

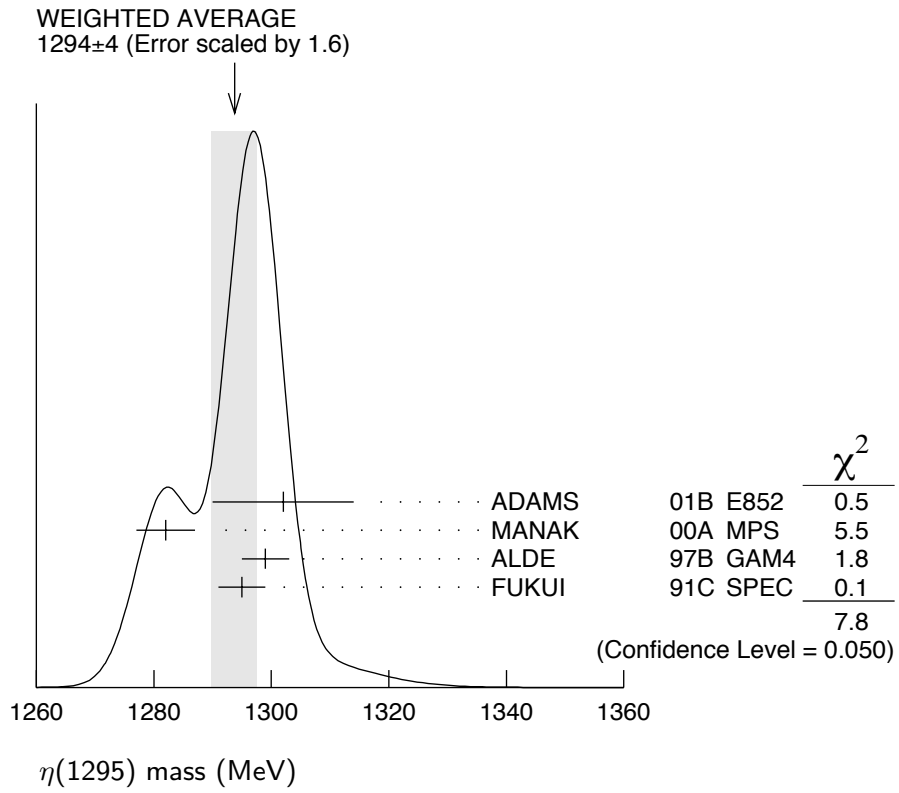
$\eta(1295)$

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

See also the mini-review under non- $q\bar{q}$ candidates. (See the index for the page number.)

$\eta(1295)$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
1294 ± 4 OUR AVERAGE		Error includes scale factor of 1.6. See the ideogram below.		
$1302 \pm 9 \pm 8$	20k	ADAMS	01B E852	$18 \text{ GeV } \pi^- p \rightarrow K^+ K^- \pi^0 n$
1282 ± 5	9082	MANAK	00A MPS	$18 \pi^- p \rightarrow \eta \pi^+ \pi^- n$
1299 ± 4	2100	ALDE	97B GAM4	$100 \pi^- p \rightarrow \eta \pi^0 \pi^0 n$
1295 ± 4		FUKUI	91C SPEC	$8.95 \pi^- p \rightarrow \eta \pi^+ \pi^- n$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
~ 1275		STANTON	79 CNTR	$8.4 \pi^- p \rightarrow n \eta 2\pi$



$\eta(1295)$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
55 ± 5 OUR AVERAGE				
57 ± 23 ± 21	20k	ADAMS	01B E852	18 GeV $\pi^- p \rightarrow K^+ K^- \pi^0 n$
66 ± 13	9082	MANAK	00A MPS	18 $\pi^- p \rightarrow \eta \pi^+ \pi^- n$
53 ± 6		FUKUI	91C SPEC	8.95 $\pi^- p \rightarrow \eta \pi^+ \pi^- n$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
<40	2100	ALDE	97B GAM4	100 $\pi^- p \rightarrow \eta \pi^0 \pi^0 n$
~ 70		STANTON	79 CNTR	8.4 $\pi^- p \rightarrow n \eta 2\pi$

$\eta(1295)$ DECAY MODES

Mode	Fraction (Γ_i/Γ)
Γ_1 $\eta \pi^+ \pi^-$	seen
Γ_2 $a_0(980)\pi$	seen
Γ_3 $\gamma\gamma$	
Γ_4 $\eta \pi^0 \pi^0$	seen
Γ_5 $\eta(\pi\pi)_{S\text{-wave}}$	seen
Γ_6 $\sigma\eta$	
Γ_7 $K\bar{K}\pi$	

$\eta(1295)$ $\Gamma(i)\Gamma(\gamma\gamma)/\Gamma(\text{total})$

$\Gamma(\eta\pi^+\pi^-) \times \Gamma(\gamma\gamma)/\Gamma_{\text{total}}$					$\Gamma_1\Gamma_3/\Gamma$
VALUE (keV)	CL%	DOCUMENT ID	TECN	COMMENT	
<0.066	95	ACCIARRI	01G L3	183–202 $e^+ e^- \rightarrow e^+ e^- \eta \pi^+ \pi^-$	
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.6	90	AIHARA	88C TPC	$e^+ e^- \rightarrow e^+ e^- \eta \pi^+ \pi^-$	
<0.3		ANTREASYAN 87	CBAL	$e^+ e^- \rightarrow e^+ e^- \eta \pi \pi$	

$\Gamma(K\bar{K}\pi) \times \Gamma(\gamma\gamma)/\Gamma_{\text{total}}$					$\Gamma_7\Gamma_3/\Gamma$
VALUE (keV)	CL%	DOCUMENT ID	TECN	COMMENT	
<0.014	90	^{1,2} AHOHE	05 CLE2	10.6 $e^+ e^- \rightarrow e^+ e^- K_S^0 K^\pm \pi^\mp$	

¹ Using $\eta(1295)$ mass and width 1294 MeV and 55 MeV, respectively.

² Assuming three-body phase-space decay to $K_S^0 K^\pm \pi^\mp$.

$\eta(1295)$ BRANCHING RATIOS **$\Gamma(a_0(980)\pi)/\Gamma_{\text{total}}$ Γ_2/Γ**

<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. ● ● ●			
not seen	BERTIN	97 OBLX	0.0 $\bar{p}p \rightarrow K^\pm(K^0)\pi^\mp\pi^+\pi^-$
seen	BIRMAN	88 MPS	8 $\pi^-p \rightarrow K^+\bar{K}^0\pi^-n$
large	ANDO	86 SPEC	8 $\pi^-p \rightarrow \eta\pi^+\pi^-n$
large	STANTON	79 CNTR	8.4 $\pi^-p \rightarrow n\eta 2\pi$

 $\Gamma(a_0(980)\pi)/\Gamma(\eta\pi^0\pi^0)$ Γ_2/Γ_4

<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
0.65±0.10	³ ALDE	97B GAM4	100 $\pi^-p \rightarrow \eta\pi^0\pi^0n$

³ Assuming that $a_0(980)$ decays only to $\eta\pi$. **$\Gamma(\eta(\pi\pi)_S\text{-wave})/\Gamma(\eta\pi^0\pi^0)$ Γ_5/Γ_4**

<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
0.35±0.10	ALDE	97B GAM4	100 $\pi^-p \rightarrow \eta\pi^0\pi^0n$

 $\Gamma(a_0(980)\pi)/\Gamma(\sigma\eta)$ Γ_2/Γ_6

<u>VALUE</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
0.48±0.22	9082	MANAK	00A MPS	18 $\pi^-p \rightarrow \eta\pi^+\pi^-n$

 $\eta(1295)$ REFERENCES

AHOHE	05	PR D71 072001	R. Ahohe <i>et al.</i>	(CLEO 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.)
MANAK	00A	PR D62 012003	J.J. Manak <i>et al.</i>	(BNL E852 Collab.)
ALDE	97B	PAN 60 386	D. Alde <i>et al.</i>	(GAMS Collab.)
		Translated from YAF 60 458.		
BERTIN	97	PL B400 226	A. Bertin <i>et al.</i>	(OBELIX Collab.)
FUKUI	91C	PL B267 293	S. Fukui <i>et al.</i>	(SUGI, NAGO, KEK, KYOT+)
AIHARA	88C	PR D38 1	H. Aihara <i>et al.</i>	(TPC-2 γ Collab.)
BIRMAN	88	PRL 61 1557	A. Birman <i>et al.</i>	(BNL, FSU, IND, MASD) JP
ANTREASYAN	87	PR D36 2633	D. Antreasyan <i>et al.</i>	(Crystal Ball Collab.)
ANDO	86	PRL 57 1296	A. Ando <i>et al.</i>	(KEK, KYOT, NIRS, SAGA+) IJP
STANTON	79	PRL 42 346	N.R. Stanton <i>et al.</i>	(OSU, CARL, MCGI+) JP

OTHER RELATED PAPERS

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ANISOVICH	00F	EPJ A6 247	A.V. Anisovich <i>et al.</i>	