$\eta(1475)$

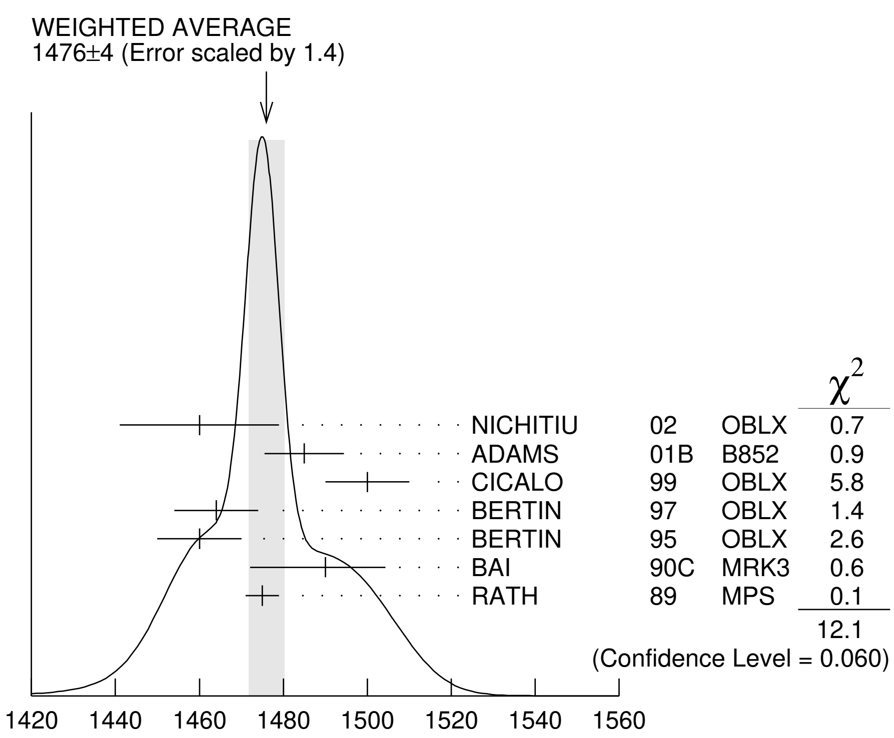
$I^G(J^{PC}) = 0^+(0^{-+})$

See also the $\eta(1405)$.

$\eta(1475)$ MASS

$K\overline{K}\pi$ MODE ($K^*(892)$ K dominant)

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
1476± 4 OUR AVERAGE	Error includes scale factor of 1.4. See the ideogram below.				
1460±19	3651	NICHITIU	02	OBLX	
1485± 8± 5	20k	ADAMS	01B	B852	18 GeV $\pi^- p \rightarrow K^+ K^- \pi^0 n$
1500±10		CICALO	99	OBLX	0 $\overline{p}p \rightarrow K^\pm K^0_S \pi^\mp \pi^+ \pi^-$
1464±10		BERTIN	97	OBLX	0 $\overline{p}p \rightarrow K^\pm (K^0) \pi^\mp \pi^+ \pi^-$
1460±10		BERTIN	95	OBLX	0 $\overline{p}p \rightarrow K\overline{K}\pi\pi\pi$
$1490^{+14}_{-8}{}^{+3}_{-16}$	1100	BAI	90C	MRK3	$J/\psi \rightarrow \gamma K^0_S K^\pm \pi^\mp$
1475± 4		RATH	89	MPS	21.4 $\pi^- p \rightarrow n K^0_S K^0_S \pi^0$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
1421±14		AUGUSTIN	92	DM2	$J/\psi \rightarrow \gamma K\overline{K}\pi$

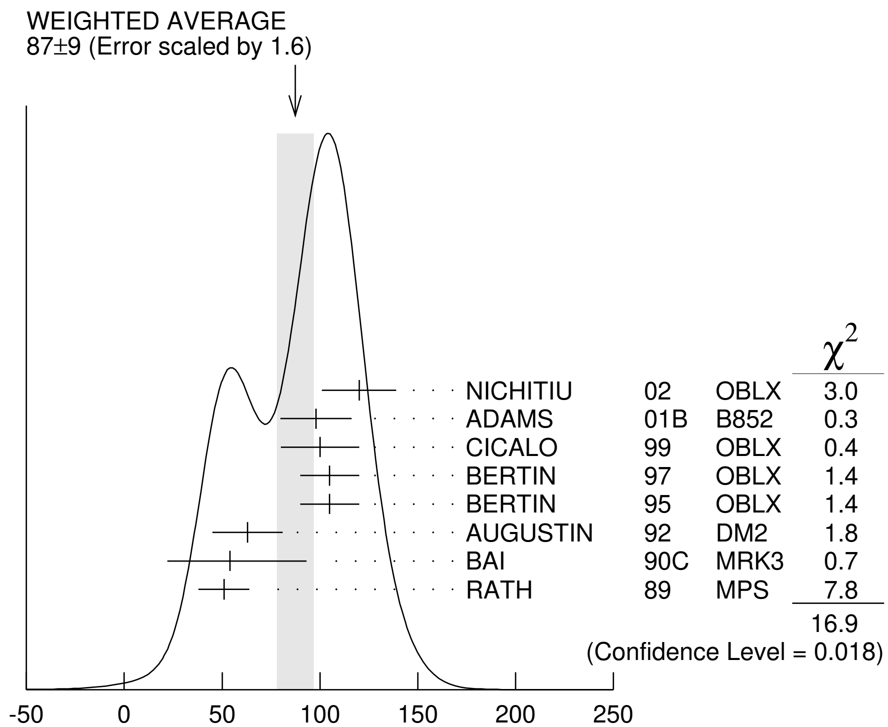


$\eta(1405)$ mass, $K\overline{K}\pi$ mode ($K^*(892)$ K dominant) (MeV)

$\eta(1475)$ WIDTH

$K\overline{K}\pi$ MODE ($K^*(892)$ K dominant)

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
87± 9 OUR AVERAGE	Error includes scale factor of 1.6. See the ideogram below.				
120±19	3651	NICHITIU	02	OBLX	
98±18± 3	20k	ADAMS	01B	B852	18 GeV $\pi^- p \to K^+ K^- \pi^0 n$
100±20		CICALO	99	OBLX	0 $\overline{p}p \to K^\pm K^0_S \pi^\mp \pi^+ \pi^-$
105±15		BERTIN	97	OBLX	0.0 $\overline{p}p \to K^\pm (K^0) \pi^\mp \pi^+ \pi^-$
105±15		BERTIN	95	OBLX	0 $\overline{p}p \to K\overline{K}\pi\pi\pi$
63±18		AUGUSTIN	92	DM2	$J/\psi \to \gamma K \overline{K}\pi$
$54^{+37}_{-21}{}^{+13}_{-24}$		BAI	90C	MRK3	$J/\psi \to \gamma K^0_S K^\pm \pi^\mp$
51±13		RATH	89	MPS	21.4 $\pi^- p \to n K^0_S K^0_S \pi^0$



$\eta(1405)$ width $K\overline{K}\pi$ mode ($K^*(892)$ K dominant)

$\eta(1475)$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	$K\overline{K}\pi$	dominant
Γ_2	$K\overline{K}^*(892)+$ c.c.	seen
Γ_3	$a_0(980)\pi$	seen
Γ_4	$\gamma\gamma$	seen

$\eta(1475)$ $\Gamma(i)\Gamma(\gamma\gamma)/\Gamma(\text{total})$

$\Gamma(K\overline{K}\pi)$ × $\Gamma(\gamma\gamma)/\Gamma_{total}$ — $\Gamma_1\Gamma_4/\Gamma$

VALUE (keV)	*CL%*	*DOCUMENT ID*		*TECN*	*COMMENT*
0.212±0.050±0.023		[1] ACCIARRI	01G	L3	183–202 $e^+e^- \to e^+e^- K^0_S K^\pm\pi^\mp$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.089	90	[2,3] AHOHE	05	CLE2	10.6 $e^+e^- \to e^+e^- K^0_S K^\pm\pi^\mp$

[1] Signal compatible with K^*K decay.
[2] Using $\eta(1475)$ mass and width 1481 MeV and 48 MeV, respectively.
[3] Assuming three-body phase-space decay to $K^0_S K^\pm\pi^\mp$.

$\eta(1475)$ BRANCHING RATIOS

$\Gamma(K\overline{K}^*(892)+\text{c.c.})/\Gamma(K\overline{K}\pi)$ — Γ_2/Γ_1

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.50±0.10	[4] BAILLON	67	HBC	0.0 $\overline{p}p \to K\overline{K}\pi\pi\pi$

$\Gamma(K\overline{K}^*(892)+\text{c.c.})/\left[\Gamma(K\overline{K}^*(892)+\text{c.c.})+\Gamma(a_0(980)\pi)\right]$ — $\Gamma_2/(\Gamma_2+\Gamma_3)$

VALUE	*CL%*	*DOCUMENT ID*		*TECN*	*COMMENT*
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.25	90	EDWARDS	82E	CBAL	$J/\psi \to K^+K^-\pi^0\gamma$

[4] Data could also refer to $\eta(1405)$.

$\eta(1475)$ REFERENCES

AHOHE	05	PR D71 072001	R. Ahohe *et al.*	(CLEO Collab.)
NICHITIU	02	PL B545 261	F. Nichitiu *et al.*	(OBELIX Collab.)
ACCIARRI	01G	PL B501 1	M. Acciarri *et al.*	(L3 Collab.)
ADAMS	01B	PL B516 264	G.S. Adams *et al.*	(BNL E852 Collab.)
CICALO	99	PL B462 453	C. Cicalo *et al.*	(OBELIX Collab.)
BERTIN	97	PL B400 226	A. Bertin *et al.*	(OBELIX Collab.)
BERTIN	95	PL B361 187	A. Bertin *et al.*	(OBELIX Collab.)
AUGUSTIN	92	PR D46 1951	J.E. Augustin, G. Cosme	(DM2 Collab.)
BAI	90C	PRL 65 2507	Z. Bai *et al.*	(Mark III Collab.)
RATH	89	PR D40 693	M.G. Rath *et al.*	(NDAM, BRAN, BNL, CUNY+)
EDWARDS	82E	PRL 49 259	C. Edwards *et al.*	(CIT, HARV, PRIN+)
BAILLON	67	NC 50A 393	P.H. Baillon *et al.*	(CERN, CDEF, IRAD)

OTHER RELATED PAPERS

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