$\omega(1600)$

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

ω(1600) MASS

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

[1] From a two Breit-Wigner fit.
[2] From a single Breit-Wigner plus background fit.
[3] From a single Breit-Wigner fit.

ω(1600) WIDTH

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

[4] From a two Breit-Wigner fit.
[5] From a single Breit-Wigner plus background fit.
[6] From a single Breit-Wigner fit.

$\omega(1600)$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	$\rho\pi$	seen
Γ_2	$\omega\pi\pi$	seen
Γ_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*
134±14	435	[7] ANTONELLI	92	DM2	1.34–2.4 $e^+e^- \rightarrow$ hadrons
• • • We do not use the following data for averages, fits, limits, etc. • • •					
93±27	315	ANTONELLI	92	DM2	1.34–2.4 $e^+e^- \rightarrow \rho\pi$
96±35		DONNACHIE	89	RVUE	$e^+e^- \rightarrow \rho\pi$

[7] 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*
170±17	435	[8] ANTONELLI	92	DM2	1.34–2.4 $e^+e^- \rightarrow$ hadrons
• • • We do not use the following data for averages, fits, limits, etc. • • •					
135±16	435	[9] ANTONELLI	92	DM2	1.34–2.4 $e^+e^- \rightarrow \omega\pi\pi$
56±31		DONNACHIE	89	RVUE	$e^+e^- \rightarrow \omega 2\pi$

[8] From a coupled fit of $\rho\pi$ and $\omega\pi\pi$ channels.
[9] 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+)