$\eta(1295)$

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

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

$\eta(1295)$ MASS

VALUE (MeV)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
1297.0±2.8 OUR AVERAGE					
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*
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

$\eta(1295)$ Γ(i)Γ(γγ)/Γ(total)

$\Gamma(\eta\pi^+\pi^-) \times \Gamma(\gamma\gamma)/\Gamma_{total}$ **$\Gamma_1\Gamma_3/\Gamma$**

VALUE (keV)	*CL%*	*DOCUMENT ID*		*TECN*	*COMMENT*
<0.3		ANTREASYAN	87	CBAL	$e^+e^- \rightarrow e^+e^-\eta\pi\pi$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.6	90	AIHARA	88C	TPC	$e^+e^- \rightarrow e^+e^-\eta\pi^+\pi^-$

$\eta(1295)$ BRANCHING RATIOS

$\Gamma(a_0(980)\pi)/\Gamma_{total}$ Γ_2/Γ

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
not seen	BERTIN	97	OBLX	0.0 $\overline{p}p \rightarrow K^{\pm}(K^0)\pi^{\mp}\pi^{+}\pi^{-}$
seen	BIRMAN	88	MPS	8 $\pi^- p \rightarrow K^+ \overline{K}^0 \pi^- n$
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

VALUE	DOCUMENT ID		TECN	COMMENT
0.65±0.10	[1] ALDE	97B	GAM4	100 $\pi^- p \rightarrow \eta\pi^0\pi^0 n$

[1] 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

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

$\eta(1295)$ REFERENCES

ALDE	97B	PAN 60 386	D. Alde, Binon, Bricman+	(GAMS Collab.)
		Translated from YAF 60 458.		
BERTIN	97	PL B400 226	+Bruschi, Capponi+	(OBELIX Collab.)
FUKUI	91C	PL B267 293	+	(SUGI, NAGO, KEK, KYOT, MIYA, AKIT)
AIHARA	88C	PR D38 1	+Alston-Garnjost+	(TPC-2γ Collab.)
BIRMAN	88	PRL 61 1557	+Chung, Peaslee+	(BNL, FSU, IND, MASD) JP
ANTREASYAN	87	PR D36 2633	+Bartels, Besset+	(Crystal Ball Collab.)
ANDO	86	PRL 57 1296	+Imai+	(KEK, KYOT, NIRS, SAGA, INUS, TSUK+) IJP
STANTON	79	PRL 42 346	+Brockman+	(OSU, CARL, MCGI, TNTO) JP