$a_2(1700)$

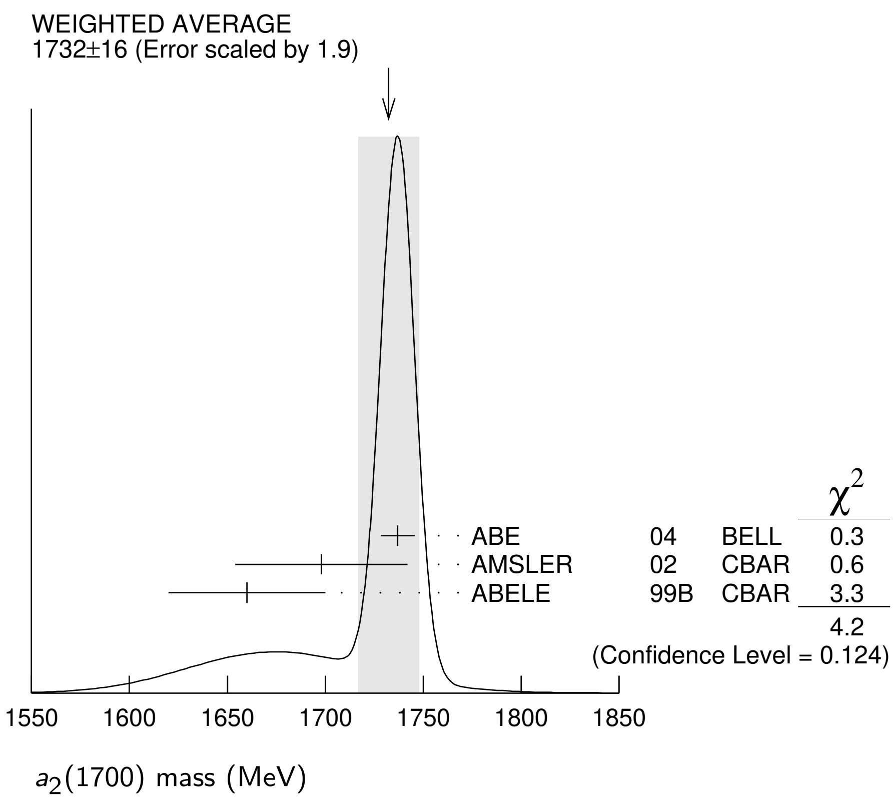
$I^G(J^{PC}) = 1^-(2^{++})$

OMITTED FROM SUMMARY TABLE

$a_2(1700)$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	CHG	COMMENT
1732±16 OUR AVERAGE		Error includes scale factor of 1.9. See the ideogram below.				
1737± 5± 7		ABE	04	BELL		10.6 $e^+e^- \to e^+e^-K^+K^-$
1698±44		[1] AMSLER	02	CBAR		0.9 $\overline{p}p \to \pi^0\eta\eta$
1660±40		ABELE	99B	CBAR		1.94 $\overline{p}p \to \pi^0\eta\eta$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
1722± 9±15	18k	[2] SCHEGELSKY	06	RVUE	0	$\gamma\gamma \to \pi^+\pi^-\pi^0$
1702± 7	80k	[3] UMAN	06	E835		5.2 $\overline{p}p \to \eta\eta\pi^0$
1721±13±44	145k	LU	05	B852		18 $\pi^-p \to \omega\pi^-\pi^0p$
~ 1775		[4] GRYGOREV	99	SPEC		40 $\pi^-p \to K^0_S K^0_S n$
1752±21± 4		ACCIARRI	97T	L3		$\gamma\gamma \to \pi^+\pi^-\pi^0$

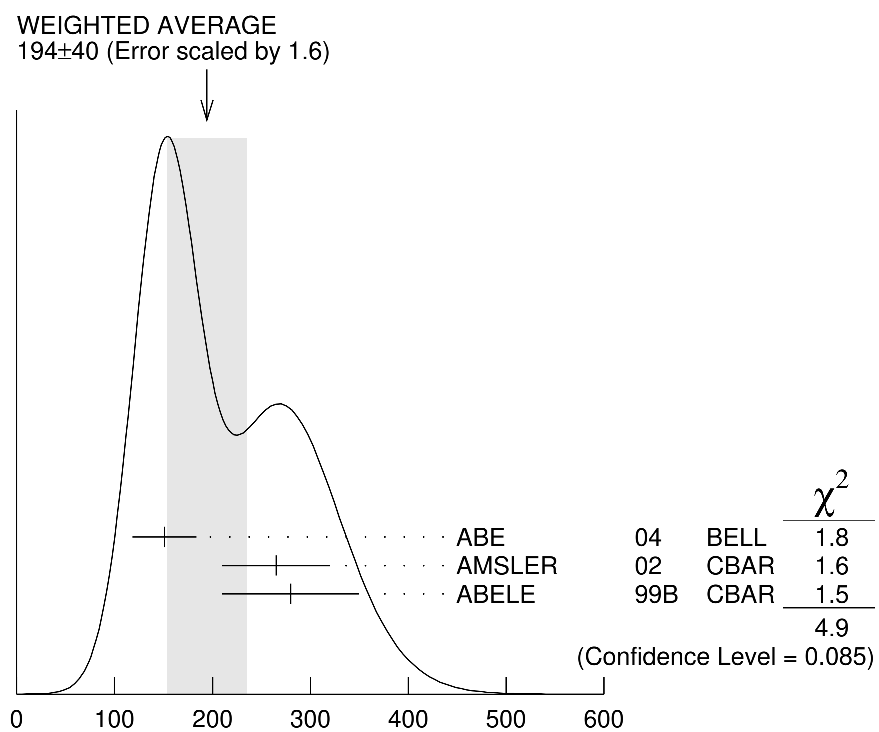
[1] T-matrix pole.
[2] From analysis of L3 data at 183–209 GeV.
[3] Statistical error only.
[4] Possibly two $J^P = 2^+$ resonances with isospins 0 and 1.



$a_2(1700)$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	CHG	COMMENT
194± 40 OUR AVERAGE		Error includes scale factor of 1.6. See the ideogram below.				
151± 22±24		ABE	04	BELL		10.6 $e^+e^- \to e^+e^- K^+K^-$
265± 55		[5] AMSLER	02	CBAR		0.9 $\overline{p}p \to \pi^0\eta\eta$
280± 70		ABELE	99B	CBAR		1.94 $\overline{p}p \to \pi^0\eta\eta$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
336± 20±20	18k	[6] SCHEGELSKY	06	RVUE	0	$\gamma\gamma \to \pi^+\pi^-\pi^0$
417± 19	80k	[7] UMAN	06	E835		5.2 $\overline{p}p \to \eta\eta\pi^0$
279± 49±66	145k	LU	05	B852		18 $\pi^- p \to \omega\pi^-\pi^0 p$
150±110±34		ACCIARRI	97T	L3		$\gamma\gamma \to \pi^+\pi^-\pi^0$

[5] T-matrix pole.
[6] From analysis of L3 data at 183–209 GeV.
[7] Statistical error only.



$a_2(1700)$ width

$a_2(1700)$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	$\eta\pi$	seen
Γ_2	$\gamma\gamma$	
Γ_3	$\rho\pi$	

Γ_4	$f_2(1270)\pi$	
Γ_5	$K\overline{K}$	seen
Γ_6	$\omega\pi^-\pi^0$	seen
Γ_7	$\omega\rho$	seen

$a_2(1700)$ PARTIAL WIDTHS

$\Gamma(\eta\pi)$ — Γ_1

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
9.5 ± 2.0	870	[8] SCHEGELSKY 06A	RVUE	$\gamma\gamma \rightarrow K^0_S K^0_S$

$\Gamma(\gamma\gamma)$ — Γ_2

VALUE (keV)	EVTS	DOCUMENT ID	TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.30 ± 0.05	870	[8] SCHEGELSKY 06A	RVUE	$\gamma\gamma \rightarrow K^0_S K^0_S$

$\Gamma(K\overline{K})$ — Γ_5

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
5.0 ± 3.0	870	[8] SCHEGELSKY 06A	RVUE	$\gamma\gamma \rightarrow K^0_S K^0_S$

[8] From analysis of L3 data at 91 and 183–209 GeV, using $a_2(1700)$ mass of 1730 MeV and width of 340 MeV, and SU(3) relations.

$a_2(1700)$ $\Gamma(i)\Gamma(\gamma\gamma)/\Gamma(\text{total})$

$\left[\Gamma(\rho\pi)+\Gamma(f_2(1270)\pi)\right] \times \Gamma(\gamma\gamma)/\Gamma_{\text{total}}$ — $(\Gamma_3+\Gamma_4)\Gamma_2/\Gamma$

VALUE (keV)	EVTS	DOCUMENT ID	TECN	COMMENT
$0.29\pm0.04\pm0.02$		ACCIARRI 97T	L3	$\gamma\gamma \rightarrow \pi^+\pi^-\pi^0$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
$0.37^{+0.12}_{-0.08}\pm0.10$	18k	[9] SCHEGELSKY 06	RVUE	$\gamma\gamma \rightarrow \pi^+\pi^-\pi^0$

[9] From analysis of L3 data at 183–209 GeV.

$\Gamma(K\overline{K}) \times \Gamma(\gamma\gamma)/\Gamma_{\text{total}}$ — $\Gamma_5\Gamma_2/\Gamma$

VALUE (eV)	DOCUMENT ID	TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •			
$20.6\pm4.2\pm4.6$	[10] ABE 04	BELL	10.6 $e^+e^- \rightarrow e^+e^-K^+K^-$

[10] Assuming spin 2.

$a_2(1700)$ BRANCHING RATIOS

$\Gamma(\rho\pi)/\Gamma(f_2(1270)\pi)$ — Γ_3/Γ_4

VALUE	EVTS	DOCUMENT ID	TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
$3.4\pm0.4\pm0.1$	18k	[11] SCHEGELSKY 06	RVUE	$\gamma\gamma \rightarrow \pi^+\pi^-\pi^0$

[11] From analysis of L3 data at 183–209 GeV.

$a_2(1700)$ REFERENCES

SCHEGELSKY	06	EPJ A27 199	V.A. Schegelsky *et al.*	
SCHEGELSKY	06A	EPJ A27 207	V.A. Schegelsky *et al.*	
UMAN	06	PR D73 052009	I. Uman *et al.*	(FNAL E835)
LU	05	PRL 94 032002	M. Lu *et al.*	(BNL E852 Collab.)
ABE	04	EPJ C32 323	K. Abe *et al.*	(BELLE Collab.)
AMSLER	02	EPJ C23 29	C. Amsler *et al.*	
ABELE	99B	EPJ C8 67	A. Abele *et al.*	(Crystal Barrel Collab.)
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		Translated from YAF 62 513.		
ACCIARRI	97T	PL B413 147	M. Acciarri *et al.*	(L3 Collab.)

OTHER RELATED PAPERS

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