

**$f'_2(1525)$**

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

### $f'_2(1525)$ 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

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
● ● ● 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 <sup>+10</sup> <sub>-2</sub>		<sup>1</sup> LONGACRE 86	MPS	22 $\pi^- p \rightarrow K_S^0 K_S^0 n$
1496 <sup>+9</sup> <sub>-8</sub>		<sup>2</sup> CHABAUD 81	ASPK	6 $\pi^- p \rightarrow K^+ K^- n$
1497 <sup>+8</sup> <sub>-9</sub>		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		<sup>3</sup> 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

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>1523.4± 1.3 OUR AVERAGE</b> 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		<sup>4</sup> BARKOV 99	SPEC	40 $K^- p \rightarrow K_S^0 K_S^0 y$

#### PRODUCED IN $e^+ e^-$ ANNIHILATION

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
The data in this block is included in the average printed for a previous datablock.				
<b>1520.7± 2.0 OUR AVERAGE</b>				
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 <sup>+15</sup> <sub>-5</sub>		BAI 03G	BES	$J/\psi \rightarrow \gamma K \bar{K}$
1523 ± 6	331	<sup>5</sup> 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	<sup>6</sup> 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 <sup>7</sup> SCHEGELSKY	06A	RVUE	$\gamma\gamma \rightarrow K_S^0 K_S^0$
1496 ± 2	<sup>8</sup> 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	<sup>9</sup> 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	<sup>10</sup> 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>
<b>1515 ± 15</b>	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>
<b>1512 ± 3 <math>\begin{smallmatrix} +1.4 \\ -0.5 \end{smallmatrix}</math></b>		<sup>11</sup> 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	<sup>12</sup> CHEKANOV	04	ZEUS $e p \rightarrow K_S^0 K_S^0 X$

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

<sup>2</sup> CHABAUD 81 is a reanalysis of PAWLICKI 77 data.

<sup>3</sup> 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.

<sup>4</sup> Systematic errors not estimated.

<sup>5</sup> Supersedes ACCIARRI 95J.

<sup>6</sup> From an analysis ignoring interference with  $f_0(1710)$ .

<sup>7</sup> From analysis of L3 data at 91 and 183–209 GeV.

<sup>8</sup> From an analysis including interference with  $f_0(1710)$ .

<sup>9</sup> 4-poles, 5-channel K matrix fit.

<sup>10</sup> T-matrix pole.

<sup>11</sup> 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.

<sup>12</sup> Systematic errors not estimated.

### $f_2'(1525)$ WIDTH

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>COMMENT</u>
<b>73 <math>\begin{smallmatrix} +6 \\ -5 \end{smallmatrix}</math> OUR FIT</b>		
<b>76 ± 10</b>	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 <sup>+5</sup> <sub>-2</sub>	<sup>13</sup> LONGACRE 86	MPS	22 $\pi^- p \rightarrow K_S^0 K_S^0 n$
69 <sup>+22</sup> <sub>-16</sub>	<sup>14</sup> CHABAUD 81	ASPK	6 $\pi^- p \rightarrow K^+ K^- n$
137 <sup>+23</sup> <sub>-21</sub>	CHABAUD 81	ASPK	18.4 $\pi^- p \rightarrow K^+ K^- n$
150 <sup>+83</sup> <sub>-50</sub>	GORLICH 80	ASPK	17 $\pi^- p$ polarized $\rightarrow K^+ K^- n$
165 ± 42	<sup>15</sup> CORDEN 79	OMEG	12–15 $\pi^- p \rightarrow \pi^+ \pi^- n$
92 <sup>+39</sup> <sub>-22</sub>	<sup>16</sup> 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
<b>80.2 ± 2.6 OUR AVERAGE</b> 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 <sup>+14</sup> <sub>-11</sub>	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 <sup>+25</sup> <sub>-16</sub>	61	BINON 07	GAMS	32.5 $K^- p \rightarrow \eta \eta (\Lambda / \Sigma^0)$
75 ± 20		<sup>17</sup> BARKOV 99	SPEC	40 $K^- p \rightarrow K_S^0 K_S^0 y$
62 <sup>+19</sup> <sub>-14</sub>	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.				
<b>79.9 ± 3.3 OUR AVERAGE</b> 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 <sup>+15</sup> <sub>-5</sub>		BAI 03G	BES	$J/\psi \rightarrow \gamma K \bar{K}$
100 ± 15	331	<sup>18</sup> 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 <sup>+13</sup> <sub>-20</sub>		BAI 96C	BES	$J/\psi \rightarrow \gamma K^+ K^-$
103 ± 30		AUGUSTIN 88	DM2	$J/\psi \rightarrow \gamma K^+ K^-$
62 ± 10		<sup>19</sup> 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	<sup>20</sup> SCHEGELSKY 06A	RVUE	$\gamma\gamma \rightarrow K_S^0 K_S^0$
100 ± 3		<sup>21</sup> FALVARD 88	DM2	$J/\psi \rightarrow \phi K^+ K^-$

### PRODUCED IN $\bar{p}p$ ANNIHILATION

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
<b>79 ± 8</b>	<sup>22</sup> 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	<sup>23</sup> 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
<b>70 ± 25</b>	BARBERIS 99	OMEG	450 $pp \rightarrow p_s p_f K^+ K^-$

### PRODUCED IN $e p$ COLLISIONS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
<b>83 ± <math>9^{+5}_{-4}</math></b>		<sup>24</sup> 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	<sup>25</sup> CHEKANOV 04	ZEUS	$e p \rightarrow K_S^0 K_S^0 X$

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

<sup>14</sup> CHABAUD 81 is a reanalysis of PAWLICKI 77 data.

<sup>15</sup> 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.

<sup>16</sup> From a fit to the  $D$  with  $f_2(1270)$ - $f_2'(1525)$  interference. Mass fixed at 1516 MeV.

<sup>17</sup> Systematic errors not estimated.

<sup>18</sup> Supersedes ACCIARRI 95J.

<sup>19</sup> From an analysis ignoring interference with  $f_0(1710)$ .

<sup>20</sup> From analysis of L3 data at 91 and 183–209 GeV.

<sup>21</sup> From an analysis including interference with  $f_0(1710)$ .

<sup>22</sup> T-matrix pole.

<sup>23</sup> 4-poles, 5-channel K matrix fit.

<sup>24</sup> 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.

<sup>25</sup> Systematic errors not estimated.

### $f_2'(1525)$ DECAY MODES

Mode	Fraction ( $\Gamma_i/\Gamma$ )
$\Gamma_1$ $K\bar{K}$	(88.7 ± 2.2) %
$\Gamma_2$ $\eta\eta$	(10.4 ± 2.2) %
$\Gamma_3$ $\pi\pi$	( 8.2 ± 1.5 ) × 10 <sup>-3</sup>
$\Gamma_4$ $K\bar{K}^*(892) + \text{c.c.}$	
$\Gamma_5$ $\pi K\bar{K}$	
$\Gamma_6$ $\pi\pi\eta$	
$\Gamma_7$ $\pi^+ \pi^+ \pi^- \pi^-$	
$\Gamma_8$ $\gamma\gamma$	( 1.11 ± 0.14 ) × 10 <sup>-6</sup>

## 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	
$\Gamma$	-23	23	-1	-55
	$x_1$	$x_2$	$x_3$	$x_8$

Mode	Rate (MeV)
$\Gamma_1$ $K\bar{K}$	65 $^{+5}_{-4}$
$\Gamma_2$ $\eta\eta$	7.6 $\pm 1.8$
$\Gamma_3$ $\pi\pi$	0.60 $\pm 0.12$
$\Gamma_8$ $\gamma\gamma$	( 8.1 $\pm 0.9$ ) $\times 10^{-5}$

### $f'_2(1525)$ PARTIAL WIDTHS

$\Gamma(K\bar{K})$					$\Gamma_1$
VALUE (MeV)	DOCUMENT ID	TECN	COMMENT		
<b>65<math>^{+5}_{-4}</math> OUR FIT</b>					
<b>63<math>^{+6}_{-5}</math></b>	<sup>26</sup> LONGACRE	86	MPS	22 $\pi^- p \rightarrow K_S^0 K_S^0 n$	
$\Gamma(\eta\eta)$					$\Gamma_2$
VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT	
<b>7.6<math>\pm 1.8</math> OUR FIT</b>					
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●					
5.0 $\pm 0.8$	870	<sup>27</sup> SCHEGELSKY 06A	RVUE	$\gamma\gamma \rightarrow K_S^0 K_S^0$	
24 $^{+3}_{-1}$		<sup>26</sup> LONGACRE	86	MPS	22 $\pi^- p \rightarrow K_S^0 K_S^0 n$

$\Gamma(\pi\pi)$   $\Gamma_3$

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
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**0.60 ± 0.12 OUR FIT**  
**1.4 <sup>+1.0</sup>/<sub>-0.5</sub>** <sup>26</sup> 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 <sup>+1.0</sup>/<sub>-0.2</sub> 870 <sup>27</sup> SCHEGELSKY 06A RVUE  $\gamma\gamma \rightarrow K_S^0 K_S^0$

$\Gamma(\gamma\gamma)$   $\Gamma_8$

VALUE (keV)	EVTS	DOCUMENT ID	TECN	COMMENT
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**0.081 ± 0.009 OUR FIT**  
 • • • We do not use the following data for averages, fits, limits, etc. • • •

0.13 ± 0.03 870 <sup>27</sup> SCHEGELSKY 06A RVUE  $\gamma\gamma \rightarrow K_S^0 K_S^0$   
<sup>26</sup> From a partial-wave analysis of data using a K-matrix formalism with 5 poles.

<sup>27</sup> 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
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**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 <sup>28</sup> ACCIARRI 01H L3  $e^+ e^- \rightarrow e^+ e^- K_S^0 K_S^0$

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

0.11 <sup>+0.03</sup>/<sub>-0.02</sub> ± 0.02 BEHREND 89C CELL  $e^+ e^- \rightarrow e^+ e^- K_S^0 K_S^0$

0.10 <sup>+0.04</sup>/<sub>-0.03</sub> ± 0.03 BERGER 88 PLUT  $e^+ e^- \rightarrow e^+ e^- K_S^0 K_S^0$

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

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

<sup>28</sup> Supersedes ACCIARRI 95J. From analysis of L3 data at 91 and 183–209 GeV,  
<sup>29</sup> Using an incoherent background.  
<sup>30</sup> Using a coherent background.

$f_2'(1525)$  BRANCHING RATIOS

$\Gamma(\eta\eta)/\Gamma_{\text{total}}$   $\Gamma_2/\Gamma$

VALUE	DOCUMENT ID	TECN	COMMENT
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• • • 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 <sup>31</sup> PROKOSHKIN 91 GAM4  $300 \pi^- p \rightarrow \pi^- p \eta\eta$

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

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

$\Gamma_2/\Gamma_1$

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    <sup>32</sup> BINON      07    GAMS    32.5  $K^- p \rightarrow \eta\eta(\Lambda/\Sigma^0)$

0.11 ±0.04      <sup>33</sup> 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  $K^- p$

<sup>32</sup> Using the compilation of the cross sections for  $f'_2(1525)$  production in  $K^- p$  collisions from ASTON 88D.

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

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

$\Gamma_3/\Gamma$

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 <sup>+0.071</sup>/<sub>-0.013</sub>      <sup>34</sup> GORLICH      80    ASPK    17,18  $\pi^- p$

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

<sup>34</sup> Assuming that the  $f'_2(1525)$  is produced by an one-pion exchange production mechanism.

<sup>35</sup> MARTIN 79 uses the PAWLICKI 77 data with different input value of the  $f'_2(1525) \rightarrow K\bar{K}$  branching ratio.

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

$\Gamma_3/\Gamma_1$

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

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

$\Gamma_6/\Gamma_1$

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.)
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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>	
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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>	
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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.)
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		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 $\gamma$ 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+)
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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
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