# $\eta(1295)$

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

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* |
|---|---|---|---|---|---|
| **<40** | 2100 | ALDE | 97B | GAM4 | 100 $\pi^- p \rightarrow \eta\pi^0\pi^0 n$ |
| **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. • • • | | | | | |
| ~ 70 | | STANTON | 79 | CNTR | 8.4 $\pi^- p \rightarrow n\eta 2\pi$ |

## $\eta(1295)$ DECAY MODES

| | Mode | Fraction ($\Gamma_i/\Gamma$) |
|---|---|---|
| $\Gamma_1$ | $\eta(1295) \rightarrow \eta\pi^+\pi^-$ | seen |
| $\Gamma_2$ | $\eta(1295) \rightarrow a_0(980)\pi$ | seen |
| $\Gamma_3$ | $\eta(1295) \rightarrow \gamma\gamma$ | |
| $\Gamma_4$ | $\eta\pi^0\pi^0$ | |
| $\Gamma_5$ | $f_0(980)\eta$ | |

## $\eta(1295)$ Γ(i)Γ($\gamma\gamma$)/Γ(total)

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

| *VALUE* (keV) | *CL%* | *DOCUMENT ID* | | *TECN* | *COMMENT* |
|---|---|---|---|---|---|
| • • • 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

### $\Gamma(a_0(980)\pi)/\Gamma_{total}$ $\Gamma_2/\Gamma$

| VALUE | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|
| not seen | BERTIN | 97 | OBLX | 0 $\overline{p}p \rightarrow K +$ $-(K0)\pi^{\mp}\pi^{+}\pi^{-}$ |
| **seen** | BIRMAN | 88 | MPS | 8 $\pi^{-}p \rightarrow K^{+}\overline{K}^{0}\pi^{-}n$ |
| large | ANDO | 86 | SPEC | 8 $\pi^{-}p \rightarrow n\eta\pi^{+}\pi^{-}$ |
| large | STANTON | 79 | CNTR | 8.4 $\pi^{-}p \rightarrow n\eta 2\pi$ |

## $\eta(1295)$ REFERENCES


| | | | | |
|---|---|---|---|---|
| ALDE | 97B | PAN 60 386 | +Binon, Bricman | (GAMS Collab.) |
| | | Translated from YAF 60 458. | | |
| BERTIN | 97 | PL B400 226 | +Bruschi, Capponi+ | (OBELIX Collaboration) |
| FUKUI | 91C | PL B267 293 | + | (SUGI, NAGO, KEK, KYOT, MIYA, AKIT) |
| AIHARA | 88C | PR D38 1 | +Alston-Garnjost+ | (TPC-2$\gamma$ 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 |