# $\pi(1300)$

$I^G(J^{PC}) = 1^-(0^{-+})$

## $\pi(1300)$ MASS

| *VALUE* (MeV) | *EVTS* | *DOCUMENT ID* | | *TECN* | *COMMENT* |
|---|---|---|---|---|---|
| **1300±100 OUR ESTIMATE** | | | | | |
| • • • We do not use the following data for averages, fits, limits, etc. • • • | | | | | |
| 1345± 8±10 | 18k | [1] SCHEGELSKY | 06 | RVUE | $\gamma\gamma \to \pi^+\pi^-\pi^0$ |
| 1343± 15±24 | | CHUNG | 02 | B852 | 18.3 $\pi^- p \to \pi^+\pi^-\pi^- p$ |
| 1375± 40 | | ABELE | 01 | CBAR | 0.0 $\overline{p}d \to \pi^- 4\pi^0 p$ |
| 1275± 15 | | BERTIN | 97D | OBLX | 0.05 $\overline{p}p \to 2\pi^+ 2\pi^-$ |
| ~ 1114 | | ABELE | 96 | CBAR | 0.0 $\overline{p}p \to 5\pi^0$ |
| 1190± 30 | | ZIELINSKI | 84 | SPEC | 200 $\pi^+ Z \to Z3\pi$ |
| 1240± 30 | | BELLINI | 82 | SPEC | 40 $\pi^- A \to A3\pi$ |
| 1273± 50 | | [2] AARON | 81 | RVUE | |
| 1342± 20 | | BONESINI | 81 | OMEG | 12 $\pi^- p \to p3\pi$ |
| ~ 1400 | | DAUM | 81B | SPEC | 63,94 $\pi^- p$ |

[1] From analysis of L3 data at 183–209 GeV.
[2] Uses multichannel Aitchison-Bowler model (BOWLER 75). Uses data from DAUM 80 and DANKOWYCH 81.

## $\pi(1300)$ WIDTH

| *VALUE* (MeV) | *EVTS* | *DOCUMENT ID* | | *TECN* | *COMMENT* |
|---|---|---|---|---|---|
| **200 to 600 OUR ESTIMATE** | | | | | |
| • • • We do not use the following data for averages, fits, limits, etc. • • • | | | | | |
| 260± 20±30 | 18k | [3] SCHEGELSKY | 06 | RVUE | $\gamma\gamma \to \pi^+\pi^-\pi^0$ |
| 449± 39±47 | | CHUNG | 02 | B852 | 18.3 $\pi^- p \to \pi^+\pi^-\pi^- p$ |
| 268± 50 | | ABELE | 01 | CBAR | 0.0 $\overline{p}d \to \pi^- 4\pi^0 p$ |
| 218±100 | | BERTIN | 97D | OBLX | 0.05 $\overline{p}p \to 2\pi^+ 2\pi^-$ |
| ~ 340 | | ABELE | 96 | CBAR | 0.0 $\overline{p}p \to 5\pi^0$ |
| 440± 80 | | ZIELINSKI | 84 | SPEC | 200 $\pi^+ Z \to Z3\pi$ |
| 360±120 | | BELLINI | 82 | SPEC | 40 $\pi^- A \to A3\pi$ |
| 580±100 | | [4] AARON | 81 | RVUE | |
| 220± 70 | | BONESINI | 81 | OMEG | 12 $\pi^- p \to p3\pi$ |
| ~ 600 | | DAUM | 81B | SPEC | 63,94 $\pi^- p$ |

[3] From analysis of L3 data at 183–209 GeV.
[4] Uses multichannel Aitchison-Bowler model (BOWLER 75). Uses data from DAUM 80 and DANKOWYCH 81.

## $\pi(1300)$ DECAY MODES

| | Mode | Fraction ($\Gamma_i/\Gamma$) |
|---|---|---|
| $\Gamma_1$ | $\rho\pi$ | seen |
| $\Gamma_2$ | $\pi(\pi\pi)_{S\text{-wave}}$ | seen |
| $\Gamma_3$ | $\gamma\gamma$ | |

## $\pi(1300)$ $\Gamma(i)\Gamma(\gamma\gamma)/\Gamma(total)$

### $\Gamma(\rho\pi) \times \Gamma(\gamma\gamma)/\Gamma_{total}$ $\Gamma_1\Gamma_3/\Gamma$

| *VALUE* (keV) | *CL%* | *DOCUMENT ID* | | *TECN* | *COMMENT* |
|---|---|---|---|---|---|
| **<0.085** | 90 | ACCIARRI | 97T | L3 | $e^+e^- \to e^+e^-\pi^+\pi^-\pi^0$ |

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

| | | | | | |
|---|---|---|---|---|---|
| <0.8 | 95 | [5] SCHEGELSKY | 06 | RVUE | $\gamma\gamma \to \pi^+\pi^-\pi^0$ |
| <0.54 | 90 | ALBRECHT | 97B | ARG | $e^+e^- \to e^+e^-\pi^+\pi^-\pi^0$ |

[5] From analysis of L3 data at 183–209 GeV.

## $\pi(1300)$ BRANCHING RATIOS

### $\Gamma(\pi(\pi\pi)_{S\text{-wave}})/\Gamma(\rho\pi)$ $\Gamma_2/\Gamma_1$

| *VALUE* | *CL%* | *DOCUMENT ID* | | *TECN* | *COMMENT* |
|---|---|---|---|---|---|
| seen | | CHUNG | 02 | B852 | $18.3\ \pi^- p \to \pi^+\pi^-\pi^- p$ |
| <0.15 | 90 | ABELE | 01 | CBAR | $0.0\ \overline{p}d \to \pi^- 4\pi^0 p$ |
| 2.12 | | [6] AARON | 81 | RVUE | |

[6] Uses multichannel Aitchison-Bowler model (BOWLER 75). Uses data from DAUM 80 and DANKOWYCH 81.

## $\pi(1300)$ REFERENCES


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