

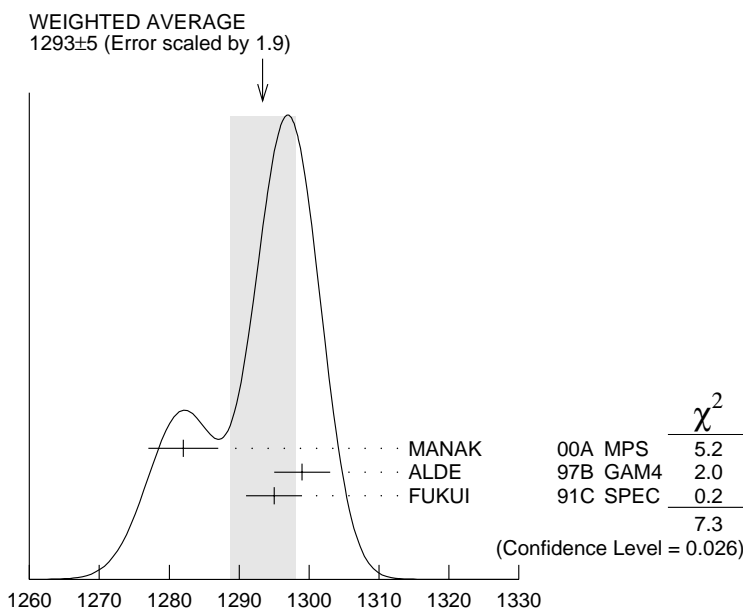
# η(1295)

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

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

## η(1295) MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
<b>1293±5 OUR AVERAGE</b>		Error includes scale factor of 1.9. See the ideogram below.		
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 $\pi^- p \rightarrow n\eta 2\pi$



η(1295) mass (MeV)

## η(1295) WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
<b>55± 5 OUR AVERAGE</b>				
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 ( $\Gamma_i/\Gamma$ )
$\Gamma_1$ $\eta\pi^+\pi^-$	seen
$\Gamma_2$ $a_0(980)\pi$	seen
$\Gamma_3$ $\gamma\gamma$	
$\Gamma_4$ $\eta\pi^0\pi^0$	seen
$\Gamma_5$ $\eta(\pi\pi)$ S-wave	seen
$\Gamma_6$ $\sigma\eta$	

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

$\Gamma(\eta\pi^+\pi^-) \times \Gamma(\gamma\gamma)/\Gamma_{\text{total}}$					$\Gamma_1\Gamma_3/\Gamma$
<u>VALUE (keV)</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<b>&lt;0.066</b>	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	$e^+e^- \rightarrow e^+e^-\eta\pi\pi$	

### $\eta(1295)$ BRANCHING RATIOS

$\Gamma(a_0(980)\pi)/\Gamma_{\text{total}}$					$\Gamma_2/\Gamma$
<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 $\pi^-p \rightarrow n\eta 2\pi$	

$\Gamma(a_0(980)\pi)/\Gamma(\eta\pi^0\pi^0)$					$\Gamma_2/\Gamma_4$
<u>VALUE</u>		<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<b>0.65 ± 0.10</b>		<sup>1</sup> ALDE	97B GAM4	100 $\pi^-p \rightarrow \eta\pi^0\pi^0n$	

<sup>1</sup> Assuming that  $a_0(980)$  decays only to  $\eta\pi$ .

$\Gamma(\eta(\pi\pi)\text{S-wave})/\Gamma(\eta\pi^0\pi^0)$					$\Gamma_5/\Gamma_4$
<u>VALUE</u>		<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<b>0.35 ± 0.10</b>		ALDE	97B GAM4	100 $\pi^-p \rightarrow \eta\pi^0\pi^0n$	

$\Gamma(a_0(980)\pi)/\Gamma(\sigma\eta)$					$\Gamma_2/\Gamma_6$
<u>VALUE</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<b>0.48 ± 0.22</b>	9082	MANAK	00A MPS	18 $\pi^-p \rightarrow \eta\pi^+\pi^-n$	

## $\eta(1295)$ REFERENCES

ACCIARRI	01G	PL B501 1	M. Acciarri <i>et al.</i>	(L3 Collab.)
MANAK	00A	PR D62 012003	J.J. Manak <i>et al.</i>	
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 $\gamma$ 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

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