1535 \pm 5 \pm 4	ABREU	96C	DLPH	$Z^0 \rightarrow K^+ K^- + X$
1516 \pm 5 $^{+9}_{-15}$	BAI	96C	BES	$J/\psi \rightarrow \gamma K^+ K^-$
1531.6 \pm 10.0	AUGUSTIN	88	DM2	$J/\psi \rightarrow \gamma K^+ K^-$
1515 \pm 5	⁷ FALVARD	88	DM2	$J/\psi \rightarrow \phi K^+ K^-$
1525 \pm 10 \pm 10	BALTRUSAIT..87	MRK3		$J/\psi \rightarrow \gamma K^+ K^-$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
1523 \pm 5	870	⁸ SCHEGELSKY	06A	RVUE $\gamma\gamma \rightarrow K_S^0 K_S^0$
1496 \pm 2		⁹ FALVARD	88	DM2 $J/\psi \rightarrow \phi K^+ K^-$

PRODUCED IN $\bar{p}p$ ANNIHILATION

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •			
1513 \pm 4	AMSLER	06	CBAR $0.9 \bar{p}p \rightarrow K^+ K^- \pi^0$
1508 \pm 9	¹⁰ AMSLER	02	CBAR $0.9 \bar{p}p \rightarrow \pi^0 \eta \eta, \pi^0 \pi^0 \pi^0$

CENTRAL PRODUCTION

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
1515 \pm 15	BARBERIS	99	OMEG $450 pp \rightarrow p_s p_f K^+ K^-$

PRODUCED IN $e p$ COLLISIONS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				

1537 $^{+9}_{-8}$ 84 ¹CHEKANOV 04 ZEUS $e p \rightarrow K_S^0 K_S^0 X$

¹ Systematic errors not estimated.

² From a partial-wave analysis of data using a K-matrix formalism with 5 poles.

³ CHABAUD 81 is a reanalysis of PAWLICKI 77 data.

⁴ From an amplitude analysis where the $f'_2(1525)$ width and elasticity are in complete disagreement with the values obtained from $K\bar{K}$ channel, making the solution dubious.

⁵ Systematic errors not estimated.

⁶ Supersedes ACCIARRI 95J.

⁷ From an analysis ignoring interference with $f_0(1710)$.

⁸ From analysis of L3 data at 91 and 183–209 GeV.

⁹ From an analysis including interference with $f_0(1710)$.

¹⁰ T-matrix pole.

$f'_2(1525)$ WIDTH

VALUE (MeV)	DOCUMENT ID	COMMENT
73^{+6}_{-5} OUR FIT		
76 \pm 10	PDG	90 For fitting

PRODUCED BY PION BEAM

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •			
102 ± 42	TIKHOLOMIROV 03	SPEC	$40.0 \pi^- C \rightarrow K_S^0 K_S^0 K_L^0 X$
108 ± 5 ± 2	¹³ LONGACRE 86	MPS	$22 \pi^- p \rightarrow K_S^0 K_S^0 n$
69 ± 22 ± 16	¹⁴ CHABAUD 81	ASPK	$6 \pi^- p \rightarrow K^+ K^- n$
137 ± 23 ± 21	CHABAUD 81	ASPK	$18.4 \pi^- p \rightarrow K^+ K^- n$
150 ± 83 ± 50	GORLICH 80	ASPK	$17 \pi^- p$ polarized $\rightarrow K^+ K^- n$
165 ± 42	¹⁵ CORDEN 79	OMEG	$12\text{--}15 \pi^- p \rightarrow \pi^+ \pi^- n$
92 ± 39 ± 22	¹⁶ POLYCHRO... 79	STRC	$7 \pi^- p \rightarrow n K_S^0 K_S^0$

PRODUCED BY K^\pm BEAM

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
80.2 ± 2.6 OUR AVERAGE	Includes data from the datablock that follows this one.			
90 ± 12		ASTON 88D	LASS	$11 K^- p \rightarrow K_S^0 K_S^0 \Lambda$
73 ± 18		BOLONKIN 86	SPEC	$40 K^- p \rightarrow K_S^0 K_S^0 Y$
83 ± 15		ARMSTRONG 83B	OMEG	$18.5 K^- p \rightarrow K^- K^+ \Lambda$
85 ± 16	650	AGUILAR.... 81B	HBC	$4.2 K^- p \rightarrow \Lambda K^+ K^-$
80 ± 14 ± 11	572	ALHARRAN 81	HBC	$8.25 K^- p \rightarrow \Lambda K \bar{K}$
72 ± 25	166	EVANGELIS... 77	OMEG	$10 K^- p \rightarrow K^+ K^- (\Lambda, \Sigma)$
69 ± 22	100	AGUILAR.... 72B	HBC	$3.9, 4.6 K^- p \rightarrow K \bar{K} (\Lambda, \Sigma)$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
75 ± 20		¹⁷ BARKOV 99	SPEC	$40 K^- p \rightarrow K_S^0 K_S^0 y$
62 ± 19 ± 14	123	BARREIRO 77	HBC	$4.15 K^- p \rightarrow \Lambda K_S^0 K_S^0$
61 ± 8	120	BRANDENB... 76C	ASPK	$13 K^- p \rightarrow K^+ K^- (\Lambda, \Sigma)$

PRODUCED IN $e^+ e^-$ ANNIHILATION

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
The data in this block is included in the average printed for a previous datablock.				

79.9 ± 3.3 OUR AVERAGE

Error includes scale factor of 1.1.				
77 ± 15		ABLIKIM 05	BES2	$J/\psi \rightarrow \phi K^+ K^-$
82 ± 2 ± 3		ABE 04	BELL	$10.6 e^+ e^- \rightarrow e^+ e^- K^+ K^-$
75 ± 4 ± 15 ± 5		BAI 03G	BES	$J/\psi \rightarrow \gamma K \bar{K}$
100 ± 15	331	¹⁸ ACCIARRI 01H	L3	$91, 183\text{--}209 e^+ e^- \rightarrow e^+ e^- K_S^0 K_S^0$
60 ± 20 ± 19		ABREU 96C	DLPH	$Z^0 \rightarrow K^+ K^- + X$
60 ± 23 ± 13 ± 20		BAI 96C	BES	$J/\psi \rightarrow \gamma K^+ K^-$
103 ± 30		AUGUSTIN 88	DM2	$J/\psi \rightarrow \gamma K^+ K^-$
62 ± 10		¹⁹ FALVAR 88	DM2	$J/\psi \rightarrow \phi K^+ K^-$
85 ± 35		BALTRUSAIT... 87	MRK3	$J/\psi \rightarrow \gamma K^+ K^-$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
104 ± 10	870	¹¹ SCHEGELSKY 06A	RVUE	$\gamma\gamma \rightarrow K_S^0 K_S^0$
100 ± 3		²⁰ FALVAR 88	DM2	$J/\psi \rightarrow \phi K^+ K^-$

11 From analysis of L3 data at 91 and 183–209 GeV.

PRODUCED IN $\bar{p}p$ ANNIHILATION

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
79±8	21 AMSLER	02 CBAR	$0.9 \bar{p}p \rightarrow \pi^0 \eta\eta, \pi^0 \pi^0 \pi^0$
$\bullet \bullet \bullet$ We do not use the following data for averages, fits, limits, etc. $\bullet \bullet \bullet$			
76±6	AMSLER	06 CBAR	$0.9 \bar{p}p \rightarrow K^+ K^- \pi^0$

CENTRAL PRODUCTION

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
70±25	BARBERIS	99 OMEG	$450 pp \rightarrow p_s p_f K^+ K^-$

PRODUCED IN $e p$ COLLISIONS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
$\bullet \bullet \bullet$ We do not use the following data for averages, fits, limits, etc. $\bullet \bullet \bullet$				
50 ⁺³⁴ ₋₂₂	84	12 CHEKANOV	04 ZEUS	$e p \rightarrow K_S^0 K_S^0 X$

12 Systematic errors not estimated.

13 From a partial-wave analysis of data using a K-matrix formalism with 5 poles.

14 CHABAUD 81 is a reanalysis of PAWLICKI 77 data.

15 From an amplitude analysis where the $f'_2(1525)$ width and elasticity are in complete disagreement with the values obtained from $K\bar{K}$ channel, making the solution dubious.

16 From a fit to the D with $f_2(1270)-f'_2(1525)$ interference. Mass fixed at 1516 MeV.

17 Systematic errors not estimated.

18 Supersedes ACCIARRI 95J.

19 From an analysis ignoring interference with $f_0(1710)$.

20 From an analysis including interference with $f_0(1710)$.

21 T-matrix pole.

$f'_2(1525)$ DECAY MODES

Mode	Fraction (Γ_i/Γ)
$\Gamma_1 K\bar{K}$	(88.8 ± 3.1) %
$\Gamma_2 \eta\eta$	(10.3 ± 3.1) %
$\Gamma_3 \pi\pi$	(8.2 ± 1.5) × 10 ⁻³
$\Gamma_4 K\bar{K}^*(892) + \text{c.c.}$	
$\Gamma_5 \pi K\bar{K}$	
$\Gamma_6 \pi\pi\eta$	
$\Gamma_7 \pi^+\pi^+\pi^-\pi^-$	
$\Gamma_8 \gamma\gamma$	(1.11 ± 0.14) × 10 ⁻⁶

CONSTRAINED FIT INFORMATION

An overall fit to the total width, 2 partial widths, a combination of partial widths obtained from integrated cross sections, and 3 branching ratios uses 15 measurements and one constraint to determine 5 parameters. The overall fit has a $\chi^2 = 14.0$ for 11 degrees of freedom.

The following *off-diagonal* array elements are the correlation coefficients $\langle \delta p_i \delta p_j \rangle / (\delta p_i \cdot \delta p_j)$, in percent, from the fit to parameters p_i , including 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_2	-100			
x_3	-3	-1		
x_8	-8	8	1	
Γ	-32	32	-1	-53
	x_1	x_2	x_3	x_8

	Mode	Rate (MeV)
Γ_1	$K\bar{K}$	65^{+5}_{-4}
Γ_2	$\eta\eta$	7.6 ± 2.5
Γ_3	$\pi\pi$	0.60 ± 0.12
Γ_8	$\gamma\gamma$	$(8.1 \pm 0.9) \times 10^{-5}$

$f'_2(1525)$ PARTIAL WIDTHS

$\Gamma(K\bar{K})$

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT	Γ_1
65^{+5}_{-4} OUR FIT				
63^{+6}_{-5}	$^{22}\text{LONGACRE}$ 86	MPS	$22\pi^- p \rightarrow K_S^0 K_S^0 n$	

$\Gamma(\eta\eta)$

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT	Γ_2
7.6 ± 2.5 OUR FIT					
5.0 ± 0.8	870	$^{23}\text{SCHEGELSKY}$ 06A	RVUE	$\gamma\gamma \rightarrow K_S^0 K_S^0$	
24^{+3}_{-1}		$^{22}\text{LONGACRE}$ 86	MPS	$22\pi^- p \rightarrow K_S^0 K_S^0 n$	

$\Gamma(\pi\pi)$

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT	Γ_3
0.60±0.12 OUR FIT					
1.4 +1.0 -0.5	22	LONGACRE 86	MPS	$22 \pi^- p \rightarrow K_S^0 K_S^0 n$	
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.2 +1.0 -0.2	870	23 SCHEGELSKY 06A	RVUE	$\gamma\gamma \rightarrow K_S^0 K_S^0$	

$\Gamma(\gamma\gamma)$

VALUE (keV)	EVTS	DOCUMENT ID	TECN	COMMENT	Γ_8
0.081±0.009 OUR FIT					
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.13 ±0.03	870	23 SCHEGELSKY 06A	RVUE	$\gamma\gamma \rightarrow K_S^0 K_S^0$	
22 From a partial-wave analysis of data using a K-matrix formalism with 5 poles.					
23 From analysis of L3 data at 91 and 183–209 GeV, using $\Gamma(f'_2(1525) \rightarrow K\bar{K}) = 68$ MeV and SU(3) relations.					

$f'_2(1525) \Gamma(i)\Gamma(\gamma\gamma)/\Gamma(\text{total})$

$\Gamma(K\bar{K}) \times \Gamma(\gamma\gamma)/\Gamma_{\text{total}}$

VALUE (keV)	EVTS	DOCUMENT ID	TECN	COMMENT	$\Gamma_1\Gamma_8/\Gamma$
0.072 ±0.007 OUR FIT					
0.072 ±0.007 OUR AVERAGE					
0.0564±0.0048±0.0116	ABE	04 BELL	10.6	$e^+ e^- \rightarrow e^+ e^- K^+ K^-$	
0.076 ±0.006 ±0.011	331 26 ACCIARRI	01H L3		$e^+ e^- \rightarrow e^+ e^- K_S^0 K_S^0$	
0.067 ±0.008 ±0.015	24 ALBRECHT	90G ARG		$e^+ e^- \rightarrow e^+ e^- K^+ K^-$	
0.11 +0.03 -0.02	±0.02 BEHREND	89C CELL		$e^+ e^- \rightarrow e^+ e^- K_S^0 K_S^0$	
0.10 +0.04 -0.03	+0.03 BERGER	88 PLUT		$e^+ e^- \rightarrow e^+ e^- K_S^0 K_S^0$	
0.12 ±0.07	±0.04 24 AIHARA	86B TPC		$e^+ e^- \rightarrow e^+ e^- K^+ K^-$	
0.11 ±0.02	±0.04 24 ALTHOFF	83 TASS		$e^+ e^- \rightarrow e^+ e^- K\bar{K}$	
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.0314±0.0050±0.0077	25 ALBRECHT	90G ARG		$e^+ e^- \rightarrow e^+ e^- K^+ K^-$	

24 Using an incoherent background.

25 Using a coherent background.

26 Supersedes ACCIARRI 95J. From analysis of L3 data at 91 and 183–209 GeV,

$f'_2(1525) \text{ BRANCHING RATIOS}$

$\Gamma(\eta\eta)/\Gamma_{\text{total}}$

VALUE	DOCUMENT ID	TECN	COMMENT	Γ_2/Γ
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.10±0.03	27 PROKOSHIN 91 GAM4	300	$\pi^- p \rightarrow \pi^- p\eta\eta$	
27 Combining results of GAM4 with those of WA76 on $K\bar{K}$ central production and results of CBAL, MRK3 and DM2 on $J/\psi \rightarrow \gamma\eta\eta$.				

$\Gamma(\eta\eta)/\Gamma(K\bar{K})$

<u>VALUE</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	Γ_2/Γ_1
0.12±0.04 OUR FIT					
0.11±0.04		28 PROKOSHKIN 91	GAM4	300 $\pi^- p \rightarrow \pi^- p \eta\eta$	
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.14	90	BARBERIS	00E	450 $p p \rightarrow p_f \eta\eta p_s$	
<0.50		BARNES	67	HBC 4.6,5.0 $K^- p$	

28 Combining results of GAM4 with those of WA76 on $K\bar{K}$ central production and results of CBAL, MRK3 and DM2 on $J/\psi \rightarrow \gamma\eta\eta$.

 $\Gamma(\pi\pi)/\Gamma_{\text{total}}$

<u>VALUE</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	Γ_3/Γ
0.0082±0.0016 OUR FIT					
0.0075±0.0016 OUR AVERAGE					
0.007 ± 0.002		COSTA...	80	OMEG 10 $\pi^- p \rightarrow K^+ K^- n$	
0.027 ^{+0.071} _{-0.013}	29	GORLICH	80	ASPK 17,18 $\pi^- p$	
0.0075±0.0025	29,30	MARTIN	79	RVUE	

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

<0.06	95	AGUILAR-...	81B	HBC 4.2 $K^- p \rightarrow \Lambda K^+ K^-$
0.19 ± 0.03		CORDEN	79	OMEG 12–15 $\pi^- p \rightarrow \pi^+ \pi^- n$
<0.045	95	BARREIRO	77	HBC 4.15 $K^- p \rightarrow \Lambda K_S^0 K_S^0$
0.012 ± 0.004	29	PAWLICKI	77	SPEC 6 $\pi N \rightarrow K^+ K^- N$
<0.063	90	BRANDENB...	76C	ASPK 13 $K^- p \rightarrow K^+ K^- (\Lambda, \Sigma)$
<0.0086	29	BEUSCH	75B	OSPK 8.9 $\pi^- p \rightarrow K^0 \bar{K}^0 n$

29 Assuming that the $f'_2(1525)$ is produced by an one-pion exchange production mechanism.

30 MARTIN 79 uses the PAWLICKI 77 data with different input value of the $f'_2(1525) \rightarrow K\bar{K}$ branching ratio.

 $\Gamma(\pi\pi)/\Gamma(K\bar{K})$

<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	Γ_3/Γ_1
0.0092±0.0018 OUR FIT				
0.075 ± 0.035	AUGUSTIN	87	DM2 $J/\psi \rightarrow \gamma\pi^+\pi^-$	

 $[\Gamma(K\bar{K}^*(892)+\text{c.c.}) + \Gamma(\pi K\bar{K})]/\Gamma(K\bar{K})$ $(\Gamma_4+\Gamma_5)/\Gamma_1$

<u>VALUE</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
• • • We do not use the following data for averages, fits, limits, etc. • • •				
<0.35	95	AGUILAR-...	72B	HBC 3.9,4.6 $K^- p$
<0.4	67	AMMAR	67	HBC

 $\Gamma(\pi\pi\eta)/\Gamma(K\bar{K})$ Γ_6/Γ_1

<u>VALUE</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
• • • We do not use the following data for averages, fits, limits, etc. • • •				
<0.41	95	AGUILAR-...	72B	HBC 3.9,4.6 $K^- p$
<0.3	67	AMMAR	67	HBC

$\Gamma(\pi^+\pi^+\pi^-\pi^-)/\Gamma(K\bar{K})$				Γ_7/Γ_1
VALUE	CL%	DOCUMENT ID	TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
<0.32	95	AGUILAR-...	72B HBC	3.9,4.6 $K^- p$

$f'_2(1525)$ REFERENCES

AMSLER	06	PL B639 165	C. Amsler <i>et al.</i>	(CBAR Collab.)
SCHEGELSKY	06A	EPJ A27 207	V.A. Schegelsky <i>et al.</i>	
ABLIKIM	05	PL B607 243	M. Ablikim <i>et al.</i>	(BES Collab.)
ABE	04	EPJ C32 323	K. Abe <i>et al.</i>	(BELLE Collab.)
CHEKANOV	04	PL B578 33	S. Chekanov <i>et al.</i>	(ZEUS Collab.)
BAI	03G	PR D68 052003	J.Z. Bai <i>et al.</i>	(BES Collab.)
TIKHOMIROV	03	PAN 66 828	G.D. Tikhomirov <i>et al.</i>	
		Translated from YAF 66 860.		
AMSLER	02	EPJ C23 29	C. Amsler <i>et al.</i>	
ACCIARRI	01H	PL B501 173	M. Acciarri <i>et al.</i>	(L3 Collab.)
BARBERIS	00E	PL B479 59	D. Barberis <i>et al.</i>	(WA 102 Collab.)
BARBERIS	99	PL B453 305	D. Barberis <i>et al.</i>	(Omega Expt.)
BARKOV	99	JETPL 70 248	B.P. Barkov <i>et al.</i>	
		Translated from ZETFP 70 242.		
ABREU	96C	PL B379 309	P. Abreu <i>et al.</i>	(DELPHI Collab.)
BAI	96C	PRL 77 3959	J.Z. Bai <i>et al.</i>	(BES Collab.)
ACCIARRI	95J	PL B363 118	M. Acciarri <i>et al.</i>	(L3 Collab.)
PROKOSHKIN	91	SPD 36 155	Y.D. Prokoshkin	(GAM2, GAM4 Collab.)
		Translated from DANS 316 900.		
ALBRECHT	90G	ZPHY C48 183	H. Albrecht <i>et al.</i>	(ARGUS Collab.)
PDG	90	PL B239 1	J.J. Hernandez <i>et al.</i>	(IFIC, BOST, CIT+)
BEHREND	89C	ZPHY C43 91	H.J. Behrend <i>et al.</i>	(CELLO Collab.)
ASTON	88D	NP B301 525	D. Aston <i>et al.</i>	(SLAC, NAGO, CINC, INUS)
AUGUSTIN	88	PRL 60 2238	J.E. Augustin <i>et al.</i>	(DM2 Collab.)
BERGER	88	ZPHY C37 329	C. Berger <i>et al.</i>	(PLUTO Collab.)
FALVARD	88	PR D38 2706	A. Falvard <i>et al.</i>	(CLER, FRAS, LAZO+)
AUGUSTIN	87	ZPHY C36 369	J.E. Augustin <i>et al.</i>	(LAZO, CLER, FRAS+)
BALTRUSAIT...	87	PR D35 2077	R.M. Baltrusaitis <i>et al.</i>	(Mark III Collab.)
AIHARA	86B	PRL 57 404	H. Aihara <i>et al.</i>	(TPC-2 γ Collab.)
BOLONKIN	86	SJNP 43 776	B.V. Bolonkin <i>et al.</i>	(ITEP) JP
		Translated from YAF 43 1211.		
LONGACRE	86	PL B177 223	R.S. Longacre <i>et al.</i>	(BNL, BRAN, CUNY+)
ALTHOFF	83	PL 121B 216	M. Althoff <i>et al.</i>	(TASSO Collab.)
ARMSTRONG	83B	NP B224 193	T.A. Armstrong <i>et al.</i>	(BARI, BIRM, CERN+)
AGUILAR-...	81B	ZPHY C8 313	M. Aguilar-Benitez <i>et al.</i>	(CERN, CDEF+)
ALHARRAN	81	NP B191 26	S. Al-Harran <i>et al.</i>	(BIRM, CERN, GLAS+)
CHABAUD	81	APP B12 575	V. Chabaud <i>et al.</i>	(CERN, CRAC, MPIM)
COSTA...	80	NP B175 402	G. Costa de Beauregard <i>et al.</i>	(BARI, BONN+)
GORLICH	80	NP B174 16	L. Gorlich <i>et al.</i>	(CRAC, MPIM, CERN+)
CORDEN	79	NP B157 250	M.J. Corden <i>et al.</i>	(BIRM, RHEL, TELA+) JP
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