

$f'_2(1525)$

$$I^G(J^{PC}) = 0^+(2^{++})$$

$f'_2(1525)$ MASS

VALUE (MeV)

DOCUMENT ID

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		¹ LONGACRE 86	MPS	22 $\pi^- p \rightarrow K_S^0 K_S^0 n$
1496 ⁺⁹ ₋₈		² 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		³ CORDEN 79	OMEG	12–15 $\pi^- p \rightarrow \pi^+ \pi^- n$
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-... 81B	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. •••
1514 ± 8	61	BINON 07	GAMS	32.5 $K^- p \rightarrow \eta \eta (\Lambda / \Sigma^0)$
1513 ±10		⁴ 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	⁵ ACCIARRI 01H	L3	91, 183–209 $e^+ e^- \rightarrow e^+ e^- K_S^0 K_S^0$

1535 ± 5 ± 4	ABREU	96C	DLPH	$Z^0 \rightarrow K^+ K^- + X$
1516 ± 5 $\begin{smallmatrix} +9 \\ -15 \end{smallmatrix}$	BAI	96C	BES	$J/\psi \rightarrow \gamma K^+ K^-$
1531.6 ± 10.0	AUGUSTIN	88	DM2	$J/\psi \rightarrow \gamma K^+ K^-$
1515 ± 5	⁶ FALVARD	88	DM2	$J/\psi \rightarrow \phi K^+ K^-$
1525 ± 10 ± 10	BALTRUSAIT..87	MRK3		$J/\psi \rightarrow \gamma K^+ K^-$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
1523 ± 5	870 ⁷ SCHEGELSKY	06A	RVUE	$\gamma\gamma \rightarrow K_S^0 K_S^0$
1496 ± 2	⁸ FALVARD	88	DM2	$J/\psi \rightarrow \phi K^+ K^-$

PRODUCED IN $\bar{p}p$ ANNIHILATION

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●			
1530 ± 12	⁹ ANISOVICH	09	RVUE 0.0 $\bar{p}p, \pi N$
1513 ± 4	AMSLER	06	CBAR 0.9 $\bar{p}p \rightarrow K^+ K^- \pi^0$
1508 ± 9	¹⁰ AMSLER	02	CBAR 0.9 $\bar{p}p \rightarrow \pi^0 \eta \eta, \pi^0 \pi^0 \pi^0$

CENTRAL PRODUCTION

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

PRODUCED IN $e p$ COLLISIONS

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
1512 ± 3 $\begin{smallmatrix} +1.4 \\ -0.5 \end{smallmatrix}$		¹¹ CHEKANOV	08	ZEUS $e p \rightarrow K_S^0 K_S^0 X$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
1537 $\begin{smallmatrix} +9 \\ -8 \end{smallmatrix}$	84	¹² CHEKANOV	04	ZEUS $e p \rightarrow K_S^0 K_S^0 X$

¹ From a partial-wave analysis of data using a K-matrix formalism with 5 poles.

² CHABAUD 81 is a reanalysis of PAWLICKI 77 data.

³ 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.

⁴ Systematic errors not estimated.

⁵ Supersedes ACCIARRI 95J.

⁶ From an analysis ignoring interference with $f_0(1710)$.

⁷ From analysis of L3 data at 91 and 183–209 GeV.

⁸ From an analysis including interference with $f_0(1710)$.

⁹ 4-poles, 5-channel K matrix fit.

¹⁰ T-matrix pole.

¹¹ In the SU(3) based model with a specific interference pattern of the $f_2(1270)$, $a_2^0(1320)$, and $f_2'(1525)$ mesons incoherently added to the $f_0(1710)$ and non-resonant background.

¹² Systematic errors not estimated.

$f_2'(1525)$ WIDTH

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>COMMENT</u>
73 $\begin{smallmatrix} +6 \\ -5 \end{smallmatrix}$ OUR FIT		
76 ± 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	TIKHOMIROV 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	12–15 $\pi^- p \rightarrow \pi^+ \pi^- n$
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. ● ● ●

92 ⁺²⁵ ₋₁₆	61	BINON 07	GAMS	32.5 $K^- p \rightarrow \eta \eta (\Lambda / \Sigma^0)$
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, 183–209 $e^+ e^- \rightarrow e^+ e^- K_S^0 K_S^0$
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 FALVARD 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	²⁰ SCHEGELSKY 06A	RVUE	$\gamma\gamma \rightarrow K_S^0 K_S^0$
100 ± 3		²¹ FALVARD	88 DM2	$J/\psi \rightarrow \phi K^+ K^-$

PRODUCED IN $\bar{p}p$ ANNIHILATION

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
79 ± 8	²² AMSLER	02 CBAR	$0.9 \bar{p}p \rightarrow \pi^0 \eta \eta, \pi^0 \pi^0 \pi^0$
• • •	We do not use the following data for averages, fits, limits, etc. • • •		
128 ± 20	²³ ANISOVICH	09 RVUE	$0.0 \bar{p}p, \pi N$
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
83 ± $\begin{smallmatrix} 9 \\ -4 \end{smallmatrix}$		²⁴ CHEKANOV	08 ZEUS	$e p \rightarrow K_S^0 K_S^0 X$
• • •	We do not use the following data for averages, fits, limits, etc. • • •			
50^{+34}_{-22}	84	²⁵ CHEKANOV	04 ZEUS	$e p \rightarrow K_S^0 K_S^0 X$

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

²¹ From an analysis including interference with $f_0(1710)$.

²² T-matrix pole.

²³ 4-poles, 5-channel K matrix fit.

²⁴ In the SU(3) based model with a specific interference pattern of the $f_2(1270)$, $a_2^0(1320)$, and $f_2'(1525)$ mesons incoherently added to the $f_0(1710)$ and non-resonant background.

²⁵ Systematic errors not estimated.

$f_2'(1525)$ DECAY MODES

Mode	Fraction (Γ_i/Γ)
Γ_1 $K\bar{K}$	(88.7 ± 2.2) %
Γ_2 $\eta\eta$	(10.4 ± 2.2) %
Γ_3 $\pi\pi$	(8.2 ± 1.5) × 10 ⁻³
Γ_4 $K\bar{K}^*(892) + \text{c.c.}$	
Γ_5 $\pi K\bar{K}$	
Γ_6 $\pi\pi\eta$	
Γ_7 $\pi^+ \pi^+ \pi^- \pi^-$	
Γ_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 16 measurements and one constraint to determine 5 parameters. The overall fit has a $\chi^2 = 14.0$ for 12 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	-6	-1		
x_8	-6	6	1	
Γ	-23	23	-1	-55
	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 ± 1.8
Γ_3 $\pi\pi$	0.60 ± 0.12
Γ_8 $\gamma\gamma$	(8.1 ± 0.9) $\times 10^{-5}$

$f'_2(1525)$ PARTIAL WIDTHS

$\Gamma(K\bar{K})$					Γ_1
VALUE (MeV)	DOCUMENT ID	TECN	COMMENT		

65 $^{+5}_{-4}$ OUR FIT

63 $^{+6}_{-5}$ ²⁶ LONGACRE 86 MPS 22 $\pi^- p \rightarrow K_S^0 K_S^0 n$

$\Gamma(\eta\eta)$					Γ_2
VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT	

7.6 ± 1.8 OUR FIT

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

5.0 ± 0.8 870 ²⁷ SCHEGELSKY 06A RVUE $\gamma\gamma \rightarrow K_S^0 K_S^0$

24 $^{+3}_{-1}$ ²⁶ LONGACRE 86 MPS 22 $\pi^- p \rightarrow K_S^0 K_S^0 n$

$\Gamma(\pi\pi)$ Γ_3
VALUE (MeV) EVTS DOCUMENT ID TECN COMMENT
0.60 ± 0.12 OUR FIT

1.4 $\begin{smallmatrix} +1.0 \\ -0.5 \end{smallmatrix}$ 26 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 $\begin{smallmatrix} +1.0 \\ -0.2 \end{smallmatrix}$ 870 27 SCHEGELSKY 06A RVUE $\gamma\gamma \rightarrow K_S^0 K_S^0$

$\Gamma(\gamma\gamma)$ Γ_8
VALUE (keV) EVTS DOCUMENT ID TECN COMMENT
0.081 ± 0.009 OUR FIT

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

0.13 ± 0.03 870 27 SCHEGELSKY 06A RVUE $\gamma\gamma \rightarrow K_S^0 K_S^0$

²⁶ From a partial-wave analysis of data using a K-matrix formalism with 5 poles.

²⁷ 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.

$f_2'(1525) \Gamma(i)\Gamma(\gamma\gamma)/\Gamma(\text{total})$

$\Gamma(K\bar{K}) \times \Gamma(\gamma\gamma)/\Gamma_{\text{total}}$ $\Gamma_1\Gamma_8/\Gamma$
VALUE (keV) EVTS DOCUMENT ID TECN COMMENT

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 28 ACCIARRI 01H L3 $e^+e^- \rightarrow e^+e^- K_S^0 K_S^0$

0.067 ± 0.008 ± 0.015 29 ALBRECHT 90G ARG $e^+e^- \rightarrow e^+e^- K^+K^-$

0.11 $\begin{smallmatrix} +0.03 \\ -0.02 \end{smallmatrix}$ ± 0.02 BEHREND 89C CELL $e^+e^- \rightarrow e^+e^- K_S^0 K_S^0$

0.10 $\begin{smallmatrix} +0.04 \\ -0.03 \end{smallmatrix}$ ± 0.03 ± 0.02 BERGER 88 PLUT $e^+e^- \rightarrow e^+e^- K_S^0 K_S^0$

0.12 ± 0.07 ± 0.04 29 AIHARA 86B TPC $e^+e^- \rightarrow e^+e^- K^+K^-$

0.11 ± 0.02 ± 0.04 29 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 30 ALBRECHT 90G ARG $e^+e^- \rightarrow e^+e^- K^+K^-$

²⁸ Supersedes ACCIARRI 95J. From analysis of L3 data at 91 and 183–209 GeV,

²⁹ Using an incoherent background.

³⁰ Using a coherent background.

$f_2'(1525)$ BRANCHING RATIOS

$\Gamma(\eta\eta)/\Gamma_{\text{total}}$ Γ_2/Γ
VALUE DOCUMENT ID TECN COMMENT

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

seen UEHARA 10A BELL 10.6 $e^+e^- \rightarrow e^+e^- \eta\eta$

0.10 ± 0.03 31 PROKOSHKIN 91 GAM4 300 $\pi^- p \rightarrow \pi^- p \eta\eta$

³¹ Combining results of GAM4 with those of WA76 on $K\bar{K}$ central production and results of CBAL, MRK3 and DM2 on $J/\psi \rightarrow \gamma\eta\eta$.

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

Γ_2/Γ_1

VALUE CL% EVTS DOCUMENT ID TECN COMMENT

0.118±0.028 OUR FIT

0.115±0.028 OUR AVERAGE

0.119±0.015±0.036 61 ³² BINON 07 GAMS 32.5 $K^- p \rightarrow \eta\eta(\Lambda/\Sigma^0)$

0.11 ±0.04 ³³ 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 $pp \rightarrow p_f \eta\eta p_S$

< 0.50 BARNES 67 HBC 4.6,5.0 $K^- p$

³² Using the compilation of the cross sections for $f_2'(1525)$ production in $K^- p$ collisions from ASTON 88D.

³³ Combining results of GAM4 with those of WA76 on $K\bar{K}$ central production and results of CBAL, MRK3 and DM2 on $J/\psi \rightarrow \gamma\eta\eta$.

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

Γ_3/Γ

VALUE CL% DOCUMENT ID TECN COMMENT

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} ³⁴ GORLICH 80 ASPK 17,18 $\pi^- p$

0.0075±0.0025 ^{34,35} 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 ³⁴ 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 ³⁴ BEUSCH 75B OSPK 8.9 $\pi^- p \rightarrow K^0 \bar{K}^0 n$

³⁴ Assuming that the $f_2'(1525)$ is produced by an one-pion exchange production mechanism.

³⁵ MARTIN 79 uses the PAWLICKI 77 data with different input value of the $f_2'(1525) \rightarrow K\bar{K}$ branching ratio.

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

Γ_3/Γ_1

VALUE DOCUMENT ID TECN COMMENT

0.0092±0.0018 OUR FIT

0.075 ±0.035

AUGUSTIN 87 DM2 $J/\psi \rightarrow \gamma\pi^+\pi^-$

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

$(\Gamma_4+\Gamma_5)/\Gamma_1$

VALUE CL% DOCUMENT ID TECN COMMENT

• • • 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

VALUE CL% DOCUMENT ID TECN COMMENT

• • • 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

$$\Gamma(\pi^+\pi^+\pi^-\pi^-)/\Gamma(K\bar{K})$$

$$\Gamma_7/\Gamma_1$$

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.32	95	AGUILAR-...	72B HBC	3.9,4.6 K^-p

$f'_2(1525)$ REFERENCES

UEHARA	10A	PR D82 114031	S. Uehara <i>et al.</i>	(BELLE Collab.)
ANISOVICH	09	IJMP A24 2481	V.V. Anisovich, A.V. Sarantsev	
CHEKANOV	08	PRL 101 112003	S. Chekanov <i>et al.</i>	(ZEUS Collab.)
BINON	07	PAN 70 1713	F. Binon <i>et al.</i>	(GAMS Collab.)
		Translated from YAF 70 1758.		
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, LALO+)
AUGUSTIN	87	ZPHY C36 369	J.E. Augustin <i>et al.</i>	(LALO, CLER, FRAS+)
BALTRUSAITIS...	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 Beaugard <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
MARTIN	79	NP B158 520	A.D. Martin, E.N. Ozmutlu	(DURH)
POLYCHRO...	79	PR D19 1317	V.A. Polychronakos <i>et al.</i>	(NDAM, ANL)
BARREIRO	77	NP B121 237	F. Barreiro <i>et al.</i>	(CERN, AMST, NIJM+)
EVANGELIS...	77	NP B127 384	C. Evangelista <i>et al.</i>	(BARI, BONN, CERN+)
PAWLICKI	77	PR D15 3196	A.J. Pawlicki <i>et al.</i>	(ANL) IJP
BRANDENB...	76C	NP B104 413	G.W. Brandenburg <i>et al.</i>	(SLAC)
BEUSCH	75B	PL 60B 101	W. Beusch <i>et al.</i>	(CERN, ETH)
AGUILAR-...	72B	PR D6 29	M. Aguilar-Benitez <i>et al.</i>	(BNL)
AMMAR	67	PRL 19 1071	R. Ammar <i>et al.</i>	(NWES, ANL) JP
BARNES	67	PRL 19 964	V.E. Barnes <i>et al.</i>	(BNL, SYRA) IJPC
CRENNELL	66	PRL 16 1025	D.J. Crennell <i>et al.</i>	(BNL) I