## $\omega_3(1670)$

$$I^G(J^{PC}) = 0^-(3^{--})$$

## $\omega_3(1670)$ MASS

| VALUE (MeV) | EVTS | | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|---|---|
| **1667 ± 4 OUR AVERAGE** | | | | | | |
| 1665.3± 5.2±4.5 | 23400 | | AMELIN | 96 | VES | 36 $\pi^- p \to \pi^+ \pi^- \pi^0 n$ |
| 1685 ±20 | 60 | | BAUBILLIER | 79 | HBC | 8.2 $K^- p$ backward |
| 1673 ±12 | 430 | [1,2] | BALTAY | 78E | HBC | 15 $\pi^+ p \to \Delta 3\pi$ |
| 1650 ±12 | | | CORDEN | 78B | OMEG | 8–12 $\pi^- p \to N 3\pi$ |
| 1669 ±11 | 600 | [2] | WAGNER | 75 | HBC | 7 $\pi^+ p \to \Delta^{++} 3\pi$ |
| 1678 ±14 | 500 | | DIAZ | 74 | DBC | 6 $\pi^+ n \to p 3\pi^0$ |
| 1660 ±13 | 200 | | DIAZ | 74 | DBC | 6 $\pi^+ n \to p\omega\pi^0\pi^0$ |
| 1679 ±17 | 200 | | MATTHEWS | 71D | DBC | 7.0 $\pi^+ n \to p 3\pi^0$ |
| 1670 ±20 | | | KENYON | 69 | DBC | 8 $\pi^+ n \to p 3\pi^0$ |
| • • • We do not use the following data for averages, fits, limits, etc. • • • | | | | | | |
| ∼ 1700 | 110 | [1] | CERRADA | 77B | HBC | 4.2 $K^- p \to \Lambda 3\pi$ |
| 1695 ±20 | | | BARNES | 69B | HBC | 4.6 $K^- p \to \omega 2\pi X$ |
| 1636 ±20 | | | ARMENISE | 68B | DBC | 5.1 $\pi^+ n \to p 3\pi^0$ |

[1] Phase rotation seen for $J^P = 3^-$ $\rho\pi$ wave.
[2] From a fit to $I(J^P) = 0(3^-)$ $\rho\pi$ partial wave.

## $\omega_3(1670)$ WIDTH

| VALUE (MeV) | EVTS | | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|---|---|
| **168±10 OUR AVERAGE** | | | | | | |
| 149±19±7 | 23400 | | AMELIN | 96 | VES | 36 $\pi^- p \to \pi^+ \pi^- \pi^0 n$ |
| 160±80 | 60 | [3] | BAUBILLIER | 79 | HBC | 8.2 $K^- p$ backward |
| 173±16 | 430 | [4,5] | BALTAY | 78E | HBC | 15 $\pi^+ p \to \Delta 3\pi$ |
| 253±39 | | | CORDEN | 78B | OMEG | 8–12 $\pi^- p \to N 3\pi$ |
| 173±28 | 600 | [3,5] | WAGNER | 75 | HBC | 7 $\pi^+ p \to \Delta^{++} 3\pi$ |
| 167±40 | 500 | | DIAZ | 74 | DBC | 6 $\pi^+ n \to p 3\pi^0$ |
| 122±39 | 200 | | DIAZ | 74 | DBC | 6 $\pi^+ n \to p\omega\pi^0\pi^0$ |
| 155±40 | 200 | [3] | MATTHEWS | 71D | DBC | 7.0 $\pi^+ n \to p 3\pi^0$ |
| • • • We do not use the following data for averages, fits, limits, etc. • • • | | | | | | |
| 90±20 | | | BARNES | 69B | HBC | 4.6 $K^- p \to \omega 2\pi$ |
| 100±40 | | | KENYON | 69 | DBC | 8 $\pi^+ n \to p 3\pi^0$ |
| 112±60 | | | ARMENISE | 68B | DBC | 5.1 $\pi^+ n \to p 3\pi^0$ |

[3] Width errors enlarged by us to $4\Gamma/\sqrt{N}$; see the note with the $K^*(892)$ mass.
[4] Phase rotation seen for $J^P = 3^-$ $\rho\pi$ wave.
[5] From a fit to $I(J^P) = 0(3^-)$ $\rho\pi$ partial wave.

## $\omega_3(1670)$ DECAY MODES

| | Mode | Fraction ($\Gamma_i/\Gamma$) |
|---|---|---|
| $\Gamma_1$ | $\rho\pi$ | seen |
| $\Gamma_2$ | $\omega\pi\pi$ | seen |
| $\Gamma_3$ | $b_1(1235)\pi$ | possibly seen |

## $\omega_3(1670)$ BRANCHING RATIOS

### $\Gamma(\omega\pi\pi)/\Gamma(\rho\pi)$ $\Gamma_2/\Gamma_1$

| VALUE | EVTS | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|---|
| • • • We do not use the following data for averages, fits, limits, etc. • • • | | | | | |
| $0.71\pm0.27$ | 100 | DIAZ | 74 | DBC | $6\,\pi^+ n \to p5\pi^0$ |

### $\Gamma(b_1(1235)\pi)/\Gamma(\rho\pi)$ $\Gamma_3/\Gamma_1$

| VALUE | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|
| possibly seen | DIAZ | 74 | DBC | $6\,\pi^+ n \to p5\pi^0$ |

### $\Gamma(b_1(1235)\pi)/\Gamma(\omega\pi\pi)$ $\Gamma_3/\Gamma_2$

| VALUE | CL% | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|---|
| • • • We do not use the following data for averages, fits, limits, etc. • • • | | | | | |
| $>0.75$ | 68 | BAUBILLIER | 79 | HBC | $8.2\ K^- p$ backward |

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———— **OTHER RELATED PAPERS** ————

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