

$\omega(1600)$ 

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

### $\omega(1600)$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	CHG	COMMENT
<b>1649±24 OUR AVERAGE</b>	Error	includes scale factor of 2.3.			
1609±20	315	<sup>1</sup> ANTONELLI	92	DM2	1.34–2.4e <sup>+</sup> e <sup>-</sup> → $\rho\pi$
1663±12	435	<sup>2</sup> ANTONELLI	92	DM2	1.34–2.4e <sup>+</sup> e <sup>-</sup> → $\omega\pi\pi$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●					
1600±30		<sup>1</sup> CLEGG	94	RVUE	e <sup>+</sup> e <sup>-</sup> → $\rho\pi$
1607±10		<sup>2</sup> CLEGG	94	RVUE	e <sup>+</sup> e <sup>-</sup> → $\omega\pi\pi$
1635±35		<sup>3</sup> CLEGG	94	RVUE	e <sup>+</sup> e <sup>-</sup> → $\rho\pi$
1625±21		<sup>3</sup> CLEGG	94	RVUE	e <sup>+</sup> e <sup>-</sup> → $\omega\pi\pi$
1670±20		ATKINSON	83B	OMEG	20–70 $\gamma p$ → $3\pi X$
1657±13		CORDIER	81	DM1	e <sup>+</sup> e <sup>-</sup> → $\omega 2\pi$
1679±34	21	ESPOSITO	80	FRAM	e <sup>+</sup> e <sup>-</sup> → $3\pi$
1652±17		COSME	79	OSPK 0	e <sup>+</sup> e <sup>-</sup> → $3\pi$

<sup>1</sup> From a two Breit-Wigner fit.<sup>2</sup> From a single Breit-Wigner plus background fit.<sup>3</sup> From a single Breit-Wigner fit.

### $\omega(1600)$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	CHG	COMMENT
<b>220±35 OUR AVERAGE</b>	Error	includes scale factor of 1.6.			
159±43	315	<sup>4</sup> ANTONELLI	92	DM2	1.34–2.4e <sup>+</sup> e <sup>-</sup> → $\rho\pi$
240±25	435	<sup>5</sup> ANTONELLI	92	DM2	1.34–2.4e <sup>+</sup> e <sup>-</sup> → $\omega\pi\pi$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●					
140±50		<sup>4</sup> CLEGG	94	RVUE	e <sup>+</sup> e <sup>-</sup> → $\rho\pi$
86±20		<sup>5</sup> CLEGG	94	RVUE	e <sup>+</sup> e <sup>-</sup> → $\omega\pi\pi$
350±80		<sup>6</sup> CLEGG	94	RVUE	e <sup>+</sup> e <sup>-</sup> → $\rho\pi$
401±63		<sup>6</sup> CLEGG	94	RVUE	e <sup>+</sup> e <sup>-</sup> → $\omega\pi\pi$
160±20		ATKINSON	83B	OMEG	20–70 $\gamma p$ → $3\pi X$
136±46		CORDIER	81	DM1	e <sup>+</sup> e <sup>-</sup> → $\omega 2\pi$
99±49	21	ESPOSITO	80	FRAM	e <sup>+</sup> e <sup>-</sup> → $3\pi$
42±17		COSME	79	OSPK 0	e <sup>+</sup> e <sup>-</sup> → $3\pi$

<sup>4</sup> From a two Breit-Wigner fit.<sup>5</sup> From a single Breit-Wigner plus background fit.<sup>6</sup> From a single Breit-Wigner fit.

## $\omega(1600)$ DECAY MODES

Mode	Fraction ( $\Gamma_i/\Gamma$ )
$\Gamma_1$ $\rho\pi$	seen
$\Gamma_2$ $\omega\pi\pi$	seen
$\Gamma_3$ $e^+e^-$	seen

### $\omega(1600)$ $\Gamma(i)\Gamma(e^+e^-)/\Gamma(\text{total})$

$\Gamma(\rho\pi) \times \Gamma(e^+e^-)/\Gamma_{\text{total}}$   $\Gamma_1\Gamma_3/\Gamma$

VALUE (eV)	EVTS	DOCUMENT ID	TECN	COMMENT
<b>134±14</b>	435	<sup>7</sup> ANTONELLI	92 DM2	1.34–2.4e <sup>+</sup> e <sup>-</sup> → hadrons

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

93±27	315	ANTONELLI	92 DM2	1.34–2.4e <sup>+</sup> e <sup>-</sup> → $\rho\pi$
96±35		DONNACHIE	89 RVUE	e <sup>+</sup> e <sup>-</sup> → $\rho\pi$

<sup>7</sup> From a coupled fit of  $\rho\pi$  and  $\omega\pi\pi$  channels.

$\Gamma(\omega\pi\pi) \times \Gamma(e^+e^-)/\Gamma_{\text{total}}$   $\Gamma_2\Gamma_3/\Gamma$

VALUE (keV)	EVTS	DOCUMENT ID	TECN	COMMENT
<b>170±17</b>	435	<sup>8</sup> ANTONELLI	92 DM2	1.34–2.4e <sup>+</sup> e <sup>-</sup> → hadrons

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

135±16	435	<sup>9</sup> ANTONELLI	92 DM2	1.34–2.4e <sup>+</sup> e <sup>-</sup> → $\omega\pi\pi$
56±31		DONNACHIE	89 RVUE	e <sup>+</sup> e <sup>-</sup> → $\omega 2\pi$

<sup>8</sup> From a coupled fit of  $\rho\pi$  and  $\omega\pi\pi$  channels.

<sup>9</sup> From a single Breit-Wigner fit.

## $\omega(1600)$ REFERENCES

CLEGG	94	ZPHY C62 455	+Donnachie	(LANC, MCHS)
ANTONELLI	92	ZPHY C56 15	+Baldini+	(DM2 Collab.)
DONNACHIE	89	ZPHY C42 663	+Clegg	(CERN, MCHS)
ATKINSON	83B	PL 127B 132	+	(BONN, CERN, GLAS, LANC, MCHS, CURIN+)
CORDIER	81	PL 106B 155	+Bisello, Bizot, Buon, Delcourt, Mane	(ORSAY)
ESPOSITO	80	LNC 28 195	+Marini, Patteri+	(FRAS, NAPL, PADO, ROMA)
COSME	79	NP B152 215	+Dudelzak, Grelaud, Jean-Marie, Jullian+	(IPN)

## OTHER RELATED PAPERS

ACHASOV	97F	PAN 60 2029	N.N. Achasov, Kozhevnikov	(NOVM)
		Translated from YAF 60 2212.		
DOLINSKY	91	PRPL 202 99	+Druzhinin, Dubrovin+	(NOVO)
ATKINSON	87	ZPHY C34 157	+	(BONN, CERN, GLAS, LANC, MCHS, CURIN)
ATKINSON	84	NP B231 15	+	(BONN, CERN, GLAS, LANC, MCHS, CURIN+)