NODE=M013

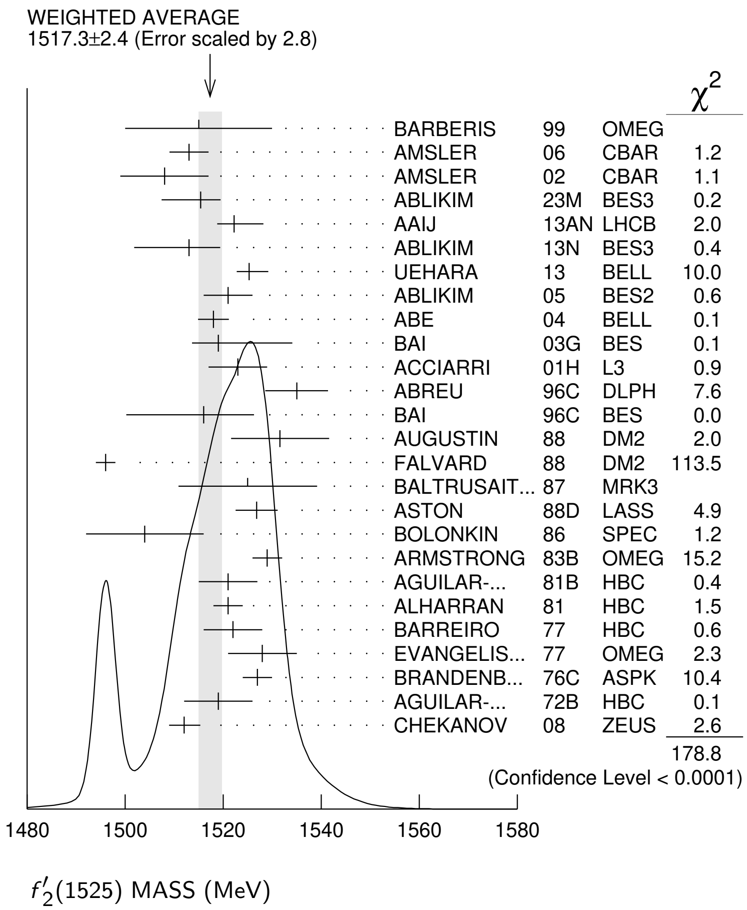
$f'_2(1525)$ $I^G(J^{PC}) = 0^+(2^{++})$

$f'_2(1525)$ MASS

NODE=M013MX

NODE=M013MX

VALUE (MeV)	DOCUMENT ID
1517.3±2.4 OUR AVERAGE	Includes data from the 6 datablocks that follow this one. Error includes scale factor of 2.8. See the ideogram below.



PRODUCED BY PION BEAM

NODE=M013M1

NODE=M013M1

The data in this block is included in the average printed for a previous datablock.

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

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
1521 ± 13		TIKHOMIROV 03	SPEC	$40.0\ \pi^- C \to K^0_S K^0_S K^0_L X$
1547^{+10}_{-2}		[1] LONGACRE 86	MPS	$22\ \pi^- p \to K^0_S K^0_S n$
1496^{+9}_{-8}		[2] CHABAUD 81	ASPK	$6\ \pi^- p \to K^+ K^- n$
1497^{+8}_{-9}		CHABAUD 81	ASPK	$18.4\ \pi^- p \to K^+ K^- n$
1492 ± 29		GORLICH 80	ASPK	$17\ \pi^- p$ polarized $\to K^+ K^- n$
1502 ± 25		[3] CORDEN 79	OMEG	12–15 $\pi^- p \to \pi^+ \pi^- n$
1480	14	CRENNELL 66	HBC	$6.0\ \pi^- p \to K^0_S K^0_S n$

OCCUR=2

[1] From a partial-wave analysis of data using a K-matrix formalism with 5 poles.
NODE=M013M;LINKAGE=L

[2] CHABAUD 81 is a reanalysis of PAWLICKI 77 data.
NODE=M013M;LINKAGE=D

[3] From an amplitude analysis where the $f'_2(1525)$ width and elasticity are in complete disagreement with the values obtained from $K\overline{K}$ channel, making the solution dubious.
NODE=M013M;LINKAGE=N

PRODUCED BY $K^{\pm}$ BEAM

NODE=M013M2
NODE=M013M2

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT

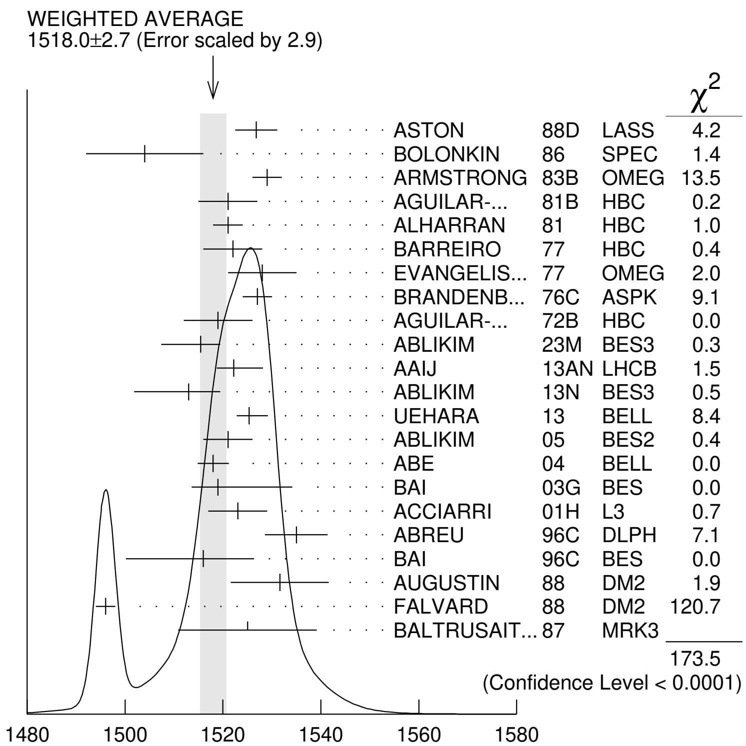
The data in this block is included in the average printed for a previous datablock.

1518.0± 2.7 OUR AVERAGE Includes data from the datablock that follows this one. Error includes scale factor of 2.9. See the ideogram below.

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
1526.8± 4.3		ASTON	88D	LASS	11 $K^- p \to K^0_S K^0_S \Lambda$
1504 ±12		BOLONKIN	86	SPEC	40 $K^- p \to K^0_S K^0_S Y$
1529 ± 3		ARMSTRONG	83B	OMEG	18.5 $K^- p \to K^- K^+ \Lambda$
1521 ± 6	650	AGUILAR-...	81B	HBC	4.2 $K^- p \to \Lambda K^+ K^-$
1521 ± 3	572	ALHARRAN	81	HBC	8.25 $K^- p \to \Lambda K \overline{K}$
1522 ± 6	123	BARREIRO	77	HBC	4.15 $K^- p \to \Lambda K^0_S K^0_S$
1528 ± 7	166	EVANGELIS...	77	OMEG	10 $K^- p \to K^+ K^- (\Lambda, \Sigma)$
1527 ± 3	120	BRANDENB...	76C	ASPK	13 $K^- p \to K^+ K^- (\Lambda, \Sigma)$
1519 ± 7	100	AGUILAR-...	72B	HBC	3.9,4.6 $K^- p \to K \overline{K} (\Lambda, \Sigma)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
1514 ± 8	61	BINON	07	GAMS	32.5 $K^- p \to \eta\eta(\Lambda / \Sigma^0)$
1513 ±10		[1] BARKOV	99	SPEC	40 $K^- p \to K^0_S K^0_S y$

[1] Systematic errors not estimated.

NODE=M013M2;LINKAGE=SK



PRODUCED BY $K^{\pm}$ BEAM (MeV)

PRODUCED IN $e^+ e^-$ ANNIHILATION AND PARTICLE DECAYS

NODE=M013M3
NODE=M013M3

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT

The data in this block is included in the average printed for a previous datablock.

1514 ± 4 OUR AVERAGE Error includes scale factor of 3.6. See the ideogram below.

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
$1515.4 \pm 2.5 ^{+3.2}_{-7.6}$	126K	ABLIKIM	23M	BES3	$J/\psi \to \gamma K^0_S K^0_S \pi^0$
$1522.2 \pm 2.8 ^{+5.3}_{-2.0}$		AAIJ	13AN	LHCB	$\overline{B}^0_s \to J/\psi K^+ K^-$
$1513 \pm 5 ^{+4}_{-10}$	5.5k	[1] ABLIKIM	13N	BES3	$e^+ e^- \to J/\psi \to \gamma\eta\eta$
$1525.3 ^{+1.2}_{-1.4} {}^{+3.7}_{-2.1}$		UEHARA	13	BELL	$\gamma\gamma \to K^0_S K^0_S$
1521 ± 5		ABLIKIM	05	BES2	$J/\psi \to \phi K^+ K^-$
1518 ± 1 ± 3		ABE	04	BELL	10.6 $e^+ e^- \to e^+ e^- K^+ K^-$
$1519 \pm 2 ^{+15}_{-5}$		BAI	03G	BES	$J/\psi \to \gamma K \overline{K}$

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT	
1523 ± 6	331	[2] ACCIARRI	01H	L3	91, 183–209 $e^+ e^- \to e^+ e^- K^0_S K^0_S$	
1535 ± 5 ± 4		ABREU	96C	DLPH	$Z^0 \to K^+ K^- + X$	
1516 ± 5 $^{+9}_{-15}$		BAI	96C	BES	$J/\psi \to \gamma K^+ K^-$	
1531.6±10.0		AUGUSTIN	88	DM2	$J/\psi \to \gamma K^+ K^-$	
1496 ± 2		[3] FALVARD	88	DM2	$J/\psi \to \phi K^+ K^-$	OCCUR=2
1525 ±10 ±10		BALTRUSAIT...87		MRK3	$J/\psi \to \gamma K^+ K^-$	
• • • We do not use the following data for averages, fits, limits, etc. • • •						
1518 ± 3		[4] KLEMPT	22	RVUE	$J/\psi(1S) \to \gamma \pi^0 \pi^0$, $\gamma K^0_S K^0_S$	
1503 ±11		[5] RODAS	22	RVUE	$J/\psi(1S) \to \gamma (\pi\pi, K\overline{K})$	
1532 ± 3 ± 6	644	[6,7] DOBBS	15		$J/\psi \to \gamma K^+ K^-$	
1557 ± 9 ± 3	113	[6,7] DOBBS	15		$\psi(2S) \to \gamma K^+ K^-$	OCCUR=2
1526 ± 7	29	[8] LEES	14H	BABR	$e^+ e^- \to K^0_S K^0_S K^+ K^- \gamma$	
1523 ± 5	870	[9] SCHEGELSKY	06A	RVUE	$\gamma\gamma \to K^0_S K^0_S$	
1515 ± 5		[10] FALVARD	88	DM2	$J/\psi \to \phi K^+ K^-$	

[1] From partial wave analysis including all possible combinations of 0^{++}, 2^{++}, and 4^{++} resonances. NODE=M013M3;LINKAGE=A

[2] Supersedes ACCIARRI 95J. NODE=M013M;LINKAGE=HA

[3] From an analysis including interference with $f_0(1710)$. NODE=M013M;LINKAGE=F2

[4] Fit of the tensor partial waves from BES3 in the multipole basis. NODE=M013M3;LINKAGE=F

[5] T-matrix pole from coupled channel K-matrix fit to data on $J/\psi \to \gamma \pi^0 \pi^0$ (ABLIKIM 15AE) and $J/\psi \to \gamma K^0_S K^0_S$ (ABLIKIM 18AA). NODE=M013M3;LINKAGE=E

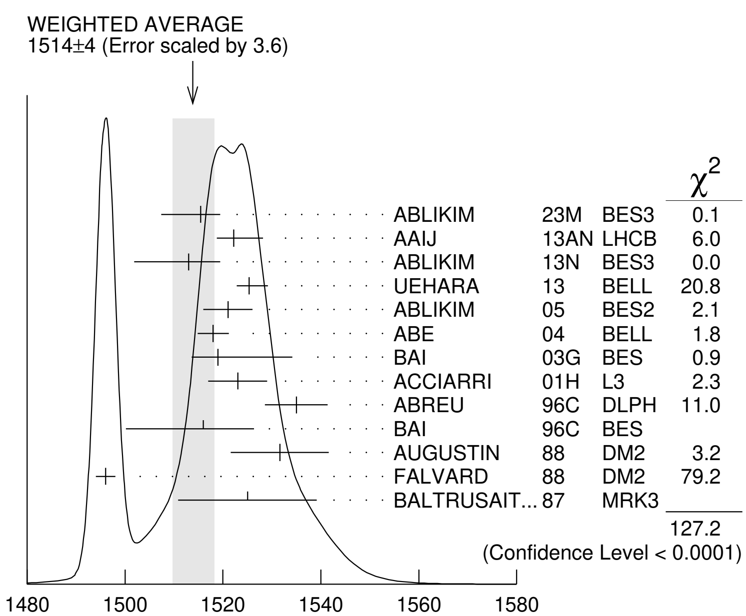
[6] Using CLEO-c data but not authored by the CLEO Collaboration. NODE=M013M3;LINKAGE=B

[7] From a fit to a Breit-Wigner line shape with fixed $\Gamma = 73$ MeV. NODE=M013M3;LINKAGE=C

[8] From a fit to a Breit-Wigner line shape plus a second-order polynomial function. Systematic errors not evaluated. NODE=M013M3;LINKAGE=D

[9] From analysis of L3 data at 91 and 183–209 GeV. NODE=M013M3;LINKAGE=SC

[10] From an analysis ignoring interference with $f_0(1710)$. NODE=M013M;LINKAGE=F1



$f'_2(1525)$ mass, $e^+ e^-$ annihilation and particle decays (MeV)

PRODUCED IN $\overline{p}p$ ANNIHILATION

NODE=M013M9
NODE=M013M9

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
The data in this block is included in the average printed for a previous datablock.				
1512 ± 4 OUR AVERAGE				
1513 ± 4	AMSLER	06	CBAR	0.9 $\overline{p}p \to K^+ K^- \pi^0$
1508 ± 9	[1] AMSLER	02	CBAR	0.9 $\overline{p}p \to \pi^0 \eta\eta$, $\pi^0\pi^0\pi^0$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
1495.0± 1.1±8.1	[2] ALBRECHT	20	RVUE	0.9 $\overline{p}p \to \pi^0\pi^0\eta$, $\pi^0\eta\eta$, $\pi^0 K^+ K^-$
1530 ±12	[3] ANISOVICH	09	RVUE	0.0 $\overline{p}p$, πN

[1] T-matrix pole. NODE=M013M;LINKAGE=TT

[2] T-matrix pole, 4 poles, 4 channels, including scattering data from HYAMS 75 ($\pi\pi$), LONGACRE 86 ($K\overline{K}$), BINON 83 ($\eta\eta$). NODE=M013M9;LINKAGE=A

[3] 4-poles, 5-channel K matrix fit. NODE=M013M9;LINKAGE=AN

CENTRAL PRODUCTION

NODE=M013M4
NODE=M013M4

VALUE (MeV)	*DOCUMENT ID*	*TECN*	*COMMENT*
The data in this block is included in the average printed for a previous datablock.			
1515±15	BARBERIS 99	OMEG	450 $pp \rightarrow p_s p_f K^+ K^-$

PRODUCED IN *ep* COLLISIONS

NODE=M013M10
NODE=M013M10

VALUE (MeV)	*EVTS*	*DOCUMENT ID*	*TECN*	*COMMENT*
The data in this block is included in the average printed for a previous datablock.				
$1512\pm3^{+1.4}_{-0.5}$		[1] CHEKANOV 08	ZEUS	$ep \rightarrow K^0_S K^0_S X$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
1537^{+9}_{-8}	84	[2] CHEKANOV 04	ZEUS	$ep \rightarrow K^0_S K^0_S X$

[1] In the SU(3) based model with a specific interference pattern of the $f_2(1270)$, $a^0_2(1320)$, and $f'_2(1525)$ mesons incoherently added to the $f_0(1710)$ and non-resonant background. NODE=M013M10;LINKAGE=HE

[2] Systematic errors not estimated. NODE=M013M10;LINKAGE=CH

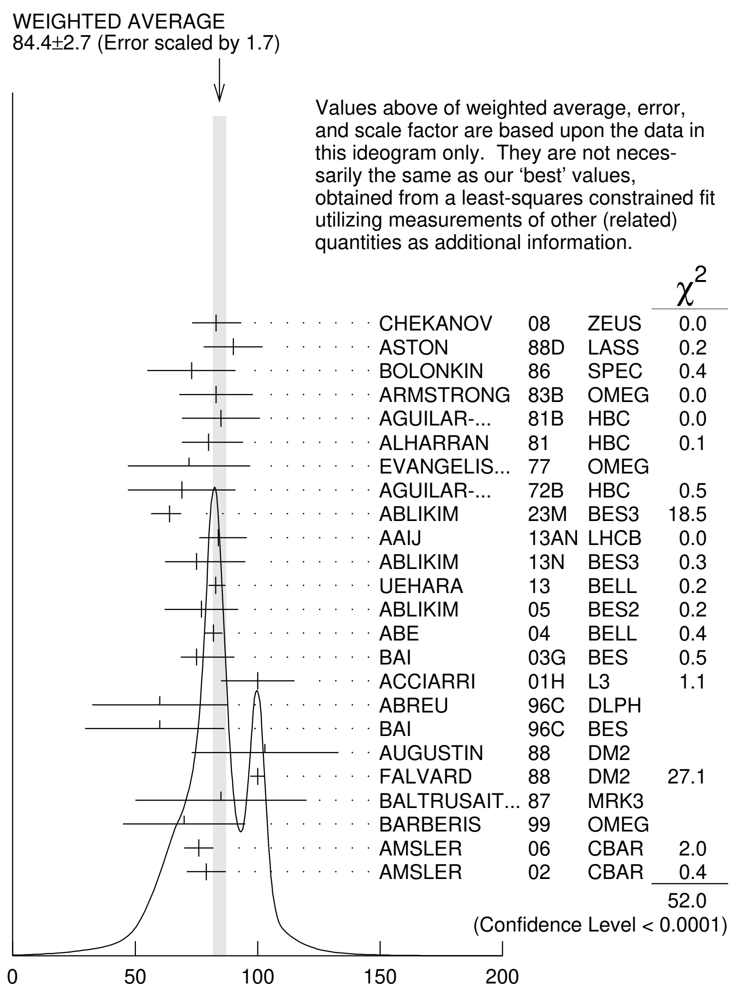
f'_2(1525) WIDTH

NODE=M013WX

NODE=M013WX

VALUE (MeV)	*DOCUMENT ID*
$72\ ^{+7}_{-6}$ OUR FIT	

84.4±2.7 OUR AVERAGE Includes data from the 6 datablocks that follow this one. Error includes scale factor of 1.7. See the ideogram below.



f'_2(1525) WIDTH (MeV)

PRODUCED BY PION BEAM

NODE=M013W1

The data in this block is included in the average printed for a previous datablock.

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

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
102 ± 42	TIKHOMIROV	03	SPEC	40.0 $\pi^- C \to K^0_S K^0_S K^0_L X$
108^{+5}_{-2}	[1] LONGACRE	86	MPS	22 $\pi^- p \to K^0_S K^0_S n$
69^{+22}_{-16}	[2] CHABAUD	81	ASPK	6 $\pi^- p \to K^+ K^- n$
137^{+23}_{-21}	CHABAUD	81	ASPK	18.4 $\pi^- p \to K^+ K^- n$
150^{+83}_{-50}	GORLICH	80	ASPK	17 $\pi^- p$ polarized $\to K^+ K^- n$
165 ± 42	[3] CORDEN	79	OMEG	12–15 $\pi^- p \to \pi^+ \pi^- n$
92^{+39}_{-22}	[4] POLYCHRO...	79	STRC	7 $\pi^- p \to n K^0_S K^0_S$

OCCUR=2

[1] From a partial-wave analysis of data using a K-matrix formalism with 5 poles. NODE=M013W;LINKAGE=L

[2] CHABAUD 81 is a reanalysis of PAWLICKI 77 data. NODE=M013W;LINKAGE=D

[3] From an amplitude analysis where the $f'_2(1525)$ width and elasticity are in complete disagreement with the values obtained from $K\overline{K}$ channel, making the solution dubious. NODE=M013W;LINKAGE=N

[4] From a fit to the D with $f_2(1270)$-$f'_2(1525)$ interference. Mass fixed at 1516 MeV. NODE=M013W;LINKAGE=M

PRODUCED BY $K^\pm$ BEAM

NODE=M013W2

The data in this block is included in the average printed for a previous datablock.

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
82± 6 OUR AVERAGE					
90 ± 12		ASTON	88D	LASS	11 $K^- p \to K^0_S K^0_S \Lambda$
73 ± 18		BOLONKIN	86	SPEC	40 $K^- p \to K^0_S K^0_S Y$
83 ± 15		ARMSTRONG	83B	OMEG	18.5 $K^- p \to K^- K^+ \Lambda$
85 ± 16	650	AGUILAR-...	81B	HBC	4.2 $K^- p \to \Lambda K^+ K^-$
80^{+14}_{-11}	572	ALHARRAN	81	HBC	8.25 $K^- p \to \Lambda K \overline{K}$
72 ± 25	166	EVANGELIS...	77	OMEG	10 $K^- p \to K^+ K^- (\Lambda, \Sigma)$
69 ± 22	100	AGUILAR-...	72B	HBC	3.9,4.6 $K^- p \to K \overline{K} (\Lambda, \Sigma)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
92^{+25}_{-16}	61	BINON	07	GAMS	32.5 $K^- p \to \eta\eta(\Lambda/\Sigma^0)$
75 ± 20		[1] BARKOV	99	SPEC	40 $K^- p \to K^0_S K^0_S y$
62^{+19}_{-14}	123	BARREIRO	77	HBC	4.15 $K^- p \to \Lambda K^0_S K^0_S$
61 ± 8	120	BRANDENB...	76C	ASPK	13 $K^- p \to K^+ K^- (\Lambda, \Sigma)$

[1] Systematic errors not estimated. NODE=M013W2;LINKAGE=SK

PRODUCED IN e^+e^- ANNIHILATION AND PARTICLE DECAYS

NODE=M013W3

The data in this block is included in the average printed for a previous datablock.

86 ± 4 OUR AVERAGE Error includes scale factor of 2.4. See the ideogram below.

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
$64.0\pm 4.3^{+2.0}_{-6.1}$	126K	ABLIKIM	23M	BES3	$J/\psi \to \gamma K^0_S K^0_S \pi^0$
$84 \pm 6 {}^{+10}_{-5}$		AAIJ	13AN	LHCB	$\overline{B}^0_s \to J/\psi K^+ K^-$
$75 {}^{+12}_{-10} {}^{+16}_{-8}$	5.5k	[1] ABLIKIM	13N	BES3	$e^+e^- \to J/\psi \to \gamma\eta\eta$
$82.9^{+2.1}_{-2.2}{}^{+3.3}_{-2.0}$		UEHARA	13	BELL	$\gamma\gamma \to K^0_S K^0_S$
77 ± 15		ABLIKIM	05	BES2	$J/\psi \to \phi K^+ K^-$
$82 \pm 2 \pm 3$		ABE	04	BELL	10.6 $e^+e^- \to e^+e^- K^+K^-$
$75 \pm 4 {}^{+15}_{-5}$		BAI	03G	BES	$J/\psi \to \gamma K \overline{K}$
100 ± 15	331	[2] ACCIARRI	01H	L3	91, 183–209 $e^+e^- \to e^+e^- K^0_S K^0_S$
$60 \pm20 \pm19$		ABREU	96C	DLPH	$Z^0 \to K^+ K^- + X$
$60 \pm23 {}^{+13}_{-20}$		BAI	96C	BES	$J/\psi \to \gamma K^+ K^-$
103 ± 30		AUGUSTIN	88	DM2	$J/\psi \to \gamma K^+ K^-$
100 ± 3		[3] FALVARD	88	DM2	$J/\psi \to \phi K^+ K^-$
85 ± 35		BALTRUSAIT...	87	MRK3	$J/\psi \to \gamma K^+ K^-$

OCCUR=2

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

78 ± 6		[4] KLEMPT	22	RVUE	$J/\psi(1S) \to \gamma\pi^0\pi^0$, $\gamma K^0_S K^0_S$
84 ±15		[5] RODAS	22	RVUE	$J/\psi(1S) \to \gamma (\pi\pi, K\overline{K})$
37 ±12	29	[6] LEES	14H	BABR	$e^+e^- \to K^0_S K^0_S K^+ K^- \gamma$
104 ±10	870	[7] SCHEGELSKY	06A	RVUE	$\gamma\gamma \to K^0_S K^0_S$
62 ±10		[8] FALVARD	88	DM2	$J/\psi \to \phi K^+ K^-$

[1] From partial wave analysis including all possible combinations of 0^{++}, 2^{++}, and 4^{++} resonances. NODE=M013W3;LINKAGE=A

[2] Supersedes ACCIARRI 95J. NODE=M013W;LINKAGE=HA

[3] From an analysis including interference with $f_0(1710)$. NODE=M013W;LINKAGE=F2

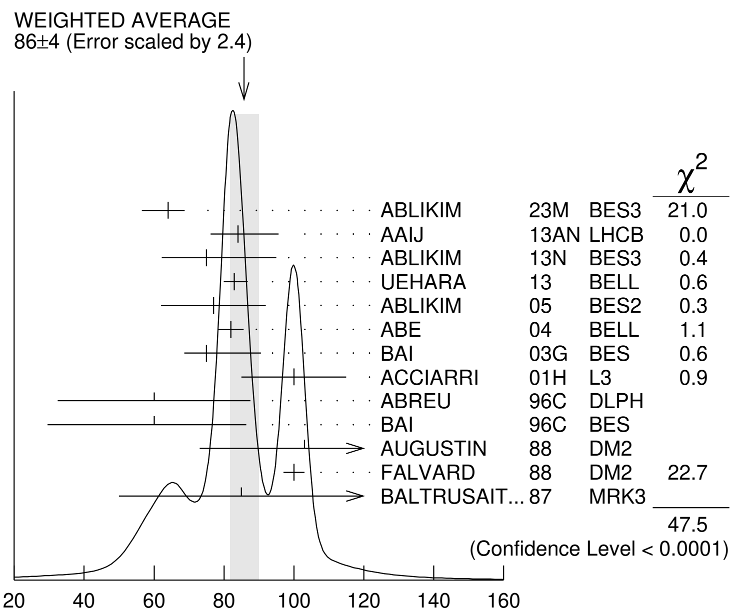
[4] Fit of the tensor partial waves from BES3 in the multipole basis. NODE=M013W3;LINKAGE=D

[5] T-matrix pole from coupled channel K-matrix fit to data on $J/\psi \to \gamma\pi^0\pi^0$ (ABLIKIM 15AE) and $J/\psi \to \gamma K^0_S K^0_S$ (ABLIKIM 18AA). NODE=M013W3;LINKAGE=C

[6] From a fit to a Breit-Wigner line shape plus a second-order polynomial function. Systematic errors not evaluated. NODE=M013W3;LINKAGE=B

[7] From analysis of L3 data at 91 and 183–209 GeV. NODE=M013W3;LINKAGE=SC

[8] From an analysis ignoring interference with $f_0(1710)$. NODE=M013W;LINKAGE=F1



$f'_2(1525)$ width, e^+e^- annihilation and particle decays (MeV)

PRODUCED IN $\overline{p}p$ ANNIHILATION

NODE=M013W9
NODE=M013W9

VALUE (MeV)	*DOCUMENT ID*	*TECN*	*COMMENT*
The data in this block is included in the average printed for a previous datablock.			
77 ± 5 OUR AVERAGE			
76 ± 6	AMSLER	06 CBAR	$0.9\ \overline{p}p \to K^+K^-\pi^0$
79 ± 8	[1] AMSLER	02 CBAR	$0.9\ \overline{p}p \to \pi^0\eta\eta, \pi^0\pi^0\pi^0$
• • • We do not use the following data for averages, fits, limits, etc. • • •			
104.8± 0.9±9.8	[2] ALBRECHT	20 RVUE	$0.9\ \overline{p}p \to \pi^0\pi^0\eta,\ \pi^0\eta\eta,\ \pi^0K^+K^-$
128 ±20	[3] ANISOVICH	09 RVUE	$0.0\ \overline{p}p, \pi N$

[1] T-matrix pole. NODE=M013W9;LINKAGE=TT

[2] T-matrix pole, 4 poles, 4 channels, including scattering data from HYAMS 75 ($\pi\pi$), LONGACRE 86 ($K\overline{K}$), BINON 83 ($\eta\eta$). NODE=M013W9;LINKAGE=A

[3] K-matrix, 4-poles, 5-channel fit. NODE=M013W9;LINKAGE=AN

CENTRAL PRODUCTION

NODE=M013W4
NODE=M013W4

VALUE (MeV)	*DOCUMENT ID*	*TECN*	*COMMENT*
The data in this block is included in the average printed for a previous datablock.			
70±25	BARBERIS	99 OMEG	$450\ pp \to p_s p_f K^+K^-$

PRODUCED IN ep COLLISIONS

NODE=M013W10

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT

The data in this block is included in the average printed for a previous datablock.

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
$83\pm 9^{+5}_{-4}$		[1] CHEKANOV	08	ZEUS	$e p \to K^0_S K^0_S X$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
50^{+34}_{-22}	84	[2] CHEKANOV	04	ZEUS	$e p \to K^0_S K^0_S X$

[1] In the SU(3) based model with a specific interference pattern of the $f_2(1270)$, $a^0_2(1320)$, and $f'_2(1525)$ mesons incoherently added to the $f_0(1710)$ and non-resonant background. NODE=M013W10;LINKAGE=HE

[2] Systematic errors not estimated. NODE=M013W10;LINKAGE=CH

$f'_2(1525)$ DECAY MODES

NODE=M013215;NODE=M013

	Mode	Fraction (Γ_i/Γ)	
Γ_1	$K\overline{K}$	(88.8 ± 2.2) %	DESIG=2
Γ_2	$\eta\eta$	(10.3 ± 2.2) %	DESIG=4
Γ_3	$\pi\pi$	$(8.2 \pm 1.5) \times 10^{-3}$	DESIG=1
Γ_4	$K\overline{K}^*(892)+$ c.c.		DESIG=3
Γ_5	$\pi K\overline{K}$		DESIG=6
Γ_6	$\pi\pi\eta$		DESIG=5
Γ_7	$\pi^+\pi^+\pi^-\pi^-$		DESIG=7
Γ_8	$\gamma\gamma$	$(1.12\pm 0.15) \times 10^{-6}$	DESIG=8

CONSTRAINED FIT INFORMATION

An overall fit to 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 $\chi^2 = 14.2$ for 12 degrees of freedom.

The following *off-diagonal* array elements are the correlation coefficients $\left\langle\delta x_i \delta x_j\right\rangle/(\delta x_i \cdot \delta x_j)$, in percent, from the fit to the branching fractions, $x_i \equiv \Gamma_i/\Gamma_{total}$. The fit constrains the x_i whose labels appear in this array to sum to one.

x_2	−100			
x_3	−5	−1		
x_8	0	0	1	
Γ	−28	28	−1	−62
	x_1	x_2	x_3	x_8

	Mode	Rate (MeV)	
Γ_1	$K\overline{K}$	$64\ ^{+6}_{-5}$	DESIG=2
Γ_2	$\eta\eta$	7.4 ± 1.9	DESIG=4
Γ_3	$\pi\pi$	0.59 ± 0.12	DESIG=1
Γ_8	$\gamma\gamma$	$(8.1 \pm 0.9) \times 10^{-5}$	DESIG=8

$f'_2(1525)$ PARTIAL WIDTHS

NODE=M013220

$\Gamma(K\overline{K})$ Γ_1

NODE=M013W6

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
64^{+6}_{-5} OUR FIT				
63^{+6}_{-5}	[1] LONGACRE	86	MPS	$22\ \pi^- p \to K^0_S K^0_S n$

[1] From a partial-wave analysis of data using a K-matrix formalism with 5 poles. NODE=M013PW;LINKAGE=L

$\Gamma(\eta\eta)$ Γ_2

NODE=M013W7
NODE=M013W7

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
7.4±1.9 OUR FIT				
• • • We do not use the following data for averages, fits, limits, etc. • • •				
5.0±0.8	870	[1] SCHEGELSKY 06A	RVUE	$\gamma\gamma \to K^0_S K^0_S$
$24\ ^{+3}_{-1}$		[2] LONGACRE 86	MPS	$22\ \pi^- p \to K^0_S K^0_S n$

[1] From analysis of L3 data at 91 and 183–209 GeV, using $\Gamma(f'_2(1525) \to K\overline{K}) = 68$ MeV and SU(3) relations. NODE=M013W7;LINKAGE=SC

[2] From a partial-wave analysis of data using a K-matrix formalism with 5 poles. NODE=M013PW7;LINKAGE=L

$\Gamma(\pi\pi)$ Γ_3

NODE=M013W5
NODE=M013W5

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
0.59±0.12 OUR FIT				
$\mathbf{1.4\ ^{+1.0}_{-0.5}}$		[1] LONGACRE 86	MPS	$22\ \pi^- p \to K^0_S K^0_S n$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
$0.2\ ^{+1.0}_{-0.2}$	870	[2] SCHEGELSKY 06A	RVUE	$\gamma\gamma \to K^0_S K^0_S$

[1] From a partial-wave analysis of data using a K-matrix formalism with 5 poles. NODE=M013PW5;LINKAGE=L

[2] From analysis of L3 data at 91 and 183–209 GeV, using $\Gamma(f'_2(1525) \to K\overline{K}) = 68$ MeV and SU(3) relations. NODE=M013W5;LINKAGE=SC

$\Gamma(\gamma\gamma)$ Γ_8

NODE=M013W8
NODE=M013W8

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	[1] SCHEGELSKY 06A	RVUE	$\gamma\gamma \to K^0_S K^0_S$

[1] From analysis of L3 data at 91 and 183–209 GeV, using $\Gamma(f'_2(1525) \to K\overline{K}) = 68$ MeV and SU(3) relations. NODE=M013W8;LINKAGE=SC

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

NODE=M013R00
NODE=M013R00

VALUE	DOCUMENT ID	TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •			
$0.746\pm0.002^{+0.166}_{-0.162}$	[1] ALBRECHT 20	RVUE	$0.9\ \overline{p}p \to \pi^0\pi^0\eta,\ \pi^0\eta\eta,\ \pi^0 K^+ K^-$

[1] Residue from T-matrix pole, 4 poles, 4 channels, including scattering data from HYAMS 75 ($\pi\pi$), LONGACRE 86 ($K\overline{K}$), BINON 83 ($\eta\eta$). NODE=M013R00;LINKAGE=A

$f'_2(1525)$ Γ(i)Γ(γγ)/Γ(total)

NODE=M013223

$\Gamma(K\overline{K}) \times \Gamma(\gamma\gamma)/\Gamma_{total}$ $\Gamma_1\Gamma_8/\Gamma$

NODE=M013G1
NODE=M013G1

VALUE (keV)	EVTS	DOCUMENT ID	TECN	COMMENT
0.072 ±0.007 OUR FIT				
0.072 ±0.007 OUR AVERAGE				
$0.048\ ^{+0.067}_{-0.008}\ ^{+0.108}_{-0.012}$		UEHARA 13	BELL	$\gamma\gamma \to K^0_S K^0_S$
0.0564±0.0048±0.0116		ABE 04	BELL	$10.6\ e^+e^- \to e^+e^- K^+K^-$
0.076 ±0.006 ±0.011	331	[1] ACCIARRI 01H	L3	$e^+e^- \to e^+e^- K^0_S K^0_S$
0.067 ±0.008 ±0.015		[2] ALBRECHT 90G	ARG	$e^+e^- \to e^+e^- K^+K^-$
$0.11\ ^{+0.03}_{-0.02}\ \pm0.02$		BEHREND 89C	CELL	$e^+e^- \to e^+e^- K^0_S K^0_S$
$0.10\ ^{+0.04}_{-0.03}\ ^{+0.03}_{-0.02}$		BERGER 88	PLUT	$e^+e^- \to e^+e^- K^0_S K^0_S$
0.12 ±0.07 ±0.04		[2] AIHARA 86B	TPC	$e^+e^- \to e^+e^- K^+K^-$
0.11 ±0.02 ±0.04		[2] ALTHOFF 83	TASS	$e^+e^- \to e^+e^- K\overline{K}$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.0314±0.0050±0.0077		[3] ALBRECHT 90G	ARG	$e^+e^- \to e^+e^- K^+K^-$

OCCUR=2

[1] Supersedes ACCIARRI 95J. From analysis of L3 data at 91 and 183–209 GeV, NODE=M013G;LINKAGE=HA

[2] Using an incoherent background. NODE=M013G1;LINKAGE=A

[3] Using a coherent background. NODE=M013G1;LINKAGE=B

$f'_2(1525)$ BRANCHING RATIOS

NODE=M013225

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

NODE=M013R8
NODE=M013R8

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.059±0.003±0.026	[1] ALBRECHT	20	RVUE	0.9 $\bar{p}p \to \pi^0\pi^0\eta$, $\pi^0\eta\eta$, $\pi^0 K^+ K^-$
seen	UEHARA	10A	BELL	10.6 $e^+e^- \to e^+e^-\eta\eta$
0.10 ±0.03	[2] PROKOSHKIN	91	GAM4	300 $\pi^- p \to \pi^- p\eta\eta$

[1] Residue from T-matrix pole, 4 poles, 4 channels, including scattering data from HYAMS 75 ($\pi\pi$), LONGACRE 86 ($K\overline{K}$), BINON 83 ($\eta\eta$). NODE=M013R8;LINKAGE=A

[2] Combining results of GAM4 with those of WA76 on $K\overline{K}$ central production and results of CBAL, MRK3 and DM2 on $J/\psi \to \gamma\eta\eta$. NODE=M013R8;LINKAGE=B

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

NODE=M013R3
NODE=M013R3

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
0.116±0.028 OUR FIT						
0.115±0.028 OUR AVERAGE						
0.119±0.015±0.036		61	[1] BINON	07	GAMS	32.5 $K^- p \to \eta\eta(\Lambda/\Sigma^0)$
0.11 ±0.04			[2] PROKOSHKIN	91	GAM4	300 $\pi^- p \to \pi^- p\eta\eta$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
< 0.14	90		BARBERIS	00E		450 $pp \to p_f\eta\eta p_s$
< 0.50			BARNES	67	HBC	4.6,5.0 $K^- p$

[1] Using the compilation of the cross sections for $f'_2(1525)$ production in $K^- p$ collisions from ASTON 88D. NODE=M013R3;LINKAGE=BI

[2] Combining results of GAM4 with those of WA76 on $K\overline{K}$ central production and results of CBAL, MRK3 and DM2 on $J/\psi \to \gamma\eta\eta$. NODE=M013R3;LINKAGE=B

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

NODE=M013R1
NODE=M013R1

VALUE (units 10^{-2})	CL%	DOCUMENT ID		TECN	COMMENT
0.82±0.16 OUR FIT					
0.75±0.16 OUR AVERAGE					
0.7 ±0.2		COSTA	80	OMEG	10 $\pi^- p \to K^+K^- n$
2.7 $^{+7.1}_{-1.3}$		[1] GORLICH	80	ASPK	17,18 $\pi^- p$
0.75±0.25		[1,2] MARTIN	79	RVUE	
• • • We do not use the following data for averages, fits, limits, etc. • • •					
3.4 ±1.5 ±1.0		[3] ALBRECHT	20	RVUE	0.9 $\bar{p}p \to \pi^0\pi^0\eta$, $\pi^0\eta\eta$, $\pi^0 K^+K^-$
< 6	95	AGUILAR-...	81B	HBC	4.2 $K^- p \to \Lambda K^+ K^-$
19 ±3		CORDEN	79	OMEG	12–15 $\pi^- p \to \pi^+\pi^- n$
< 4.5	95	BARREIRO	77	HBC	4.15 $K^- p \to \Lambda K^0_S K^0_S$
1.2 ±0.4		[1] PAWLICKI	77	SPEC	6 $\pi N \to K^+K^- N$
< 6.3	90	BRANDENB...	76C	ASPK	13 $K^- p \to K^+K^-(\Lambda,\Sigma)$
< 0.86		[1] BEUSCH	75B	OSPK	8.9 $\pi^- p \to K^0\overline{K}^0 n$

[1] Assuming that the $f'_2(1525)$ is produced by an one-pion exchange production mechanism. NODE=M013R1;LINKAGE=C

[2] MARTIN 79 uses the PAWLICKI 77 data with different input value of the $f'_2(1525) \to K\overline{K}$ branching ratio. NODE=M013R1;LINKAGE=D

[3] Residue from T-matrix pole, 4 poles, 4 channels, including scattering data from HYAMS 75 ($\pi\pi$), LONGACRE 86 ($K\overline{K}$), BINON 83 ($\eta\eta$). NODE=M013R1;LINKAGE=A

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

NODE=M013R7
NODE=M013R7

VALUE	DOCUMENT ID		TECN	COMMENT
0.0092±0.0018 OUR FIT				
0.075 ±0.035	AUGUSTIN	87	DM2	$J/\psi \to \gamma\pi^+\pi^-$

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

NODE=M013R5
NODE=M013R5

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	

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

NODE=M013R4
NODE=M013R4

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	

$\Gamma(\pi^+\pi^+\pi^-\pi^-)/\Gamma(K\overline{K})$ Γ_7/Γ_1

NODE=M013R6
NODE=M013R6

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 $K^- p$

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