

$\eta(1475)$
was $\eta(1440)$

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

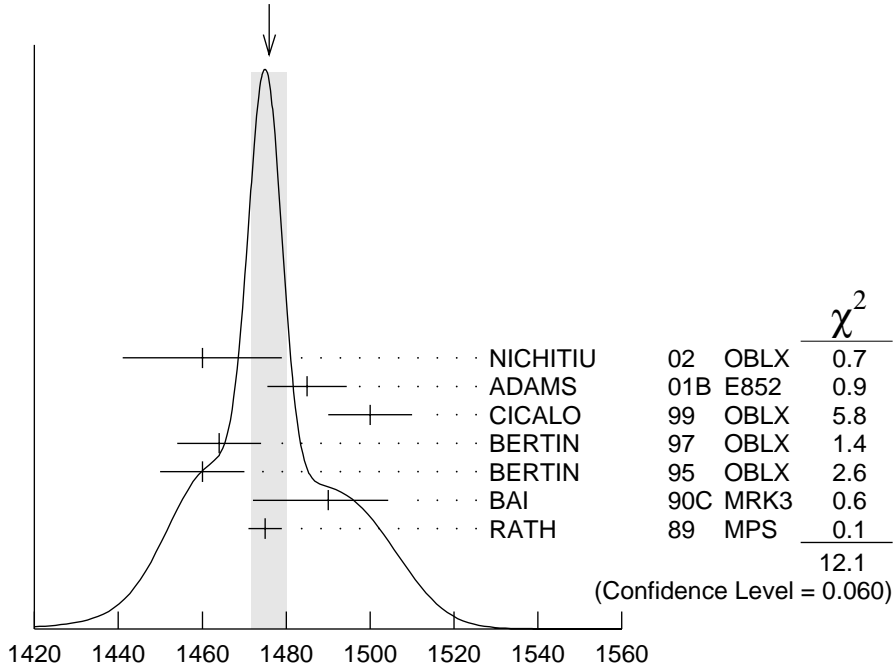
See also the $\eta(1405)$.

$\eta(1475)$ MASS

$K\bar{K}\pi$ 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
$1485 \pm 8 \pm 5$	20k	ADAMS	01B E852	$18 \text{ GeV } \pi^- p \rightarrow K^+ K^- \pi^0 n$
1500 ± 10		CICALO	99	OBLX $0 \bar{p} p \rightarrow K^\pm K_S^0 \pi^\mp \pi^+ \pi^-$
1464 ± 10		BERTIN	97	OBLX $0 \bar{p} p \rightarrow K^\pm (K^0) \pi^\mp \pi^+ \pi^-$
1460 ± 10		BERTIN	95	OBLX $0 \bar{p} p \rightarrow K\bar{K}\pi\pi\pi$
1490^{+14+3}_{-8-16}	1100	BAI	90C MRK3	$J/\psi \rightarrow \gamma K_S^0 K^\pm \pi^\mp$
1475 ± 4		RATH	89 MPS	$21.4 \pi^- p \rightarrow n K_S^0 K_S^0 \pi^0$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
1421 ± 14		AUGUSTIN	92 DM2	$J/\psi \rightarrow \gamma K\bar{K}\pi$

WEIGHTED AVERAGE
 1476 ± 4 (Error scaled by 1.4)

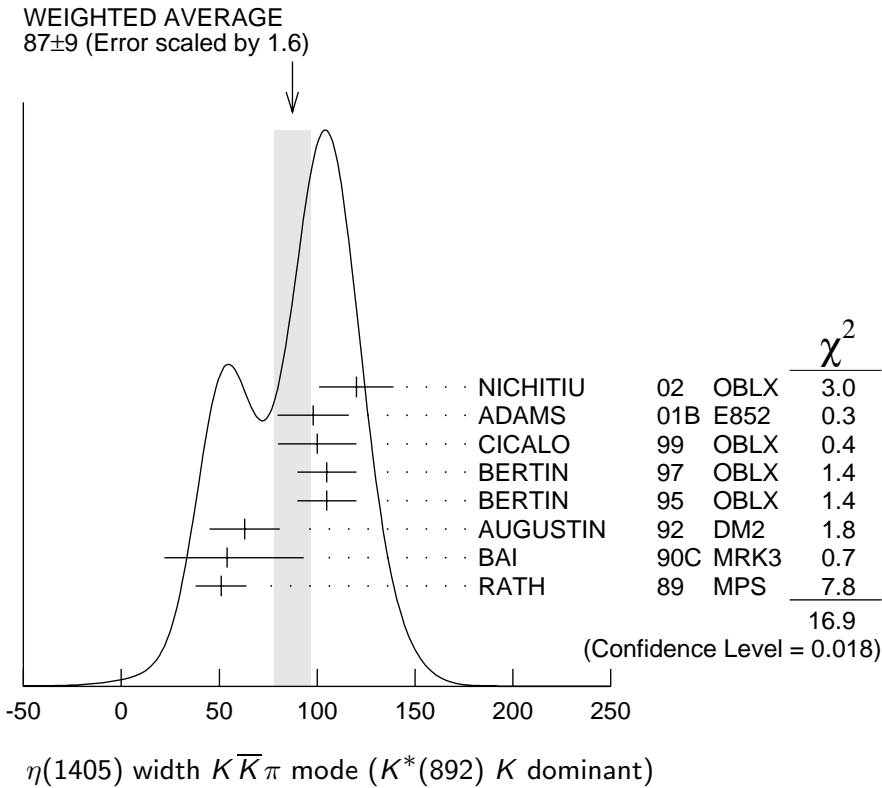


$\eta(1405)$ mass, $K\bar{K}\pi$ mode ($K^*(892)$ K dominant) (MeV)

$\eta(1475)$ WIDTH

$K\bar{K}\pi$ 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	
$98 \pm 18 \pm 3$	20k	ADAMS	01B E852	$18 \text{ GeV } \pi^- p \rightarrow K^+ K^- \pi^0 n$
100 ± 20		CICALO	99 OBLX	$0 \bar{p} p \rightarrow K^\pm K_S^0 \pi^\mp \pi^+ \pi^-$
105 ± 15		BERTIN	97 OBLX	$0.0 \bar{p} p \rightarrow K^\pm (K^0) \pi^\mp \pi^+ \pi^-$
105 ± 15		BERTIN	95 OBLX	$0 \bar{p} p \rightarrow K\bar{K}\pi\pi\pi$
63 ± 18		AUGUSTIN	92 DM2	$J/\psi \rightarrow \gamma K\bar{K}\pi$
54^{+37+13}_{-21-24}		BAI	90C MRK3	$J/\psi \rightarrow \gamma K_S^0 K^\pm \pi^\mp$
51 ± 13		RATH	89 MPS	$21.4 \pi^- p \rightarrow n K_S^0 K_S^0 \pi^0$



$\eta(1475)$ DECAY MODES

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

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

$\Gamma(K\bar{K}\pi) \times \Gamma(\gamma\gamma)/\Gamma_{\text{total}}$	$\Gamma_1\Gamma_4/\Gamma$
<u>VALUE (keV)</u>	<u>DOCUMENT ID</u> <u>TECN</u> <u>COMMENT</u>
0.212 ± 0.050 ± 0.023	¹ ACCIARRI 01G L3 183–202 $e^+e^- \rightarrow e^+e^-K_S^0K^\pm\pi^\mp$

¹Signal compatible with K^*K decay.

$\eta(1475)$ BRANCHING RATIOS

$\Gamma(K\bar{K}^*(892) + \text{c.c.})/\Gamma(K\bar{K}\pi)$	Γ_2/Γ_1
<u>VALUE</u>	<u>DOCUMENT ID</u> <u>TECN</u> <u>COMMENT</u>

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

0.50 ± 0.10 ² BAILLON 67 HBC 0.0 $\bar{p}p \rightarrow K\bar{K}\pi\pi\pi$

$\Gamma(K\bar{K}^*(892) + \text{c.c.})/[\Gamma(K\bar{K}^*(892) + \text{c.c.}) + \Gamma(a_0(980)\pi)]$	$\Gamma_2/(\Gamma_2+\Gamma_3)$
<u>VALUE</u>	<u>CL%</u> <u>DOCUMENT ID</u> <u>TECN</u> <u>COMMENT</u>

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

<0.25 90 EDWARDS 82E CBAL $J/\psi \rightarrow K^+K^-\pi^0\gamma$

²Data could also refer to $\eta(1405)$.

$\eta(1475)$ REFERENCES

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